



# 2020 Annual Report

Defining Markets







April 1, 2021

To our shareholders,

When I reflect on 2020, I am incredibly proud of the extraordinary adaptability of our people and success of our business in the face of unrelenting challenges. Our Cboe Global Markets associates and customers around the globe transformed their homes into places of work, adapting how we interact and communicate. As a company, we enhanced our business through strategic acquisitions, we converted our open-outcry trading floor to an all-electronic environment and then back again, ensuring the safety of our customers and associates along the way, and we advanced and changed how we view the world.

### **A Year of Record Results and Return of Capital**

The Cboe team was resilient throughout 2020 and remained focused on our mission to define markets, enabling us to grow despite the unprecedented environment and create an even stronger foundation for our future. COVID-19 brought sudden and extreme uncertainty to every aspect of our personal and professional lives, yet the Cboe community rose to the occasion. Cboe associates adapted to every challenge with patience, innovation and an unwavering commitment to delivering results.

In 2020, Cboe posted a record-breaking year, increasing net revenue by 10 percent and adjusted earnings per share by 11 percent<sup>(1)</sup>, and laying the groundwork for continued long-term growth. Our results were driven by record trading volumes in U.S. cash equities and multi-list options, fueled by strong retail trading, growth in recurring non-transactional revenues and increased efficiency enabled by our fully integrated, superior technology.

These record results and strong cash flow generation enabled us to return \$520 million to shareholders in 2020, a new all-time high and a 69 percent increase compared to 2019. We have raised the quarterly dividend each year for 10 consecutive years, including a 17 percent increase in 2020, and we plan to continue growing the dividend as part of our steadfast commitment to returning capital to shareholders in 2021 and beyond.

### **Evolving our Business Through Strategic Acquisitions**

In 2020 we completed six strategic acquisitions that, combined, align with our growth strategy to expand our product line across asset classes, broaden our geographic reach, diversify our business mix with recurring revenue and leverage our technology advantage. Our ability to successfully execute these acquisitions despite the backdrop of 2020 is testament to the dedication and expertise of our entire global team. We believe each of the deals closed in 2020 will help us accelerate organic growth in 2021 and beyond.

The acquisitions of Hanweck, FT Options and Trade Alert, each a leading provider of market intelligence, have bolstered our Data and Access Solutions suite of data, analytics and indices. This holistic offering provides market participants with the resources to better understand risk, make better informed trading decisions and access our markets at every step of the trade process. We now look forward to leveraging this combined offering into an even more holistic suite of portfolio and margin risk analytics, for our growing client base throughout the world.

Our acquisition of EuroCCP, one of the largest pan-European clearing houses, has provided the opportunity for us to pursue derivatives in the region. By leveraging our highly successful European equities business and global derivatives expertise, we aim to simplify and bring new efficiencies to pan-European derivatives trading and clearing. We believe the European market is ripe for significant structural growth, and through the planned launch of Cboe Europe Derivatives later this year, we intend to reshape and expand overall derivatives trading in Europe with a novel market structure designed to attract both new and existing participants.

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<sup>(1)</sup> Adjusted earnings per share is a non-GAAP measure and a reconciliation to a GAAP measure is provided on page 62 of the Cboe Global Markets, Inc. Annual Report on Form 10-K for the year ended December 31, 2020.

Through our acquisitions of MATCHNow and BIDS Trading, leading alternative trading systems (ATS) in Canada and the U.S., we aim to expand our North American equities offering. Following the proven playbook used to grow our European equities business, we look to bring more choice and competition to the Canadian marketplace. The BIDS Trading platform powers Cboe LIS, one of the largest block-trading platforms in Europe, and we plan to leverage BIDS' capabilities and services for other products and geographies in the future.

### **Innovating to Meet the Needs of a Changing Marketplace**

Cboe's robust proprietary technology underpins all that we do as a global market operator, empowering us to adapt to changing market dynamics. Our highly skilled team of technology and operations associates continues to drive innovation at Cboe—setting the expectation for how modern trading should be and providing clients with a unified, world-class trading experience across all our equities, options and futures markets.

The worldwide adjustment to working remotely has accelerated the need for technology solutions. Advances in technology have led to further evolution of the markets, providing participants with greater access to news, information and educational resources, along with increased speed of execution, cost savings, efficiency, stability and scalability. The needs of the customer don't change, but the way we engage with them and the way we interact will become more advanced and efficient.

We see opportunity in the growing retail engagement in the market, and we are well-positioned to invest in and leverage our core strengths—product and market innovation, technology, strong customer relationships and investor education—to support this growing user base. We are creating opportunities for this new wave of market participants through new product offerings, such as smaller-sized contracts in our proprietary suite of products, the extension of VIX and SPX options trading hours to an almost 24-hours-a-day model and other market structure enhancements across our equities, options and futures businesses that help cater to the efficient execution of trades on behalf of retail investors.

### **Providing Fair, Orderly and Trusted Markets**

Throughout this pandemic, Cboe has demonstrated remarkable resiliency amidst extreme economic turbulence, providing a forum for investors to express their views and manage and lay off risk. That resilience is rooted in a recognition that financial markets are critical infrastructure for the economy, and it is our responsibility to be prepared by testing our systems regularly, running backup facilities and maintaining our robust business continuity plans. We remain committed to ensuring the orderly operation and surveillance of our markets.

Our associates worked closely with clients, regulators and health officials to continue providing fair and reliable markets without interruption throughout the historic transition of our open outcry trading floor to an all-electronic platform at the onset of the pandemic in March 2020. And the safety and wellbeing of the Cboe community continues to be our top priority. Today's trading floor layout accommodates social distancing and incorporates stringent health and safety protocols, allowing our trading community to focus on the important role they fulfill in the markets.

### **Advancing Our Commitment to Diversity, Equality and Inclusion**

In a year spent almost entirely in a work from home environment, the Cboe community has never been closer. At our core, Cboe is defining markets by putting people first—our associates working together with our customers, regulators and the broader industry to find solutions to meet today's challenges.

In an unimaginably chaotic and difficult year marked by the pandemic, geopolitical tensions and social unrest, we came together as a community to examine how to advance racial equity, diversity and inclusivity within Cboe. This initiative is a top priority for the Board of Directors, Executive team and associates across the company who believe that we grow and become stronger when we bring new perspectives and a greater variety of experiences and viewpoints to our workplace.



Cboe has made several changes across the organization to attract, engage, develop and retain a diverse associate base, and to foster an environment where all can flourish and contribute. These efforts include expansion of our Human Resources recruitment team and initiatives, alignment of corporate diversity and inclusion goals to Executive team goals, and further collaboration with our Associate Resource Groups.

Our Diversity Leadership Council was founded in 2020 with a vision to help the organization challenge bias, embrace differences and become a stronger team; while the Cboe Women’s Initiative, established in 2019, continues to increase the representation of women at Cboe, strengthen their voices and cultivate opportunities for their growth and advancement. The collective insight and experience of both groups enrich our corporate efforts and ensure our diversity and inclusion initiatives permeate every level and area of the organization.

As Cboe expands our efforts globally, we are equally committed to being a local partner in the communities in which we live and work. In an effort to reduce the spread of COVID-19 to first responders, Cboe donated \$1 million to deploy patient isolation units to fire departments and hospitals in Chicago, New York and Kansas City in 2020. Our Cboe associates embodied good citizenship throughout the year, making contributions through Cboe’s matching gift program to 34 percent more charities and nonprofit organizations in 2020 than in 2019, resulting in an increase of 41 percent in total monetary donations.

Our goal is to have a positive impact on the world’s “greater good” through the three pillars of ESG—Environmental, Social and Governance. We recognize that operating in a socially responsible manner helps promote the long-term interests of our investors, associates, customers and community members. Because what we do at Cboe matters, and putting our people first helps us make the right choices at the right moments.

#### **A Solid Foundation to Fuel Future Growth**

We look forward to leveraging the transactions we closed in 2020 to continue to enhance our business and accelerate organic growth in 2021 and beyond. We plan to continue to invest in organic growth initiatives this year, which we expect to contribute to our incremental, top line compounded average organic growth target of 4 to 6 percent over the mid-term<sup>(2)</sup>. Since our IPO, we have also allocated capital inorganically to help accelerate our strategy while returning capital to shareholders with a singular goal of creating long-term shareholder value. Cboe shareholders have received a total shareholder return of 387 percent over the last 10 years, exceeding the S&P 500 return of 267 percent.

With the solid foundation we’ve built, the clear vision we’ve created and the exceptional Board and team of global associates we have in place, I am excited and energized by the opportunities ahead. 2021 will be a year of investment and growth for Cboe, enabled by the continued execution of our strategy to further fuel organic growth in our business over the long-term.

I believe we have the people, technology, and expertise to continue to define markets in a very powerful way and achieve our mission to build one of the world’s largest global securities and derivatives trading networks. Thank you for your continued trust and confidence in Cboe.



Edward T. Tilly  
*Chairman, President and Chief Executive Officer*

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<sup>(2)</sup> Guidance is as of February 5, 2021 and the company is neither updating nor reconfirming guidance in this letter.

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**UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION  
Washington, DC 20549**

**Form 10-K**

**ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the fiscal year ended December 31, 2020

or

**TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the transition period from \_\_\_\_\_ to \_\_\_\_\_  
Commission File No. 001-34774

**Cboe Global Markets, Inc.**

(Exact name of registrant as specified in its charter)

**Delaware**  
(State or other jurisdiction of  
incorporation or organization)

**20-5446972**  
(I.R.S. Employer  
Identification Number)

**400 South LaSalle Street**  
**Chicago, Illinois**  
(Address of principal executive offices)

**60605**  
(Zip Code)

Registrant's telephone number, including area code  
**(312) 786-5600**

Securities registered pursuant to Section 12(b) of the Act:

Title of Each Class	Trading Symbol (s)	Name of Exchange on Which Registered
Common Stock, par value \$0.01 per share	CBOE	CboeBZX

Securities registered pursuant to Section 12(g) of the Act:

**None**

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes  No

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. Yes  No

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months and (2) has been subject to such filing requirements for the past 90 days. Yes  No

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). Yes  No

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company," and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer  Accelerated filer  Non-accelerated filer  Smaller reporting company  Emerging growth company

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act.

Indicate by check mark whether the registrant has filed a report on and attestation to its management's assessment of the effectiveness of its internal control over financial reporting under Section 404(b) of the Sarbanes-Oxley Act (15 U.S.C. 7262(b)) by the registered public accounting firm that prepared or issued its audit report.

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Act). Yes  No

As of June 30, 2020, the aggregate market value of the Registrant's outstanding voting common equity held by non-affiliates was approximately \$10.1 billion based on the closing price of \$93.28 per share of common stock.

The number of outstanding shares of the registrant's common stock as of February 12, 2021 was 107,210,079 shares of common stock.

**DOCUMENTS INCORPORATED BY REFERENCE**

Portions of Cboe Global Market's Definitive Proxy Statement for the 2021 Annual Meeting of Stockholders, which will be filed no later than 120 days after December 31, 2020, are incorporated by reference in Part III.



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**CBOE GLOBAL MARKETS, INC.**  
**2020 FORM 10-K**

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## CERTAIN DEFINED TERMS

Throughout this document, unless otherwise specified or the context so requires:

- “Cboe,” “we,” “us,” “our” or “the Company” refers to Cboe Global Markets, Inc. and its subsidiaries.
- “ADV” means average daily volume.
- “ADNV” means average daily notional value.
- “AFM” refers to the Netherlands Authority for the Financial Markets.
- “ATS” refers to an alternative trading system.
- “Bats Global Markets” and “Bats” refer to our wholly-owned subsidiary Bats Global Markets, Inc., now known as Cboe Bats, LLC, and its subsidiaries.
- “BIDS Trading” refers to BIDS Trading, L.P., a wholly-owned subsidiary of Cboe Global Markets, Inc. The ATS operated by BIDS Trading is not a registered national securities exchange or a facility thereof.
- “BYX” refers to Cboe BYX Exchange, Inc., a wholly-owned subsidiary of Cboe Global Markets, Inc.
- “BZX” refers to Cboe BZX Exchange, Inc., a wholly-owned subsidiary of Cboe Global Markets, Inc.
- “C2” refers to Cboe C2 Exchange, Inc. a wholly-owned subsidiary of Cboe Global Markets, Inc.
- “Cboe Chi-X Europe” refers to Cboe Chi-X Europe Limited, a wholly-owned subsidiary of Cboe Global Markets, Inc.
- “Cboe Europe Equities” refers to the combined businesses of Cboe Europe and Cboe NL.
- “Cboe Europe” refers to Cboe Europe Limited, a wholly-owned subsidiary of Cboe Global Markets, Inc., the UK operator of our Multilateral Trading Facility (“MTF”), our Regulated Market (“RM”), and our Approved Publication Arrangement (“APA”) under its Recognized Investment Exchange (“RIE”) status.
- “Cboe FX” refers to Cboe FX Markets, LLC, a wholly-owned subsidiary of Cboe Global Markets, Inc.
- “Cboe NL” refers to Cboe Europe BV, a wholly-owned subsidiary of Cboe Global Markets, Inc., the Netherlands operator of our MTF, RM, and APA.
- “Cboe Options” refers to Cboe Exchange, Inc., a wholly-owned subsidiary of Cboe Global Markets, Inc.
- “Cboe SEF” refers to Cboe SEF, LLC, a wholly-owned subsidiary of Cboe Global Markets, Inc.
- “Cboe Trading” refers to Cboe Trading, Inc., a wholly-owned subsidiary of Cboe Global Markets, Inc., operated in the United States.
- “CFE” refers to Cboe Futures Exchange, LLC, a wholly-owned subsidiary of Cboe Global Markets, Inc.
- “CFTC” refers to the U.S. Commodity Futures Trading Commission.
- “EDGA” refers to Cboe EDGA Exchange, Inc., a wholly-owned subsidiary of Cboe Global Markets, Inc.
- “EDGX” refers to Cboe EDGX Exchange, Inc., a wholly-owned subsidiary of Cboe Global Markets, Inc.
- “ESMA” refers to the European Securities and Markets Authority.
- “EuroCCP” refers to European Central Counterparty N.V., a wholly-owned subsidiary of Cboe Global Markets, Inc.
- “Exchanges” refers to Cboe Options, C2, BZX, BYX, EDGX, and EDGA.
- “FASB” refers to the Financial Accounting Standards Board.
- “FCA” refers to the UK Financial Conduct Authority.
- “FINRA” refers to the Financial Industry Regulatory Authority.
- “GAAP” refers to Generally Accepted Accounting Principles in the United States.
- “IIROC” refers to the Investment Industry Regulatory Organization of Canada.
- “MATCHNow” refers to TriAct Canada Marketplace LP, a wholly-owned subsidiary of Cboe Global Markets, Inc., the operator of our Canadian ATS called MATCHNow.
- “Merger” refers to our acquisition of Bats Global Markets, completed on February 28, 2017.
- “OCC” refers to The Options Clearing Corporation.
- “OPRA” refers to Options Price Reporting Authority, LLC.
- “SEC” refers to the U.S. Securities and Exchange Commission.
- “SPX” refers to our S&P 500 Index exchange-traded options products.
- “TPH” refers to either a Trading Permit Holder or a Trading Privilege Holder.
- “VIX” refers to our Cboe Volatility Index exchange traded options and futures products.

## TRADEMARK AND OTHER INFORMATION

Cboe®, Cboe Global Markets®, Bats®, BIDS Trading®, BYX®, BZX®, Cboe Options Institute®, Cboe Vest®, Cboe Volatility Index®, CFE®, EDGA®, EDGX®, EuroCCP®, Hybrid®, LiveVol®, MATCHNow®, Silexx® and VIX® are registered trademarks, and Cboe Futures Exchange<sup>SM</sup>, C2<sup>SM</sup>, f(t)options<sup>SM</sup>, Hanweck<sup>SM</sup>, and Trade Alert<sup>SM</sup> are service marks of Cboe Global Markets, Inc. and its subsidiaries. Standard & Poor's®, S&P®, S&P 100®, S&P 500® and SPX® are registered trademarks of Standard & Poor's Financial Services LLC and have been licensed for use by Cboe Exchange, Inc. Dow Jones®, Dow Jones Industrial Average®, DJIA® and Dow Jones Indices are registered trademarks or service marks of Dow Jones Trademark Holdings, LLC, used under license. Russell® and the Russell index names are registered trademarks of Frank Russell Company, used under license. FTSE® and the FTSE indices are trademarks and service marks of FTSE International Limited, used under license. All other trademarks and service marks are the property of their respective owners.

MSCI and the MSCI index names are service marks of MSCI Inc. ("MSCI") or its affiliates and have been licensed for use by us. Any derivative indices and any financial products based on the derivative indices ("MSCI-Based Products") are not sponsored, guaranteed or endorsed by MSCI, its affiliates or any other party involved in, or related to, making or compiling such MSCI index. Neither MSCI, its affiliates nor any other party involved in, or related to, making or compiling any MSCI index makes any representations regarding the advisability of investing in such MSCI-Based Products; makes any warranty, express or implied; or bears any liability as to the results to be obtained by any person or any entity from the use of any such MSCI index or any data included therein. No purchaser, seller or holder of any MSCI-Based Product, or any other person or entity, should use or refer to any MSCI trade name, trademark or service mark to sponsor, endorse, market or promote any security without first contacting MSCI to determine whether MSCI's permission is required.

This Annual Report on Form 10-K includes market share and industry data that we obtained from industry publications and surveys, reports of governmental agencies 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 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 presented herein, our estimates involve risks and uncertainties and are subject to change based on various factors. We refer you to the "Risk Factors" in Part I, Item 1A of this Annual Report on Form 10-K and our other filings with the SEC.



## FORWARD-LOOKING STATEMENTS

This Annual Report on Form 10-K 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, including statements in “Business” and “Management’s Discussion and Analysis of Financial Condition and Results of Operations.” 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. In particular, you should consider the risks and uncertainties described under “Risk Factors” in this Annual Report.

While we believe we have identified material risks, these risks and uncertainties are not exhaustive. Moreover, 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;
- 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 or clearing 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 indices 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 minimize the risks, including our credit and default risks, associated with operating a European clearinghouse;
- our ability to accommodate trading and clearing 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 or for whom we clear transactions;
- 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;
- our ability to maintain BIDS Trading as an independently managed and operated trading venue, separate from and not integrated with our registered national securities exchanges;
- 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 and our ability to make payments on or refinance 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.

For a detailed discussion of these and other factors that might affect our performance, see Part I, Item 1A of this Report. We do not undertake, and 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. We caution you not to place undue reliance on the forward-looking statements, which speak only as of the date of this filing.

## PART I

### Item 1. Business

The following description of the business should be read in conjunction with the information included elsewhere in this Annual Report on Form 10-K for the year ended December 31, 2020. This description contains forward-looking statements that involve risks and uncertainties. Actual results could differ significantly from the results discussed in the forward-looking statements due to the factors set forth in “Risk Factors” and elsewhere in this Annual Report on Form 10-K.

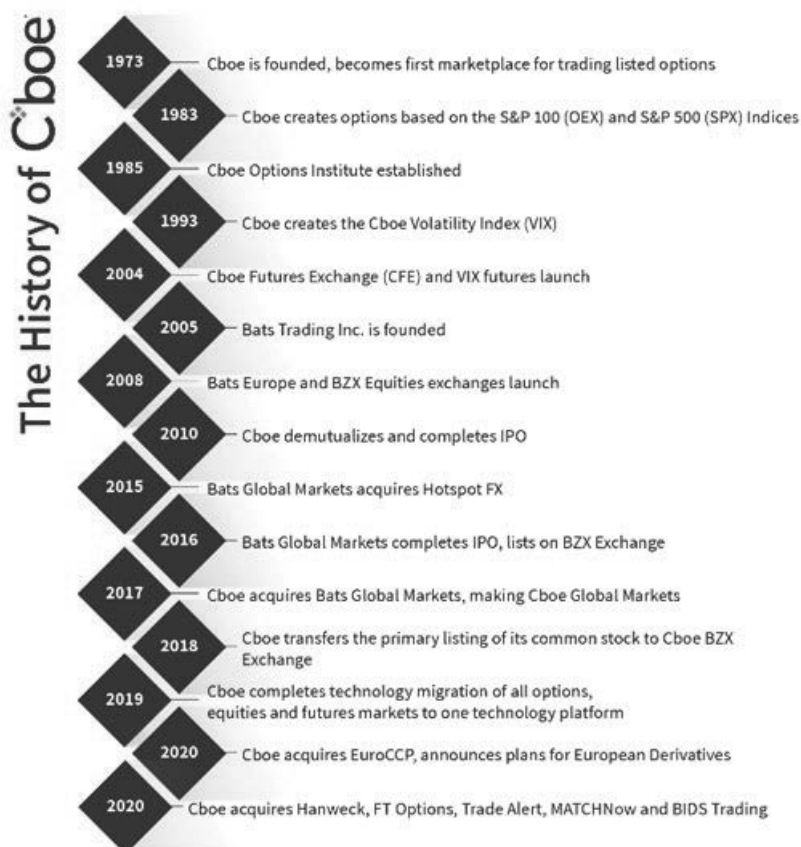
#### Overview

Cboe Global Markets, Inc. provides cutting-edge trading and investment solutions to investors around the world. The Company is committed to defining markets through product innovation, leading edge technology, and seamless trading solutions.

Cboe offers trading across a diverse range of products in multiple asset classes and geographies, including options, futures, U.S., Canadian and European equities, exchange-traded products (“ETPs”), global foreign exchange (“FX”) and volatility products based on the VIX Index, recognized as the world’s premier gauge of U.S. equity market volatility.

Cboe’s subsidiaries include the largest options exchange and the third largest stock exchange operator in the U.S. In addition, the Company operates one of the largest stock exchanges by value traded in Europe, and owns EuroCCP, a leading pan-European equities clearinghouse, BIDS Trading, a leading block-trading ATS by volume in the U.S., and MATCHNow, a leading equities ATS in Canada. Cboe also is a leading market globally for ETP listings and trading.

The graphic below provides a brief overview of Cboe’s history:





## Our Business

Cboe Global Markets reports on the following five business segments:

- **Options.** The Options segment includes listed options on market indices (“index options”), as well as on the stocks of individual corporations (“equity options”) and options on ETPs, such as exchange-traded funds (“ETFs”) and exchange-traded notes (“ETNs”), which are “multi-listed” options and listed on a non-exclusive basis. These options trade on Cboe Options, C2 Options, BZX Options, and EDGX Options, all U.S. national security exchanges. Cboe Options is the Company’s primary options market and offers trading in listed options through a single system that integrates electronic trading and traditional open outcry trading on the Cboe Options trading floor in Chicago. There was a temporary suspension of open outcry trading between March 13, 2020 and June 14, 2020 in response to the novel coronavirus (“COVID-19”) pandemic. C2 Options, BZX Options, and EDGX Options are all-electronic options exchanges, and typically operate with different market models and fee structures than Cboe Options. The Options segment also includes applicable market data revenue generated from the consolidated tape plans, the licensing of proprietary options market data, index licensing, and access and capacity services.
- **North American Equities (formerly U.S. Equities).** The North American Equities segment includes listed U.S. equities and ETP transaction services that occur on fully electronic exchanges owned and operated by BZX Equities, BYX Equities, EDGX Equities, and EDGA Equities and Canadian equities and other transaction services that occur on or through the MATCHNow ATS. This segment was previously referred to as the U.S. Equities segment, but has been updated as a result of the acquisition of MATCHNow, which provides Canadian equities and other transaction services. In addition, in connection with the closing of the acquisition of BIDS Trading, starting January 1, 2021, this segment also includes equities transactions that occur on the BIDS Trading platforms. The North American Equities segment also includes ETP listings on BZX, the Cboe Global Markets, Inc. common stock listing, applicable market data revenue generated from the consolidated tape plans, the licensing of proprietary equities market data, routing services, access and capacity services and advertising activity from ETF.com.
- **Futures.** The Futures segment includes transaction services provided by the Company’s fully electronic futures exchange, CFE, which includes offerings for trading of VIX futures and other futures products, the licensing of proprietary market data, as well as access and capacity services.
- **European Equities.** The European Equities segment includes the pan-European listed equities transaction services, ETPs, exchange traded commodities, and international depository receipts that are hosted on MTFs operated by Cboe Europe Equities. It also includes the ETP listings business on RMs and clearing activities of EuroCCP. Cboe Europe Equities operates lit and dark pools, a periodic auctions book, and a Large-in-Scale (“LIS”) trading negotiation facility. Cboe NL, launched in October 2019, operates similar business functionality to that offered by Cboe Europe, and provides for trading only in European Economic Area (“EEA”) symbols. Cboe Europe Equities also includes revenue generated from the licensing of proprietary market data and from access and capacity services.
- **Global FX.** The Global FX segment includes institutional FX trading services that occur on the Cboe FX fully electronic trading platform, non-deliverable forward FX transactions (“NDFs”) offered for execution on Cboe SEF and Cboe Swiss, as well as revenue generated from the licensing of proprietary market data and from access and capacity services.

See “Management’s Discussion and Analysis of Financial Condition and Results of Operations” and Note 17 (“Segment Reporting”) in the notes to our Consolidated Financial Statements for discussion of revenues, and operating income (or loss) by business segment. Certain activities within our segments operate globally. For information regarding risks related to our international operations see “Risk Factors.”

The following chart lists average daily transaction volume in number of shares/contracts, notional value transacted or trades cleared for Options (Cboe Options, C2 Options, BZX Options, and EDGX Options); Futures (CFE); U.S. Equities (BZX Equities, BYX Equities, EDGA Equities, and EDGX Equities); Canadian Equities (MATCHNow); European Equities (Cboe Europe Equities); European Clearing (EuroCCP); and Global FX (Cboe FX and Cboe SEF) for the periods indicated:

	Annual Volumes		
	2020	2019	2018
Options total contracts ADV (in millions) . . . . .	10.1	7.3	7.9
U.S. Equities total touched shares ADV (in billions) . . . . .	1.8	1.2	1.4
Canadian Equities total touched shares ADV (in millions) (1) . . . . .	43.1	—	—
Futures ADV (in thousands) . . . . .	200.6	249.0	300.0
European Equities matched and touched ADNV (€ in billions) . . . . .	6.9	7.7	10.4
European trades cleared (in millions) (2) . . . . .	545.5	—	—
Global FX ADNV (\$ in billions) . . . . .	34.7	32.3	37.4

- (1) Canadian Equities data reflects ADV for the period of 2020 following Cboe's acquisition of MATCHNow, which was effective August 4, 2020.
- (2) European trades cleared data reflects trades cleared for the period of 2020 following Cboe's acquisition of EuroCCP, which was effective July 1, 2020. Trades cleared refers to the total number of non-interoperable trades cleared.

ADV= average daily volume  
ADNV= average daily notional value

### Competitive Strengths

At Cboe, we are defining markets to benefit participants and drive the global marketplace forward through product innovation, leading edge technology and seamless trading solutions.

- **Product Innovation.** Markets are fundamentally defined by the products they offer, and no institution has created more noteworthy tradable products than Cboe. From equity options, index options, VIX options, to VIX futures and our corporate bond index futures, our track record for market-defining product innovation speaks for itself. Our partnerships with leading index and service providers further strengthen our ability to create the next great product innovation. Cboe offers trading across a diverse range of products, including options, futures, North American and European equities, ETPs, global FX, and multi-asset volatility products.

Our legacy of innovation not only includes products, but also the creation or acquisition of entirely new markets or market models, including the first listed-options marketplace, the first alternative venue to traditional equity markets, the first pan-European MTF and the first electronic communication network (“ECN”) for the institutional FX market. These markets have grown to become some of the largest, most relied upon in the world.

- **Leading Edge Technology.** Our industry-leading proprietary technology was built, and is continually refined, to anticipate the evolving needs of our customers. Our trading platform is developed, owned, and operated in-house and is designed to optimize reliability, speed, scalability, and versatility. All of our U.S. equity, options, and futures markets have been successfully migrated to this cutting-edge technology. We regularly raise the bar in trading technology through an ambitious schedule of software releases and enhancements to our platforms across the globe.
- **Seamless Trading Solutions.** Cboe strives to provide trading solutions that enhance the customer experience through our advocacy efforts, insights, education, data analytics and other services.

## Value Proposition

We also believe that we provide stakeholders with a strong value proposition due to the following key drivers:

- We have a diverse and unique product set, with high-margin proprietary products that allow customers to express a market view and manage risk in various market environments.
- We provide exposure to large, underpenetrated market segments, targeted to fuel the growth of Cboe's proprietary products globally.
- We have developed a highly scalable business model, coupled with disciplined expense management.
- We have had a strong track record of financial results and efficient capital allocation, helping to create long-term shareholder value.

## Key Growth Strategy Initiatives

We expect to further grow our business and increase our revenues and profitability by pursuing the following growth strategies:

- **Build Upon Core Proprietary Products.** We plan to grow our existing proprietary products, including SPX options and VIX options and futures, by further penetrating key market segments, including pension funds, insurance companies, endowments and asset managers. We also plan to enhance existing proprietary products, develop new proprietary products and expand our user base and use cases. In 2020, we delivered on this initiative by launching mini VIX futures, launching options on the S&P 500 Environmental, Social and Governance ("ESG") Index, and launched target outcome indices on Russell 2000 Index. Expected new initiatives for 2021 include the expansion of our Global Trading Hours, subject to regulatory review, to extend the availability of our proprietary products, the enhancement of our online learning tools for investor education, and the launch of a new core derivatives education curriculum.
- **Leverage Leading Proprietary Trading Technology.** We have developed a superior technology platform that positions Cboe to integrate additional products, features and volumes, while providing efficiencies across venues. We are also able to leverage the efficiencies of our common technology to further expand revenues, while maintaining disciplined expense management. In 2020, we delivered on this initiative by integrating our information solutions acquisitions, Hanweck Associates, LLC ("Hanweck"), FT Providers, LLC ("FT Options") and Trade Alert, LLC ("Trade Alert"), commencing the integration of EuroCCP and its technology to potentially launch pan-European derivatives in 2021, subject to regulatory review, and transitioning execution management from the PULSe Trader Workstation to Cboe Silexx.
- **Diversify Business Mix With Growth of Non-Transactional Revenues.** We are diversifying our business mix through the growth of our non-transactional revenues, which primarily consists of increasing the distribution of proprietary market data and enhanced market data, offering insightful information to support our customers' needs, and providing tools that draw users to our markets and drive volume. In 2020, we delivered on this initiative by growing our proprietary market data and access and capacity fees and also increased recurring revenues with our information solutions acquisitions.
- **Broaden Geographic Reach.** We plan to widen our global access and product distribution through customer engagement, new product offerings and strategic acquisitions. We also plan to strengthen combined offerings while reaching new markets. In 2020, we delivered on this initiative by acquiring MATCHNow, a leading Canadian ATS, expanding our geographic presence and product capabilities.
- **Expand Product Lines Across Asset Classes.** We expect to strengthen our product set with new asset classes, create markets that utilize Cboe capabilities, and provide tools that support access to multiple channels and markets. In 2020, we delivered on this initiative with the strong growth in Cboe Retail Priority, the planned launch of U.S. Periodic auctions order book, subject to regulatory approval, and the acquisition of BIDS Trading, a U.S. ATS, which diversifies our equities offerings. Cboe also expanded its FX offering in 2020, with the launch of Cboe FX Central, a new central limit order book and the launch of Cboe Swiss, as new NDF market.

## Proprietary Products

In addition to our exchanges providing a marketplace and listing venue for the trading of securities and derivatives we also calculate proprietary indices that are used as the basis for proprietary products, such as our SPX options and VIX options and futures, or licensed for use by third parties. These include:

- volatility index products based on various broad-based market indices, such as the S&P 500, the S&P 100, and the Russell 2000,
- correlation or volatility indices based on ETFs and individual stocks, such as the Cboe Crude Oil ETF Volatility Index, the Cboe Gold ETF Volatility Index, the Cboe Equity VIX on Apple, and the Cboe Equity VIX on Amazon,
- interest rate volatility indices, such as the Cboe Interest Rate Swap Volatility Index and
- options strategy benchmarks, such as the Cboe BuyWrite, PutWrite and Collar indices based on the S&P 500 and Russell 2000, BuyWrite and PutWrite indices on MSCI EAFE, MSCI Emerging Markets and BuyWrite indices based on other broad-based market indices.

Our most frequently traded proprietary products are SPX options and VIX options and futures. In addition to any transaction fee revenue generated on products created based on these indices, we have granted licenses for third parties to use and sublicense some of these proprietary indices to create third-party indices and products. Accordingly, we generate revenue from proprietary indices by distributing them for reference purposes, using them as the basis for proprietary products and licensing them for use for third-party indices and products.

These proprietary indices and products are built both through our in-house research and development staff and our strategic relationships and license agreements with index providers. The following is a discussion of our strategic relationships and additional detail on our most frequently traded products, including SPX options and VIX options and futures.

### ***Strategic Relationships***

The Company has long-term business relationships with several providers of market indices. We license their indices, including on an exclusive basis, as the foundation for indices, index options and other products. The Company also acquires interests in and agrees to work jointly with key providers to develop new products and services that are expected to capitalize on our core competencies and diversify our sources of revenue. Of particular note are the following:

- **S&P.** We have the exclusive right to offer exchange-listed options contracts in the United States on the S&P 500 Index, the S&P 100 Index, the S&P 500 ESG Index, and the S&P Select Sector Indices as a result of a licensing arrangement with S&P Dow Jones Indices, LLC (“S&P”). Our license from S&P is through December 31, 2033, with an exclusive license to trade options on the S&P 500 Index through December 31, 2032. We use the market data from the trading of options on the S&P 500 Index and S&P 100 Index for the creation of Cboe volatility indices, such as the VIX Index, and for the creation of tradable products on those volatility indices.
- **FTSE Russell.** Under our license agreement with the London Stock Exchange Group’s (“LSEG”) leading global index franchises, Frank Russell Company and FTSE International Limited (together “FTSE Russell”), we have the exclusive right in the United States to offer listed options on more than two dozen FTSE Russell indices, which represent a diverse group of domestic and global equities with international appeal. Our exclusive license from FTSE Russell is through 2030. We offer options on the Russell 2000, Russell 1000, Russell 1000 Value and Russell 1000 Growth Indices.
- **MSCI.** We have the exclusive right in the United States to offer listed options on six of MSCI’s indices and to calculate and commercialize volatility and strategy indices on the market data from the trading of options on the MSCI EAFE and MSCI Emerging Markets indices, as a result of licensing arrangements with MSCI Inc. (“MSCI”). We currently offer options on the MSCI EAFE and MSCI Emerging Markets Indices, and use trading information to calculate several versions of BuyWrite and PutWrite strategy indices on each MSCI index.

- **Dow Jones.** We have the exclusive right during standard U.S. trading hours to offer listed options contracts in the United States on the Dow Jones Industrial Average (“DJIA”) and certain other Dow Jones indices through December 31, 2033 as a result of a licensing arrangement with DJI Opco, LLC. We use market data from the trading of options on these indices to create Cboe volatility indices, variance indicators and BuyWrite indices, and to trade options and other products on these indices.

### **SPX Options**

The S&P 500 Index is an index comprised of 500 large-cap U.S. listed companies. It is one of the most commonly followed indices and is considered a bellwether for the U.S. economy. The SPX options we offer on the S&P 500 Index are exclusive to Cboe and contribute substantially to our volumes and transaction fees. Because of the S&P 500 Index’s status as a bellwether, SPX options are used in many different trading strategies by customers with different goals, including pension funds hedging their equity exposure by buying put options, asset managers seeking enhanced returns by selling covered call options and hedge funds using risk-managed strategies to capture so-called “risk premia” embedded in option prices. We also offer SPX Weeklys options, which have settlements on Mondays, Wednesdays, Fridays and on the last trading day of each month. We believe these additional expirations provide customers with more precision when hedging overall portfolio risk.

### **Volatility Trading**

Cboe pioneered the trading of exchange-traded volatility products with its introduction of VIX futures in 2004 and VIX options in 2006. The VIX Index, although not directly tradable, is based on the mid-point of real-time quotes of SPX options and is designed to reflect investors’ consensus view of future 30-day expected stock market volatility. The VIX methodology provides the basis for the creation of VIX options and futures. The final settlement value of VIX derivatives is determined on their expiration date through a Special Opening Quotation (“SOQ”) of the VIX Index. The SOQ calculation uses opening trade prices of selected options; unless there is no opening price, in which case the opening price used in the SOQ calculation is the midpoint of the highest bid and lowest offer at the time of the opening. Since we started offering these products, we have seen trading from a number of different customer segments utilizing a number of different trading strategies, including hedging extreme stock market declines, also known as “tail risk” hedging, and risk-managed strategies that seek to capture the relative price changes of expected volatility at different times in the future. We also offer VIX Weeklys options and futures to provide investors with opportunities and tools to trade volatility over a shorter term.

### **Listing**

Cboe serves as a listing destination for ETPs in the U.S. and Europe, and its markets are structured and designed for ETP issuers and their investors. In 2020, Cboe added 114 ETP listings in the U.S. and won 36 percent of all new U.S. ETP listings. There are now 511 ETPs globally listed on Cboe from 63 different issuers. We offer fully-automated opening, closing and halt reopening auctions for our listed securities, which are designed to maximize the efficiency of the price discovery process.

Cboe also offers issuers the choice of an innovative market maker program referred to as the Cboe Lead Market Maker (“LMM”) incentive program on Cboe BZX and the Cboe Europe Equities Liquidity Provider Program (“LPP”) on Cboe Europe Equities. Under the LMM program, an LMM has certain quoting obligations and for meeting those enhanced obligations, Cboe pays the LMM a daily stipend that varies depending on the average aggregate daily auction volume in the ETPs assigned to such LMM. Also, LMMs transact for free in the closing auction in their assigned ETPs. Under the LPP, Cboe Europe Equities offers three programs designed for participants that wish to provide liquidity by posting and maintaining executable quotes within certain set parameters with the result of providing liquidity on a regular and ongoing basis. Cboe BZX also offers the Cboe Liquidity Management Provider (“LMP”) Program (“LMP Program”). The LMP Program is a rewards-based program that incentivizes liquidity providers to make a better market in ETPs. Incentives are based on an LMP’s quote quality in the Cboe LMP Program securities, which include all Cboe-listed ETPs and certain non-Cboe-listed ETPs.

### **Market Data and Information Solutions**

We derive a portion of our revenue from market data fees from U.S. tape plans, including Unlisted Trading Privileges (“UTPs”), the Consolidated Tape Association (“CTA”) and OPRA. Fees, net of plan costs, from UTP, CTA, and OPRA are allocated and distributed to plan participants like us according to their share of tape fees based on a formula, required by Regulation NMS, which may take into account both trading and quoting activity.

We also provide a robust offering of market data and information solutions products across multiple asset classes and geographic regions that are designed to suit our customers' diverse needs. Products include real-time depth of book quotation information, auction and complex option information, top of book quotes and trades, last sale information, consolidated equity feeds, real-time index values, and trade reporting facility information. With our recent information solutions acquisitions, we have expanded our services to include analytics services, theoretical values, alpha generating tools, probability data, and historical information for our markets through multiple data services, which include Silexx, LiveVol, Hanweck, FT Options, and Trade Alert.

## Our Models

Our markets use a combination of pricing and market models to differentiate them from each other and from our competitors. For our options markets, Cboe Options is a hybrid market combining open outcry floor trading with electronic trading. For multi-listed products, we utilize public customer priority, market turner in certain products, participation rights and pro-rata allocation market models, combined with the "classic" pricing model. Under the classic pricing model, professional participants pay transaction fees, public customers generally do not pay transaction fees and market makers compensate brokers for sending order flow to the exchange (known as payment for order flow). For proprietary products, we use price-time or pro-rata allocation, sometimes with public customer priority, and market turner market models, combined with a pricing model where all market participants generally pay fees. Our other three options markets are fully electronic. BZX options utilizes a price-time market model, combined with a "maker-taker" pricing model. Under the maker-taker pricing model, market participants who make the market (a "maker") generally receive a rebate, while market participants who trade against those markets (a "taker") pay a transaction fee. EDGX options utilizes customer priority, participation rights and pro-rata allocation market models, combined with the classic pricing model. C2 options utilizes a pro-rata allocation market model, combined with the maker-taker pricing model.

For our U.S. equities exchanges, which are fully electronic, BZX equities utilizes a price-time market model, combined with the maker-taker pricing model. EDGX equities utilizes a price-time with retail priority market model, combined with the maker-taker pricing model. BYX equities utilizes a price-time with price improvement for retail customers market model, combined with the "taker-maker" pricing model. Under the taker-maker pricing model, market participants who make the market pay a transaction fee, while market participants who trade against those markets receive a rebate. EDGA equities utilizes a price-time market model, combined with a taker-maker pricing model. In addition to these market models, each of the U.S. equity exchanges provide numerous specific order types that are designed to enhance their respective market models.

For our Canadian equities ATS, which is fully electronic, MATCHNow utilizes a model that combines frequent call matches and continuous execution opportunities in a confidential trading book. The system uses real-time quotes for protected transparent Canadian markets. Orders matched within MATCHNow are executed at three levels of price improvement: (1) the mid-point between the Canadian best bid and offer (the "CBBO"); (2) one price increment better than the CBBO or; (3) at the bid or offer for orders that meet a specified large threshold. Trading fees are typically calculated as a function of trade volume and share price.

For our U.S. equities ATS market, which is fully electronic, BIDS Trading utilizes a sponsored access model to provide anonymous executions in NMS stocks. BIDS Trading provides numerous order types, including both firm and conditional orders. All orders matched within BIDS Trading are executed at or better than the NBBO. BIDS Trading charges fees based on disclosed, objective criteria: (i) means of access; (ii) the type of order; and (iii) the total volume of executions during the calendar month.

For our futures market, which is fully electronic, CFE utilizes a price-time market model, combined with a pricing model where all market participants generally pay fees, subject to specified exceptions.

Our Cboe FX platform utilizes a price-firmness-time priority market model, combined with a pricing model where users are charged either a flat or tiered commission rate based upon the notional amount traded on the platform. Our Cboe SEF platform charges a flat commission based upon the notional amount traded on the platform and the capacity in which a participant is trading.

In Europe, following the implementation of the Directive on Markets in Financial Instruments (Directive 2014/65/EU) ("MiFID II"), rebates are generally available if they are tied to a market making scheme or specific service.

Our exchanges also charge fees for the opportunity to trade or access our exchanges, including fees for trading-related functionality. To facilitate trading, we also charge fees for certain technology services, terminal and other equipment rights, maintenance services, trading floor space and telecommunications services.

## Clearing

On July 1, 2020, we completed our acquisition of EuroCCP, a European central counterparty (“CCP”), that provides post-trade services, including clearing, to stock exchanges, multilateral trading facilities and for over-the-counter equities trades. EuroCCP acts as a central counterparty that, for its clearing participants, becomes the buyer to every seller and the seller to every buyer. As a result, it guarantees the timely performance of the obligations of buyers and sellers and takes on the risk of the performance of the transactions that it clears. Additionally, as a critical Financial Market Infrastructure, EuroCCP is subject to strict business continuity requirements and regulatory oversight. In 2020, EuroCCP provided CCP protection for an average of €41 billion of cleared value on a daily basis. Through the process of netting, in 2020, EuroCCP eliminated 80% or €30 billion of the average daily cleared value, leaving an average daily settlement value of €11 billion.

## Customers

Our customers generally include financial institutions, trading platforms, institutional and individual investors and professional traders. Our equities and options customers in the United States include trading permit holders and members of Cboe Options, C2, BZX, BYX, EDGX, and EDGA, which are SEC-registered broker-dealers, and the customers of those broker-dealers. Our Canadian equities customers include participants of MATCHNow, which are Canadian registered investment dealers, and certain clients of those dealers. Our ATS equities participants in the United States include users of BIDS Trading, which are SEC-registered broker-dealers and certain customers of those broker-dealers. Our futures customers include banks, futures commission merchants and their customers, hedge funds, asset managers, proprietary trading firms and Commodity Trading Advisors. Similarly, our equities’ customers in Europe are European Union (“EU”) regulated brokerage and proprietary trading firms, as well as sponsored access clients of these brokerage firms, and certain non-EU. regulated and unregulated direct access participants. EuroCCP clears equities from 18 European markets and from the United States, as well as Depositary Receipts, ETFs, and exchange traded currencies (“ETCs”). Our institutional global FX customers include banks, broker-dealers, hedge funds, asset managers, proprietary trading firms, Commodity Trading Advisors and corporates. Access to our markets, trading rights and privileges depend upon the nature of the customer, such as whether the individual is a trading permit holder, trading privilege holder, member or participant of one of our markets.

## Competition

The industry in which we operate is intensely competitive. We believe we face competition on a number of factors, including:

- the price, quality and speed of our trade and clearing execution;
- functionality and ease of use of our trading and clearing platforms;
- range of our products and services;
- integrity of our marketplaces;
- technological innovation and adaptation; and
- our reputation.

We believe that we compete favorably with respect to these factors through a variety of methods, including:

- offering access to a broad array of products and services, including proprietary products and market data;
- offering fee schedules, pricing models that both attract order flow and provide incentives to liquidity providers;
- providing advanced technology that offers broad functionality, low latency, fast execution, ease of use, scalability, reliability and security;
- offering efficient, transparent and liquid marketplaces;
- offering deep and liquid markets with opportunities for price improvement;
- offering broad trading platform access in the EU;
- maintaining close relationships with customers; and
- providing customers with a comprehensive source of information on options and ETPs as well as extensive options education.



In our proprietary products, we compete against other futures exchanges and swap execution facilities that offer similar products, as well as against financial market participants that offer similar over-the-counter derivatives. We also compete against certain multi-listed options products, such as options on SPY, which may offer similar market exposure of our proprietary products such as SPX options.

The multi-listed options industry is extremely competitive. We expect this trend to continue. As of December 31, 2020, we compete with 12 U.S. options exchanges, in large part due to existing exchange holding companies opening new exchanges that offer different markets and pricing models on existing technology. Most of the equity and ETP options listed and traded on our exchanges are also listed and traded on the other exchanges. In addition, the options exchanges that we compete with set fees and rebates to attract multi-listed options business to their exchanges, which has historically reduced the net revenue per contract that we generate from multi-listed options, and the options exchanges that we compete with structure their options businesses in partnership with established market participants, such as consolidators, and other order flow providers, to increase their volume traded.

Our U.S. listed equity securities and listing services and the BIDS Trading ATS compete against 12 other exchanges as of December 31, 2020, and several other ATSS and single dealer platforms. Market participants have multiple venues for the execution of orders, including national securities exchanges and numerous off-exchange venues, including other ATSS and broker-dealers who internalize orders off-exchange. Additionally, issuers have multiple venues for the listing of their products. In Canada, our equities ATS, MATCHNow, competes with several Canadian exchanges and other ATSS.

The market for execution and clearing services in Europe became more competitive following the introduction of MiFID II and the Regulation on Markets in Financial Instruments (Regulation (EU) No 600/2014) (“MiFIR”). Furthermore, MiFID II and MiFIR placed more onerous conditions on trading venues and investment firms and restricted certain types of trading activity. Our major competitors in Europe include national stock exchanges, other pan-European MTFs, European clearinghouses, dark pools, and systematic internalizers.

The global FX market remains severely fragmented, with transparent automated marketplaces such as Cboe FX challenging a small number of similarly situated competitors. While the global FX market has experienced a shift from competing interbank platforms to ECNs, the electronification of the spot and NDF FX market may encounter resistance from customers that still prefer to utilize the phone, instant chats, terminals and key banking relationships for price discovery and trading. Furthermore, electronification of the FX market appears to be experiencing more resistance outside the United States. The electronic spot FX market is also intensely competitive, with over 10 other venues competing for market share as of December 31, 2020. Cboe measures and reports on market share against a narrower set of competitors, included in those venues.

In addition, demand for our market data faces competition from other securities exchanges, technology companies, third-party market data providers and information and software vendors, who have their own substantial market data distribution capabilities that serve as alternative means for receiving open market data feeds instead of connecting directly to our exchanges or trading venues. The sale of our proprietary data products is also under competitive threat from ATSS and trading venues that offer similar products. Distributors and consumers of our market data may also use our market data as an input into a product that competes against one of our traded or cleared products.

## **Technology**

### ***Cboe Trading Technology***

The trading platform for our equities, options and futures markets is developed, owned and operated in-house and is designed to optimize reliability, speed, scalability and versatility. Each of our exchanges provide different market models, appealing to different user bases and the trading technologies support all of them. Further, the technologies are designed to support many specialized features for each of the markets, such as: dark pools, trade reporting facility, systematic internalizer, Large-in-Scale, smart order routing, FLEX options, 24x5 trading and hybrid trading (combining electronic and open outcry). In addition, Cboe operates separate trading and clearing platforms, as applicable, for BIDS Trading, MATCHNow, EuroCCP, and Global FX.

Our trading platforms have experienced very low operational downtime and low latency. The trading platforms use readily available hardware, thereby minimizing capital outlays required for each new market entry. Also, in order to continue to implement new enhancements to our trading platforms, new releases of software are generally deployed routinely in all of the applicable markets.

## **Disaster Recovery**

We operate and maintain geographically diverse disaster recovery facilities for all of our markets. We expect that the disaster recovery facilities can be up and running in a short period of time and work with our market participants to ensure that the marketplace can be quickly reopened. We regularly test our data center recovery plans and periodically carry out weekend tests using our back-up data centers, as well as an annual test with our U.S. trading participants. In Canada, as required by local regulations, MATCHNow conducts internal testing of its disaster recovery data processing capabilities at least annually, and it participates in the bi-annual testing coordinated by the IIROC. In Europe, we also regularly test our data center recovery plans and periodically carry out weekend tests which use our back-up data center, as well as an annual test with our European trading participants. We continue to work to improve both the availability of our technology and our disaster recovery facilities.

## **Routing and Clearing**

OCC is the sole provider of clearing on all of our options and futures exchanges. National Securities Clearing Corporation ("NSCC"), a subsidiary of the Depository Trust and Clearing Corporation ("DTC"), is the sole provider of clearing on our U.S. listed equity exchanges. The Canadian Depository for Securities ("CDS") is the sole provider of clearing on all equities transactions occurring on MATCHNow. BofA Securities, Inc. ("BOA") is the sole provider of clearing on all equities transactions occurring on BIDS Trading. Cboe Europe Equities relies on LCH Limited and LCH SA ("LCH"), EuroCCP, which is described above, and SIX x-clear Ltd ("SIX x-clear") to clear trades in European listed equity securities as part of an interoperable clearing model.

Cboe Trading is a routing broker-dealer used by our four U.S. equities exchanges and our four U.S. options exchanges, including the electronic platform portion of Cboe Options. Cboe Trading's clearing firms are Wedbush Securities, Inc. ("Wedbush") and Morgan Stanley & Co. LLC ("Morgan Stanley").

## **Regulatory Environment and Compliance**

Various aspects of our business are subject to regulation by the SEC, CFTC, FINRA, IIROC, the Ontario Securities Commission (the "OSC"), ESMA, FCA, the Central Bank of the Netherlands ("DNB"), and the AFM and market participants may be subject to regulation by the SEC, CFTC, FINRA, National Futures Association ("NFA"), FCA, Board of Governors of the Federal Reserve, U.S. Department of the Treasury and/or foreign regulators. The following is a discussion of the more significant areas of regulation of us by the SEC, the CFTC, and certain European regulators.

### **Recent Developments**

Laws and regulations regarding our business are frequently modified or changed to address perceived problems, new products, competition or at the request of market participants. The following is a summary of the general regulatory structure and brief discussion of recent regulatory developments that may significantly impact our business.

#### **United States**

##### *Transaction Fee Pilot*

In December 2018, the SEC approved a transaction fee pilot in national market system ("NMS") stocks (the "transaction fee pilot"). The pilot will subject stock exchange transaction fee pricing, including maker-taker fee-and-rebate pricing models, to new temporary pricing restrictions across two test groups, and will require the exchanges to prepare data to be submitted to the SEC. The transaction fee pilot includes a test group that will prohibit rebates and linked pricing, as well as a test group that will impose a cap of \$0.0010 for removing or providing displayed liquidity. Once commenced, the transaction fee pilot will last for up to two years with an automatic sunset at one year unless extended by the SEC. On June 16, 2020, the Court of Appeals for the D.C. Circuit vacated the transaction fee pilot and remanded it back to the SEC for reconsideration.

The transaction fee pilot, or a successor pilot, if any, may cause Cboe's equities exchanges, BZX, BYX, EDGX, and EDGA, to require additional resources to comply with or continue to challenge the transaction fee pilot or a successor pilot and it may have a material impact on our business, financial condition and operating results if, for example, order flow shifts away from exchanges were to occur.

### *Consolidated Data Plan Order*

On May 6, 2020, the SEC issued a final order (the “Consolidated Data Plan Order”) that would require U.S. equities exchanges and FINRA to develop and file a new consolidated data plan (the “Plan”) that would replace the three current U.S. equities tape data plans and require certain governance provisions, such as changes to the voting structure. Pursuant to the Consolidated Data Plan Order, we and the other U.S. equities exchanges and FINRA were required to file the proposed Plan for public comment before the SEC takes any definitive action on such new plan. The proposed Plan was filed on August 11, 2020. Until and if the SEC approves a new plan, the current data plans will continue to govern. The Consolidated Data Plan Order may cause our equities exchanges, BZX, BYX, EDGX, and EDGA, to require additional resources to comply with or challenge the Consolidated Data Plan Order and it may have a material impact on our business, financial condition and operating results if, for example, there is a negative impact on the market data fees our equities exchanges are able to charge. See “Risk Factors” and “Legal Proceedings” for more information.

### *Financial Transaction Taxes*

A number of federal, state and local jurisdictions in the U.S. and EU Member States have considered a financial transaction tax, but many details remain to be discussed and agreed, including how to assess the tax. Implementation of a financial transaction tax could result in a reduction in volumes and liquidity, which would have a negative impact on our operations. See “Risk Factors” for more information.

### *Market Data Infrastructure Rule*

On December 9, 2020, the SEC issued a Market Data Infrastructure Final Rule, which makes significant additions to the content available on the Securities Information Processors (“SIPs”) and replaces the exclusive processors with a competing consolidator model. The implementation of the new rules could cause Cboe’s equities exchanges, BZX, BYX, EDGX, and EDGA, to require additional resources to comply with or to challenge the new rules and they may have a material impact on our business, financial condition and operating results if, for example, there are lower SIP plan revenues or we must reduce the fees we charge for market data. See “Risk Factors” and “Legal Proceedings” for more information.

## **Europe**

### *Brexit*

On June 23, 2016, the United Kingdom (the “UK”) voted to leave the EU in a referendum (the “Brexit Vote”). On January 31, 2020, the UK exited from the EU (“Brexit”) and began a transition period (the “Transition Period”) lasting until December 31, 2020. On December 31, 2020, the Transition Period ended. The EU and UK agreed to a trade deal but it did not cover the entire financial sector. New restrictions on share trading came into force when trading began on January 4, 2021, preventing EU firms from accessing UK venues in European Economic Area (“EEA”)-listed securities. However, this restriction was not imposed in the other direction. As a result, UK firms are permitted to trade EEA listed securities on EU venues. While the EU and UK have committed to agreeing to a framework for co-operation on financial service regulation, there is no assurance that this will lead to improved access to UK venues by EU firms. There is likely to be ongoing uncertainty about the capital markets regulation that will apply to Cboe Europe Equities and its customers for the foreseeable future. For information regarding risks related to Brexit, see “Risk Factors.”

### *Withdrawal of Swiss Equivalence and Swiss Counter Measure*

As a result of an ongoing disagreement between the EU and Switzerland, the European Commission allowed its MiFID equivalence decision for Switzerland to expire at the end of June 2019. As a result, Switzerland made it illegal for venues in the EU, including Cboe Europe, to trade Swiss equities. Consequently, Cboe Europe had to remove these instruments from trading and suffered a loss of trading revenues. However, following Brexit and the end of the Transition Period, UK and Swiss governments were able to reach an agreement to allow the trading of Swiss equities on UK trading venues, including Cboe Europe’s UK exchange. Cboe Europe resumed trading in Swiss equities on February 4, 2021.

## *Capital Markets Union*

The European Council (“E.C.”) has highlighted one of its top priorities as being the establishment of a fully functioning, well-regulated Capital Markets Union (“CMU”). An Action Plan of concrete steps was set out in September 2015, and an update of the list of initiatives was published in September 2016. More recently, the E.C. has set up a High Level Forum on CMU, with the E.C. and European Parliament also seeking to reboot this project. This therefore remains an ongoing project for the E.C., which may result in additional regulation or legislation.

## *OTC Derivatives, Central Counterparties and Trade Repositories*

Regulation (EU) No 648/2012 of the European Parliament and of the Council of July 4, 2012 on OTC derivatives, central counterparties and trade repositories (the “European Market Infrastructure Regulation” or “EMIR”) sets out rules relating to over-the-counter (“OTC”) derivatives markets, central counterparties and trade repositories. The rules introduce a reporting obligation for OTC derivatives markets, a clearing obligation for eligible OTC derivatives markets, measures to reduce counterparty credit and operational risk for bilateral OTC derivatives markets, CCPs, and trade repositories, and rules on the establishment of interoperability between CCPs. EMIR was enhanced and amended in June 2019. In addition, regulation governing the authorization and supervision of Central Securities Depositories (“CSDR”) was approved in September 2014, with the publication of most “Level 2” Regulatory Technical Standards in March 2017, with implementation in March 2019. CSDR may result in the introduction of mandatory buy-ins for OTC business in 2021. In June 2020, European authorities reached a political agreement on a proposed Central Counterparty Recovery and Resolution Regulation (“R&R Regulation”), which may, among other things, increase the amount of prefunded capital EuroCCP is required to maintain. This additional prefunded capital may be required to be drawn before any resolution measures can be taken by the CCP. The final text of the R&R Regulation was published in the Official Journal of the EU on January 22, 2021. As European authorities finalize and potentially adopt level 2 guidance, the final R&R Regulation may have a material adverse effect on our business, financial condition and operating results.

## **Compliance**

### *U.S. Securities Industry*

Federal securities laws have established a two-tiered system for the regulation of securities exchanges and market participants. The first tier consists of the SEC, which has primary responsibility for enforcing federal securities laws. The second tier consists of self-regulatory organizations (“SROs”), which are non-governmental entities that must register with and are regulated by the SEC. The Exchanges are SROs, each registered under Section 6 of the Exchange Act of 1934, as amended (“Exchange Act”) as a “national securities exchange,” and are subject to oversight by the SEC.

SROs are an essential component of the regulatory scheme of the Exchange Act for providing fair and orderly markets and protecting investors. To be registered as a national securities exchange, an exchange must successfully undergo an application and review process with the SEC prior to beginning operations. Among other things, the SEC must determine that the SRO has the ability to comply with the Exchange Act and to enforce compliance by its members and persons associated with its members with the provisions of the Exchange Act, the rules and regulations thereunder and the rules of the exchange.

In general, an exchange SRO is responsible for operating its trading platforms consistent with its rules, and regulating its members through the adoption and enforcement of rules governing the business conduct of its members. The rules of the exchange must also assure fair representation of its members in the selection of its directors and administration of its affairs and, among other things, provide that one or more directors be representative of issuers or investors and not be associated with a member of the exchange or with a broker or dealer. Additionally, the rules of the exchange must be adequate to ensure fair dealing and to protect investors and may not impose any burden on competition not necessary or appropriate in furtherance of the purposes of the Exchange Act.

As registered national securities exchanges, virtually all facets of our Exchange operations are subject to the SEC’s oversight, as prescribed by the Exchange Act. The Exchange Act and the rules thereunder impose on us many regulatory and operational responsibilities, including record keeping and the day-to-day responsibilities for market operations and broker-dealer oversight. Furthermore, as SROs, the Exchanges are potentially subject to regulatory or legal action by the SEC or other interested parties. The SEC also has broad enforcement powers to censure, fine, issue cease-and-desist orders, prohibit us from engaging in some of our businesses, suspend or revoke our designation as a registered securities exchange or remove or censure any of our officers or directors who violate applicable laws or regulations. For example, in 2013, Cboe Options and C2 and, in 2015, EDGX and EDGA, entered into consent orders with the SEC, under which they

were censured, ordered to cease and desist from violating certain sections of the Exchange Act, paid fines and agreed to complete certain undertakings. We have certified to the completion of these undertakings and are no longer required to certify.

As part of its regulatory oversight, the SEC conducts periodic reviews and inspections of exchanges, and the Exchanges have been subject to such routine reviews and inspections. To the extent such reviews and inspections result in regulatory or other changes, we may be required to modify the manner in which we conduct our business, which may adversely affect our business. We collect certain fees to cover Section 31 fees charged to the Exchanges by the SEC and certain fees derived from our regulatory function and fines in connection with our disciplinary proceedings. The Exchanges are responsible for the ultimate payment of Section 31 fees to the SEC. Additionally, under the rules of each of our exchanges, as required by the SEC, any revenue derived from the regulatory fees and fines cannot be used for non-regulatory purposes.

Section 19 of the Exchange Act also provides that we must submit to the SEC proposed changes to any of the Exchanges' rules, including revisions of their certificates of incorporation, bylaws, or other governing documents of the SROs or their parent companies. The SEC will typically publish the proposal for public comment, following which the SEC may approve or disapprove the proposal, as it deems appropriate. Certain categories of rule changes, like fee changes, can be effective on filing, but the SEC retains the ability to suspend or reject such filings within a prescribed period of time.

#### *Canadian Securities Industry*

MATCHNow is subject to comprehensive regulation and oversight by the IIROC, and its primary provincial securities regulatory authority, the OSC. The regulations applicable to MATCHNow cover a wide array of areas, including, but not limited to, marketplace operations (which include corporate governance, fair access, systems compliance and integrity, and conflict management requirements), trading rules, electronic trading risk management, and financial viability.

#### *Futures and Swaps Industry-CFE and Cboe SEF*

The operations of each of CFE and Cboe SEF are subject to regulation by the CFTC under the Commodity Exchange Act. The Commodity Exchange Act generally requires that futures trading in the United States be conducted on a designated contract market and, in some cases, requires swaps trading to be conducted on swap execution facility ("SEF") or designated contract market ("DCM"). The Commodity Exchange Act and CFTC regulations establish criteria for an exchange to be designated as a contract market on which futures and futures options contracts may be traded, and for a trading platform to be designated as a swap execution facility on which certain swaps may be traded. Designation as a contract market or swap execution facility for the trading of specified futures or swaps contracts is non-exclusive. This means that the CFTC may permit additional exchanges or trading platforms to be contract markets or swap execution facilities for trading the same or similar contracts.

CFE is a designated contract market, and Cboe SEF is a swap execution facility, each of which is subject to the oversight of the CFTC and to a variety of ongoing regulatory and reporting responsibilities under the Commodity Exchange Act. As a designated contract market, CFE is required to comply with the applicable core principles and regulations under the Commodity Exchange Act, as is Cboe SEF as a swap execution facility. Each of CFE and Cboe SEF has surveillance and regulatory operations and procedures to monitor and enforce compliance by trading privilege holders with CFE rules, and by participants with Cboe SEF rules, as applicable. If CFE or Cboe SEF fails to comply with applicable laws, rules or regulations, it may be subject to censure, fines, cease-and-desist orders, suspension of its business, removal of personnel or other sanctions, including revocation of CFE's designation as a contract market or Cboe SEF's designation as a swap execution facility.

#### *Europe*

Cboe Europe is located in London and is subject to regulation in the UK and to certain European regulations. The current UK regulatory system was established by the Financial Services Act 2012 ("FSA12"), which amended the Financial Services and Markets Act 2000. The legislation replaced the previous financial services regulator, the Financial Services Authority, with three new bodies: The Financial Policy Committee ("FPC"), The Prudential Regulation Authority, and the FCA. Financial conduct of markets, including activity on, and the operation of, markets is regulated by the FCA, which is an independent non-governmental body, given statutory powers by the FSA12. The FCA has three statutory objectives: to secure an appropriate degree of protection for consumers; to protect and enhance the integrity of the UK

financial system; and to promote effective competition in the interests of consumers in the markets for financial services. The FCA is accountable to Her Majesty's Treasury Ministers and, through them, to Parliament.

EuroCCP and Cboe NL are located in Amsterdam and subject to Dutch law and regulation. The current Dutch regulatory system was established by the Act on Financial Supervision. Financial conduct of markets, including activity on, and the operation of, markets is regulated by the AFM. Financial conduct of CCPs, including clearing activity is regulated by the AFM and DNB. The AFM is an independent non-governmental body, given statutory powers by the Act on Financial Supervision. The AFM has three strategic objectives: to promote the fair and conscientious provision of financial services, to promote the fair and efficient operation of the capital markets and to contribute to the stability of the financial system. The AFM is accountable to the Minister of Finance. The DNB is the Dutch central bank, financial sector supervisor and resolution authority. The DNB is committed to a stable financial system: stable prices, solid financial institutions and properly functioning payment transfers.

Much of the UK and Dutch financial services regulation originates from the EU. Such regulation includes organizational requirements, capital resources requirements and the specific requirements for RMs and MTFs and are applicable to both Cboe Europe and Cboe NL. MiFID II and MiFIR set out requirements for RMs and MTFs with respect to the establishment of transparent and non-discretionary rules and procedures governing access and for fair and orderly trading and the efficient execution of orders, as well as to facilitate the efficient settlement of transactions conducted on RMs and MTFs and monitoring compliance with the rules. EMIR governs the CCPs operating in the EU and requires them to meet common risk management, governance and capital adequacy standards. The regulatory functions required of Cboe Europe Equities, including EuroCCP, by MiFID II, MiFIR, EMIR and other relevant legislation and regulations are performed by in-house staff. Cboe Europe Equities utilizes the same state-of-the-art, real-time surveillance system is used on the U.S. to monitor trading and market activities on BZX, BYX, EDGA, and EDGX. EuroCCP utilizes proprietary risk management software to monitor settlement and funding flows.

#### *Global FX*

While the global institutional spot FX market remains largely unregulated, the enactment of the Dodd Frank Act and its related regulations in the United States and the ongoing implementation of MiFID II and MiFIR in Europe have impacted the regulatory landscape for currency derivative products. For example, certain standardized currency derivative products are required to trade on an organized trading venue such as a SEF or DCM in the United States or on an MTF or organized trading facility in Europe. Moreover, even in the largely unregulated spot FX market, this movement towards additional trading standards and norms is highlighted by the publication of the FX Global Code in 2017 by the Global Foreign Exchange Committee, reflecting principles of good conduct for the wholesale FX market, and whose publication may lead to additional oversight in the global FX market. Cboe FX issued a Statement of Commitment declaring its commitment to conduct its FX market activities in a manner consistent with the principles of the FX Global Code. Following the publication of the FX Global Code regulators are taking a new look at the spot FX market, and any decision to impose new regulations may affect our spot FX business line.

#### *Broker-Dealer*

Cboe Trading and BIDS Trading are registered broker-dealers regulated by the SEC, FINRA, other SROs of which they are members and various state securities regulators. Cboe Trading currently operates as a routing broker-dealer for sending orders from the Exchanges to other venues for execution, including routing orders among the Exchanges. Cboe Trading is considered a facility of each of the Exchanges and is subject to the rules of the Exchanges. The Exchanges are responsible for enforcing Cboe Trading's compliance with their rules, including to ensure Cboe Trading is not given preferential treatment. BIDS Trading currently operates an ATS, which is designed to bring counterparties together to anonymously trade large blocks of U.S. equities. BIDS Trading is not a member of any of the U.S. national securities exchanges and is not subject to exchange rules.

Cboe Trading and BIDS Trading are subject to SEC and SRO rules, as applicable, and, as registered broker-dealers, regulations concerning all aspects of their businesses, including trading practices, order handling, best execution, anti-money laundering, handling of material non-public information, safeguarding data, reporting, capital adequacy, record retention, market access and the conduct of their officers, employees and other associated persons. The SEC, SROs and state securities commissions may conduct proceedings which can result in injunctions or other sanctions, censures, fines, the issuance of cease and desist orders or the suspension or expulsion of a broker-dealer, its officers or employees. The SEC and FINRA impose certain minimum capital requirement rules that require notification when a broker-dealer's net capital falls below certain predefined criteria, dictate the ratio of debt to equity in the regulatory capital composition of a

broker-dealer, constrain the ability of a broker-dealer to expand its business under certain circumstances and impose certain requirements that may have the effect of prohibiting a broker-dealer from distributing or withdrawing capital.

In addition, the ATS operated by BIDS Trading is not a registered national securities exchange or a facility thereof, as such, Cboe intends to maintain the BIDS ATS as an independently managed and operated trading venue, separate from and not integrated with the Exchanges. BIDS Trading Chief Executive Officer, Tim Mahoney, is expected to remain in his current role and lead BIDS Trading as an independent business within Cboe, reporting into an independent committee of the board of Cboe Global Markets. Further, Cboe Trading will not route orders to BIDS Trading on behalf of the Exchanges.

### *Cboe Global Markets*

Certain aspects of Cboe Global Markets are also subject to SEC, FCA and AFM oversight, including certain ownership and voting restrictions on its stockholders. The focus of the SEC's regulation of Cboe Global Markets is to assure fair representation of members in the selection of the directors of the Exchanges, public participation in the governance of the Exchanges and that the Exchanges can satisfy their regulatory responsibilities under the Exchange Act. Furthermore, the SEC requires that Cboe Global Markets give due regard to the preservation of the independence of the self-regulatory function of the Exchanges and to Cboe Global Markets' obligations to investors and the general public. The SEC also requires that Cboe Global Markets not take any actions that would interfere with the effectuation of any decisions by the board of directors of any of the Exchanges relating to its regulatory functions or the structure of the market that it regulates or that would interfere with the ability of such Exchange to carry out its responsibilities under the Exchange Act. To the extent that Cboe Global Markets' business activities involve or relate to the Exchanges, the officers and directors of Cboe Global Markets may be deemed to be officers and directors of the exchanges for purposes of and subject to oversight under the federal securities laws. Accordingly, the SEC may exercise direct supervision and disciplinary authority over certain Cboe Global Markets' activities and those activities may be subject to SEC approval and, in some cases, public notice and comment.

In addition, Cboe Global Markets indirectly holds all of the issued share capital and voting rights in Cboe Europe and its wholly owned subsidiaries, Cboe Chi-X Europe and Cboe NL. As a result, we and any person who holds, or has voting power with respect to, 10% or more of the outstanding shares of Cboe Global Markets common stock may be subject to certain regulatory requirements under UK and Dutch law.

### **U.S. Regulatory Responsibilities**

Our U.S.-based exchanges are responsible for assessing the compliance of their TPHs or members, including Cboe Trading, with the respective exchange's rules and the applicable rules of the SEC and/or CFTC. The main activities that the exchanges, as applicable, are required to monitor for the purpose of compliance with these rules include:

- surveillance designed to detect violations of exchange trading rules;
- surveillance designed to detect violations of SEC and/or CFTC rules;
- investigation of matters deemed to be problematic;
- the investigation of complaints about possible rule violations brought by customers, TPHs, members or other SROs; and
- the examination of TPHs or members, including Cboe Trading, for compliance with rules such as those related to net capital, books and records, market access and other matters related to the TPHs' exchange business functions.

In order to ensure market integrity, we regulate and monitor our TPHs' and members' trading activities by using both our employees and third parties under regulatory services agreements ("RSAs"). See "Regulatory Agreements" below. Providing effective regulation is important for attracting and retaining the confidence and participation of market-makers, broker-dealers and institutional and retail investors.

We expend considerable time, financial resources and effort to ensure that the exchanges' rules and regulations conform to regulatory best practices within the securities and futures exchange industries and within the regulatory regime overseen by the SEC and CFTC, our primary regulators. In order to support our efforts and those of our market participants to comply with applicable law and our exchange rules, we developed a regulatory program to monitor market activity on our exchanges.



All of our Exchanges and CFE are participants in the Intermarket Surveillance Group (“ISG”). ISG is an international information-sharing cooperative governed by a written agreement that provides for a comprehensive surveillance sharing arrangement. In addition to the agreement for confidential information sharing, the ISG provides a framework for the coordination of regulatory efforts among exchanges trading securities, commodity futures and related products to address potential intermarket manipulations and trading abuses.

As part of the regulatory program, each of our Exchanges and CFE have rules pertaining to their respective disciplinary processes.

## **U.S. Regulatory Agreements**

The Exchanges and CFE have entered into agreements under which third parties have agreed to perform regulatory functions on behalf of our markets, (e.g., RSAs). As discussed below, in addition, in certain other instances for our Exchanges, a third party has been allocated the regulatory responsibility under Rule 17d-1 or Rule 17d-2 under the Exchange Act, while in others, we retain the regulatory responsibility for the activities.

### *Regulatory Services Agreement with FINRA*

The Exchanges have entered into agreements with FINRA under which FINRA has agreed to provide regulatory services to the Exchanges. Under these agreements, FINRA performs certain regulatory functions on behalf of the Exchanges and, to avoid any potential conflicts of interest concerning the regulation and oversight of Cboe Trading, certain regulatory services specific to Cboe Trading. The Exchanges remain responsible for the regulation of their TPHs, members and marketplaces, and retain the authority for bringing disciplinary actions against their TPHs and members, although FINRA performs various disciplinary-related functions on behalf of the Exchanges. Over the course of 2019 through 2021 certain regulatory and disciplinary-related functions that FINRA had performed on behalf of the Exchanges have been, or are in the process of being, moved back in-house from FINRA.

### *Regulatory Services Agreements with NFA and OCC*

Through December 31, 2020, the NFA performed regulatory functions on behalf of CFE pursuant to an RSA with CFE. Starting January 1, 2021, these regulatory functions were moved in-house from the NFA. In addition, OCC has also performed and continues to perform certain regulatory functions on behalf of CFE pursuant to an RSA with CFE. CFE also performs other regulatory and disciplinary-related functions in-house. Whether performed under an RSA or in-house, CFE retains overall responsibility for the regulation of its marketplace and for bringing disciplinary actions. CFE is also a party to cooperative and regulatory information sharing agreements with other SROs and is a member of the ISG, described above.

### *Rule 17d-1 Designations and Rule 17d-2 Agreements*

Section 17(d) of the Exchange Act and the related Exchange Act rules permit SROs to allocate certain regulatory responsibilities to avoid duplicative oversight and regulation. Under Exchange Act Rule 17d-1, the SEC designates one SRO to be the designated examining authority (“DEA”) for each broker-dealer that is a member of more than one SRO. The DEA is responsible for the regulatory oversight of the Exchange Act’s financial responsibility rules pertaining to that broker-dealer. Cboe Options is the DEA for several of its TPHs. Cboe Trading’s assigned DEA is FINRA.

Exchange Act Rule 17d-2 permits SROs to enter into agreements, commonly called Rule 17d-2 agreements, which are approved by the SEC and concern the enforcement of rules applicable to all of those SROs and relating to TPHs and members those SROs have in common. The Exchanges have entered into certain bi-lateral Rule 17d-2 agreements under which FINRA is allocated responsibility for enforcing certain federal securities laws and certain Exchange rules that are common with FINRA rules. The Exchanges have entered into certain other multi-party Rule 17d-2 agreements that allocate responsibility among the participating SROs, which may include the Exchanges, for ensuring that their allocated common members comply with certain rules governing, among other items, options related sales practices, options related market surveillance, insider trading, NMS and consolidated audit trail NMS plan (“CAT”) compliance.

## **National Market System Plans**

We are member participants of several NMS plans including, but not limited to, the following: Cboe Options, C2, BZX, and EDGX are member exchanges in OPRA, which is the designated securities information processor for market information that is generated through the trading of exchange-listed securities options in the United States, and it

disseminates certain core trading information, such as last sale reports and quotations. Cboe Options, BZX, BYX, EDGA, and EDGX also participate in the CTA and the UTP, which perform analogous services for the U.S. equities market. Securities Information Automation Corporation (“SIAC”) acts as the “processor” for OPRA and the CTA/QC Plans. Nasdaq Stock Market, LLC acts as the processor for the Nasdaq Unlisted Trading Privileges Plan.

Cboe Options, C2, BZX, and EDGX are also parties to the Options Order Protection and Locked/Crossed Market Plan, which is designed to prohibit trade-throughs and avoid locked/crossed markets. Cboe Options, C2, BZX, and EDGX are also parties to the Options Listing Procedures Plan, which sets forth the procedures that the options exchanges must follow to list new options. Cboe Options, C2, BZX, BYX, EDGA, and EDGX are also parties to the NMS plan for the selection and reservation of securities symbols.

Under the Options Regulatory Surveillance Authority Plan (“ORSA Plan”), U.S. securities options exchanges are permitted to act jointly in the administration, operation and maintenance of a regulatory system for the surveillance, investigation and detection of the unlawful use of undisclosed, material information in trading in one or more of their markets. The ORSA Plan is intended to enhance the effectiveness and efficiency with which the exchanges regulate their respective markets and to avoid duplication of certain regulatory efforts. FINRA operates the ORSA Plan facility.

The CAT involves the creation of a comprehensive audit trail that strives to enhance regulators’ ability to monitor trading activity in the U.S. securities markets through a phased implementation. Upon final implementation of the provisions of the CAT, data will be required to be reported to a central repository the following day by each SRO (a “Plan Participant”) and broker-dealer (an “Industry Member”). On November 15, 2016, the SEC approved the CAT. The first of various phases of CAT were originally required to begin in November 2017; however, there have been some delays. In 2017, Thesys CAT LLC (“Thesys”), a subsidiary of Thesys Technologies, LLC, was selected as the plan processor with the responsibility to build and operate the CAT. The first phase of CAT ultimately went live in November 2018, at which time we and other SROs/Plan Participants began initial reporting to the CAT. In 2019, Thesys was replaced by a new plan processor, FINRA CAT, LLC, a subsidiary of FINRA. The second phase for Industry Member order and trade file submissions is now live and began in June 2020 (for equities) and July 2020 (for options), with additional sub-phases related to order and trade file submissions carrying through December 2021 (or by subsequent dates in the event the current deadlines are extended). The final implementation sub-phase, related to broker-dealer customer and account information submissions by Industry Members, is now scheduled to go live in July 2022 (or by a subsequent date in the event the current deadline is extended). While the funding of the CAT is ultimately expected to be provided by both the SROs/Plan Participants (which includes our securities exchanges) and Industry Members, until fee filings associated with the funding model are effective with or approved by the SEC, the funding to date has solely been provided by the SROs/Plan Participants. The funding by the SROs/Plan Participants has been done in exchange for promissory notes expected to be repaid once such Industry Member fees are collected. Until those fees are collected, the SROs/Plan Participants may continue to incur additional significant costs, including as a result of replacing the plan processor, or result in the uncollectibility of promissory notes related to the funding of the implementation and operation of the CAT. See Note 9 (“Credit Losses”) and Note 10 (“Other Assets, Net”) for further information. In addition, on February 14, 2021, Consolidated Audit Trail, LLC, formed by SRO Plan Participants to implement the CAT requirements, filed motions to stay all or portions of two exemptive orders the SEC issued on December 16, 2020 related to the implementation of the CAT. On February 16, 2021, Consolidated Audit Trail, LLC also petitioned the U.S. Court of Appeals for the District of Columbia Circuit for judicial review of the two exemptive orders, asserting that the orders are unlawful.

## **Intellectual Property**

We own or have rights to a number of intellectual property assets, including trademarks, service marks, domain names, trade names, copyrights, trade secrets and patents. While the majority of our intellectual property is protected under U.S. law, we have many intellectual property assets protected by laws in Europe, Asia and other parts of the world. We license some intellectual property assets to other entities. We attempt to protect our intellectual property rights, while respecting the legitimate intellectual property rights of others.

## **Human Capital Management**

Cboe has a robust human capital management program in place focused on equal opportunities, performance and career development, health and well-being, comprehensive benefits, training and succession planning. Additional information on our approach to human capital and ESG issues can be found in the Cboe Global Markets, Inc. Environmental, Social and Governance Report located in the Corporate Social Responsibility section of our website at <https://markets.cboe.com/about/corporate-social-responsibility>, which does not form a part of this Form 10-K.

## *Equal Opportunity, Diversity, and Pay Equity*

Cboe believes in a culture of diversity and inclusion that promotes creativity, collaboration and innovation, which is critical to the success of our business and defining the markets of tomorrow. Cboe is an equal opportunity employer and provides equal employment opportunities to all qualified persons without regard to sex, race, color, ethnicity, creed, religion, national origin, ancestry, citizenship status, age, veteran or military status, disability, marital status, domestic partnership or civil union status, pregnancy, sexual orientation, genetic status, gender identity or expression, and any other characteristic protected by law (a "Protected Characteristic"). Cboe is committed to applying our Equal Employment Opportunity Policy to all employment practices that impact the terms and conditions of employment including, but not limited to, hiring, evaluation, discipline, promotion, training, compensation, transfer, and termination. Actively nurturing and maintaining a diverse and inclusive culture at Cboe is a core imperative. We believe that our collective and unique perspectives fuel our capabilities, enhance our team spirit and enable us to attract and retain top talent as we define the markets of the future. Our commitment and responsibility in this regard starts at the top, with full Cboe Board of Directors and executive team support.

One of the most compelling examples of our pledge to equality, diversity and inclusion throughout our company is the completion of our first pay equity study in 2019. In 2020, we finalized the implementation of the findings of our inaugural study. To maintain and strengthen our efforts in this area, we also review the critical touchpoints across the employee journey with Cboe to keep a level playing field, from the talent selection, promotion, leadership development and succession planning processes and make adjustments, as necessary, to ensure opportunity parity across the company. Our goal is to ensure that equal pay and equal opportunity for all that results in a collaborative, high performing organization bringing new innovations to market and providing superior service to our customers.

The Cboe Women's Initiative was launched in November 2019 and includes more than 70 women working toward its mission: to increase representation, strengthen voices, and build a culture of opportunity and advancement for the women of Cboe. The Women's Initiative is led by a group of senior-level Cboe women, has broad representation across Cboe's global footprint and enjoys the support of Cboe's management and Human Resources. More specifically, the Women's Initiative is comprised of four committees that target areas where its membership strives to promote change, such as networking, enhancing recruitment and retention, highlighting benefits and resources for women at Cboe, and building a formal mentorship program at Cboe. In addition, there were several networking opportunities throughout the year for the women of Cboe. These events included the inaugural "Women Trailblazers" events where senior women share their success stories through personal accounts of career growth and impact. In March of 2020, we also celebrated International Women's Day globally with several fireside chat events with Cboe Board of Directors members.

We are also proud to share that Cboe recently formed an employee Diversity Leadership Council in 2020 focused on unlocking the potential of a variety of perspectives, capabilities and cultural experiences. We believe in a culture of diversity and inclusion that promotes creativity, collaboration and innovation, which is critical to the success of our business and defining the markets of tomorrow. To reinforce this belief, this council is a collective voice on how Cboe strives to create a diverse workforce that reflects the world in which we operate. Further, they are charged with oversight on how we build an inclusive culture where every employee feels welcome, safe and empowered.

To reinforce our commitment to organizational wide education and commitment to diversity and inclusion we provided a full-day Unconscious Bias training through third-party experts for all managers around the globe in 2020 with the commitment to continue the rollout of this program for all employees.

## *Performance and Career Development*

Cboe expects employees to perform their duties to the best of their ability and to develop their competencies for career growth. We recognize the need to provide ongoing, timely, and constructive performance feedback. Cboe has designed a Performance Management Program that drives the professional development of our employees while also providing fair and equitable rewards and recognition. The principles of performance management include:

- align performance expectations with strategy and goals of the business,
- ongoing open dialogue regarding performance and development,
- foster accountability for behaviors and actions which contribute to a positive culture, and

- commitment to deliver results which drive our business.

We continued to strengthen our talent management processes in 2020 by instituting career conversations that were enabled through specially designed toolkits for both employees and managers to support regular, valuable conversations focused on improvement, development and retention.

#### *Employee Health and Well-Being and Comprehensive Benefits Program*

Cboe's vision is to support the overall wellness of employees and their families through education and activities that encourage a healthy lifestyle, resulting in improved health and productivity. Our programs and benefit plans provide a corporate atmosphere of collective well-being that incorporate strategies for physical, emotional, mental and financial wellness. Our programs focused on enhanced employee assistance programs, wellness programs and challenges, that include both mental and physical wellbeing, and webinars and classes through our retirement vendor to support the financial health of our employees.

To further these efforts, we launched the CboeFit program that creates an opportunity to elevate these programs and strengthen employee engagement as we execute against our wellness vision and strategies. With the global pandemic in 2020, there was further focus on our Employee Assistance program that was strengthened across the globe with a diverse set of mental health resources aimed at supporting our employees during a unique and challenging time.

#### *Employee Engagement and Pulse Surveys, Town Halls and an Open-Door Policy*

In 2020, Cboe conducted our third annual employee engagement survey and has implemented career, leadership, and culture focused programs in response to the survey findings. Our participation rate exceeds standard benchmarks and a significant majority of our employees would recommend Cboe as a great place to work. To further cement our commitment to Diversity and Inclusion, we added new, enhanced questions in this area. Our Diversity Leadership Council hosted a special focus group to review these specific results to listen to the voices of our diverse population, prioritize their feedback and ideas, and create commitments for actionable improvements.

Our senior management team continues to hold the commitment to an open-door policy and encourages the free flow of information and communication in furtherance of active transparency. With the 2020 pandemic, our ability to tap into the voice of our employees was critically important. We conducted regular pulse surveys to gauge sentiment in making critical decisions. Our CEO also issues weekly letters to help connect with our employees. Human Resources also provided ongoing regular resources and tips to help support the variety of challenges from the new reality of fully remote work to childcare and elder care that our employees faced throughout 2020.

Cboe also continues to create an open and frank atmosphere in which any grievance, complaint, suggestion or question receives a timely response. Cboe offers a whistleblower hotline for complaints, which can be made anonymously. Additionally, employees can raise questions and suggestions to the Cboe Human Resources team either in-person or via a group email address and are either responded to individually or addressed at our Global Town Hall meetings. The objective of these town halls is to provide employees an update on company news, share updates from major business lines, as well as provide a forum to ask questions and offer feedback. Town halls can include updates on anything from legislation that may impact our business to ESG topics. Employees are encouraged to participate in free flow of information and communication and to offer positive and constructive feedback in furtherance of active transparency.

#### *Training and Succession Planning*

The development of all employees at Cboe is vitally important to our collective success. Through skill and competency development we signal our investment in all while also enabling enhanced productivity. Through our tuition reimbursement program, our employees receive financial support in their pursuit of specialized university courses and degrees. In addition to our ongoing offering of online courses on diverse topics through our corporate university, CboeU, we also provided new learning programs in 2020. We also have employees participate in the newly launched CboeLearns hybrid program focused on virtual classroom instruction combined with work application. Additionally, we had employees participate in another new program, CboeLive, focused on business topics to foster organizational-wide knowledge sharing and education.

Leadership is another critical element to our success at Cboe. People managers globally participated in a two-day training focused on the "4 Essential Roles of Leadership" (1. Inspire Trust; 2. Create Vision; 3. Execute Strategy; 4. Coach

Potential). We expanded on our leadership training through the design and launch of a bespoke 8-week program, CboeLeads, expanding on the development of our high potential leaders further strengthening the leadership bench and accelerating readiness of this key talent pool. The senior management team participated in an additional one-day workshop focused on their roles that was also accompanied by Leadership toolkits to guide an enhanced approach to coaching and career conversations.

Cboe has held several succession planning discussions with the Compensation Committee and Board of Directors to plan for the fulfillment of essential roles, such as the CEO and other senior officers. This process includes investments in advanced development planning for targeted successors to accelerate their readiness through key internal projects and assignments as well as tailored training. Diversity and inclusion are a formal part of Cboe's succession planning process as we work to identify and advance internal diverse talent and, in parallel, continually scan external talent pools for successors.

### Employees

As of December 31, 2020, we employed 1,010 individuals, 786 of whom are based in the United States, 113 of whom are located in London, 7 of whom are located in Belfast, Northern Ireland, 12 of whom are located in Ecuador, 6 of whom are located in Ontario, Canada, 15 of whom are located in Calgary, Alberta, 65 of whom are located in the Amsterdam, 1 of whom is located in Hong Kong, 3 of whom are located in Singapore, and 2 of whom are located in Switzerland. Of these employees, 355 were involved in technology or operations and 106 were involved in direct support of trading operations. The remaining 549 employees provide business development, financial, regulation, human resources, compliance, legal, planning and research, administrative and managerial support.

We have 8 building engineers that are covered by a collective bargaining agreement, which expires on May 31, 2021, with the International Union of Operating Engineers Local 399, AFL-CIO. Management believes that we have strong relationships with our employees, and we have never experienced a work stoppage.

### Information about our Executive Officers

Set forth below is information regarding our executive officers:

Name	Age	Position
Edward T. Tilly . . . . .	57	Chairman of the Board, President and Chief Executive Officer
Christopher A. Isaacson . . . . .	42	Executive Vice President and Chief Operating Officer
Brian N. Schell . . . . .	55	Executive Vice President, Chief Financial Officer and Treasurer
John F. Deters . . . . .	50	Executive Vice President, Chief Strategy Officer
Bryan Harkins . . . . .	44	Executive Vice President, Head of Markets Division
David Howson . . . . .	44	Executive Vice President, President Europe
Patrick Sexton . . . . .	56	Executive Vice President, General Counsel and Corporate Secretary
Jill M. Griebenow . . . . .	41	Senior Vice President, Chief Accounting Officer

*Edward T. Tilly.* Mr. Tilly is our Chairman, President and Chief Executive Officer. Mr. Tilly has served as our President since January 2019, Chairman since February 2017 and as CEO and director since May 2013. Prior to becoming CEO, Mr. Tilly served as President and Chief Operating Officer from November 2011, and Executive Vice Chairman from August 2006 until November 2011. He was a member of CBOE from 1989 until 2006, and served as Member Vice Chairman from 2004 through July 2006. He holds a B.A. degree in Economics from Northwestern University.

*Christopher A. Isaacson.* Mr. Isaacson is our Executive Vice President and Chief Operating Officer, a position he has held since January 2019. Previously he was our Executive Vice President and Chief Information Officer, a position he was appointed to upon the Company's acquisition of Bats. Prior to that, he served as Bats' Executive Vice President and Global Chief Information Officer since February 2014, he served as Bats' Senior Vice President and Chief Operation Officer from 2007 to 2014 and he has held other various senior leadership positions since 2005. Prior to being one of the founders of Bats, Mr. Isaacson was a software developer at Tradebot Systems, Inc. from 2003 to 2005. Mr. Isaacson serves on the board of directors of CFE, SEF, and OCC. Mr. Isaacson holds a B.S. degree in information systems with a minor in math from Nebraska Wesleyan University and an M.B.A. degree from the University of Nebraska-Lincoln.

*Brian N. Schell.* Mr. Schell is our Executive Vice President, Chief Financial Officer and Treasurer, a position he has held since January 2018. Previously, he was Deputy Chief Financial Officer of the Company's subsidiary Cboe Exchange,

Inc., a position he was appointed to upon the Company's acquisition of Bats. Prior to that, he served as Chief Financial Officer of Bats since March 2011. Prior to joining Bats, he held various senior leadership positions at H&R Block Inc., as well as various positions at the FDIC, KPMG and JP Morgan. Mr. Schell holds a B.B.A. degree with an emphasis in finance from the University of Notre Dame and an M.B.A. degree from The George Washington University.

*John F. Deters.* Mr. Deters is our Executive Vice President, Chief Strategy Officer, a position he has held since 2018. He has previously served as our Head of Multi-Asset Solutions from 2018 to 2019 and as Chief Strategy Officer from 2013 to 2018. Prior to joining Cboe in 2013, Mr. Deters was most recently a Vice President and Investment Banker of Financial Institutions Group, Investment Banking at Barclays from 2008 to 2013. Mr. Deters holds a B.A. degree from Wheaton College, an M.B.A. degree from the University of Chicago, and a J.D./M.S. dual degree from Georgetown University Law Center.

*Bryan Harkins.* Mr. Harkins is our Executive Vice President, Head of Markets Division, a position he has held since June 2019. He has also previously served as our Co-Head of Markets Division from March 2018 to June 2019. Previously, he was Head of Equities and Global FX of the Company's subsidiaries, a position he was appointed to upon the Company's acquisition of Bats. Prior to that, he served as Executive Vice President, Head of U.S. Markets of Bats since January 2014. Prior to the Direct Edge acquisition by Bats in January 2014 when Mr. Harkins first joined Bats, Mr. Harkins served as Chief Operating Officer of Direct Edge, where he worked since 2007. Mr. Harkins holds a B.A. degree from the University of Notre Dame and an M.B.A. degree from New York University's Stern School of Business.

*David Howson.* Mr. Howson is our Executive Vice President, President Europe, a position he has held since January 2020. Previously, he was Chief Operating Officer of Cboe Europe from 2013 to 2019. Prior to that, he served as Founder, Chief Technology Officer of Equiduct from April 2006 through June 2013. Mr. Howson holds a First Class Honours bachelor's degree from the University of Newcastle-upon-Tyne.

*Patrick Sexton.* Mr. Sexton is our Executive Vice President, General Counsel and Corporate Secretary, a position he has held since March 2018. Previously, he was Deputy General Counsel of the Company's subsidiary Cboe Exchange, Inc. He served in that capacity from July 2013 to March 2018 and has acted as legal, regulatory and compliance counsel with increasing responsibility and oversight since joining the Company in 1997. Mr. Sexton holds a B.A. degree from the University of Notre Dame and a J.D. degree with honors from Notre Dame Law School.

*Jill M. Griebenow.* Ms. Griebenow is our Senior Vice President, Chief Accounting Officer, a position she has held since August 2018. Previously, she served as Chief Financial Officer, Europe of the Company's subsidiary Cboe Europe, a position she was appointed to upon the Company's acquisition of Bats. She also previously served as Chief Financial Officer, Europe of Bats' subsidiary Bats Europe Limited since February 2014 and was employed by Bats in the financial area since 2011. Prior to that, she held various positions at Ernst & Young LLP. Ms. Griebenow is a certified public accountant and holds a bachelor's degree in accounting from the University of Northern Iowa.

## **Corporate Social Responsibility**

The Company recognizes that operating in a socially responsible manner helps promote the long-term interests of our stockholders, organization, associates, industry and community. Our guiding principles help us deliver on our corporate mission and strategy, including good citizenship.

- Active Transparency – A commitment to proactively sharing information and knowledge.
- Creative Collaboration – An enthusiasm for working with our customers and partners to advance innovation.
- Competitive Spirit – A will to succeed and be the best.
- Superior Service – A drive to understand needs and exceed expectations.
- Good Citizenship – A dedication to the betterment of our markets, workplace and community.

We believe that being a good citizen means that we hold ourselves accountable for the integrity of the markets and to the communities we serve, seek to help resolve conflicts and build consensus, inform those impacted before taking action, lead by example and serve as part of the solution. We also seek to be good citizens to the communities we serve by being committed to being environmentally conscious. Additionally, being good citizens also means that we strive to

support our associates and better serve our industry and community through our human capital development, volunteerism and policies. See “Human Capital Management” subsection above for more information.

Additional information on our approach to ESG can be found in the 2020 Cboe Global Markets, Inc. Environmental, Social and Governance Report located in the Corporate Social Responsibility section of our website at <http://www.Cboe.com/aboutCboe>, which does not form a part of this Form 10-K.

#### **Available Information**

Our website is [www.cboe.com](http://www.cboe.com). The Company files annual, quarterly and current reports, proxy statements and other information with the SEC under the Exchange Act. The Company makes available, free of charge, on its website its annual report on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K and amendments to those reports filed or furnished pursuant to Section 13(a) or 15(d) of the Exchange Act, as soon as reasonably practicable after such reports are electronically filed with, or furnished to, the SEC. The Company’s reports filed with, or furnished to, the SEC are also available on the SEC’s website at [www.sec.gov](http://www.sec.gov).

In addition, we have posted on our website the charters for our (i) Audit Committee, (ii) Compensation Committee, and (iii) Nominating and Governance Committee, as well as our Code of Business Conduct and Ethics and Corporate Governance Guidelines. We will provide a copy of these documents without charge to stockholders upon written request to Investor Relations, Cboe Global Markets, Inc., 400 South LaSalle Street, Chicago, Illinois 60605. Our website and information included in or linked to our website are not part of this Form 10-K.



## Item 1A. Risk Factors.

The risks and uncertainties described below are those that we believe are material at this time relating to our business. These risks and uncertainties, however, are not the only risks and uncertainties that we face. Additional risks and uncertainties not currently known to us or that we currently deem to be immaterial may also significantly impact us. Any of these risks and uncertainties may materially and adversely affect our business, financial condition or results of operations, liquidity, and cash flows.

### Summary of Risk Factors

The following is a summary of the key risks and uncertainties described below that we believe are material to us at this time:

- the impact of the COVID-19 pandemic, including changes to trading behavior broadly in the market;
- 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 or clearing 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 indices 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 minimize the risks, including our credit and default risks, associated with operating a European clearinghouse;
- our ability to accommodate trading and clearing 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 or for whom we clear transactions;
- 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;
- our ability to maintain BIDS Trading as an independently managed and operated trading venue, separate from and not integrated with our registered national securities exchanges;
- 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 and our ability to make payments on or refinance our debt obligations;
- our ability to maintain an investment grade credit rating; and
- impairment of our goodwill, long-lived assets, investments or intangible assets.

### Risks Relating to Our Business

***The COVID-19 pandemic and its effects could have a material adverse effect on our business, financial condition, operating results and cash flows.***

On March 11, 2020, the World Health Organization declared COVID-19 a global pandemic. Our business and operations could be materially and adversely affected by the effects of COVID-19, however, the extent to which our results could be affected by COVID-19 largely depends on future developments which are uncertain and cannot be accurately predicted. Governments, public institutions, and other organizations around the world have taken, and may take additional, emergency measures to combat its spread, including rollouts of vaccinations, implementation of travel

bans and closures of offices, factories, schools, public buildings and businesses. These measures may interfere with the ability of our employees, vendors, technology equipment suppliers, data and disaster recovery centers, and other service providers to perform their respective responsibilities and obligations relative to the conduct of our business. In particular, between March 13, 2020 and June 14, 2020, we temporarily suspended open outcry trading in response to COVID-19. In addition to uncertain expenses we may incur due to COVID-19 as part of us providing a safe and healthy work and trading environment, employees working remotely from different locations and in connection with our eventual return to our offices, we may also be subject to claims from employees or customers alleging failure to maintain safe premises and restrictions with respect to protocols relating to COVID-19. Further, changes in trading behavior, impacts to trading behavior due to the temporary suspension of open outcry trading, market disruptions, additional temporary suspensions of open outcry trading, temporary regulatory measures and other future developments caused by the effects of COVID-19, including a re-occurrence of cases, could impact trading volumes and the demand for our products, market data and services, which could have a material adverse effect on our business, financial condition, operating results and cash flows and could heighten many of the other risks described below.

***Loss of our right to exclusively list and trade certain index options and futures could have a material adverse effect on our financial performance.***

We hold exclusive licenses to list securities index options on the S&P 500 Index, the Russell 2000 Index, as well as others, granted to us by the owners of such indices, and additionally hold exclusive rights to our proprietary VIX methodology that provides the basis for the creation of VIX options and futures. In 2020, approximately 58.0% of our net transaction and clearing fees (defined below) were generated by futures and index options, the overwhelming majority of which were generated by our exclusively-licensed products (e.g., SPX options) and products based on our proprietary VIX methodology (e.g., VIX options and futures). The bulk of this revenue is attributable to our SPX options and VIX options and futures. As a result, our revenues less cost of revenues are dependent in large part on the exclusive licenses we hold for these products and our ability to maintain our exclusive proprietary rights in the VIX methodology and related products and indices.

There is a risk, with respect to each of our current exclusive licenses, that the owner of the index may not renew the license with us on an exclusive basis or at all. In the first event, we would be subject to multiple listing in the trading of what is now an index product traded by us on an exclusive basis, which could result in a loss of market share and negatively impact our profitability. In the second event, we could lose the right to list the index product entirely. The loss or limited use of any of our exclusive index licenses, especially for the S&P 500 Index, for any reason could have a material adverse effect on our business and profitability.

In addition to the risks related to our exclusive licenses, if we are unable to retain exclusive proprietary rights in the VIX methodology and related products and indices, our volatility products could be subject to multiple listing which could have a material adverse effect on us.

The EU has adopted legislation affecting providers and users of benchmark indices in the EU MiFIR requires benchmarks used to value a financial instrument in the EU to be made available on a non-discriminatory basis to all EU trading venues and central counterparty clearing houses for the purposes of trading and clearing. As a result, owners of such benchmarks must provide licenses on fair, reasonable and non-discriminatory terms. While similar legislation to MiFIR has not been proposed in the U.S., if it were passed, it could cause us to lose our exclusive rights to list and trade internally developed and licensed index products. Further, in 2018, the EU implemented the EU Benchmark Regulation, which regulates users, data providers and calculators of benchmarks (“administrators”) in the EU, and among other things, prohibits use of benchmarks in connection with a financial instrument unless the administrator is deemed to be subject to an equivalent regulatory regime and the benchmark is registered in an EU member state. These regulations and other emerging regulatory regimes around the world may impact international customers’ interest in or ability to trade index-based products listed on our U.S. exchanges, as well as impact our expansion activities to establish foreign trading of our index-based products and our ability to license proprietary indices for use outside of the U.S.

Furthermore, our competitors may succeed in developing, offering and providing a market for the trading of index-based or volatility products that are economically similar to those that we offer and they may become successful and take away volume from our products. It is also possible that a third party may offer trading in index-based products that are the same as those that are the subject of one of our exclusive licenses, but in a jurisdiction in which the index owner cannot require a license or in a manner otherwise not covered by our exclusive license.

The value of our licenses to exclusively list securities index options and futures also depends on the continued ability of index owners to require licenses for the trading of options and futures based on their indices. Although we and the

index owners have prevailed in legal actions challenging our rights to exclusively license indices, we may be subject to changes in the law or other actions taken in the future that might impede our ability to exclusively offer trading in certain index options and futures.

***General economic conditions and other factors beyond our control could significantly reduce demand for our products and services and harm our business.***

The volume of trading and clearing transactions and the demand for our products and services are directly affected by economic, political and market conditions in the U.S., Europe and elsewhere in the world that are beyond our control, including:

- economic, political and geopolitical market conditions;
- broad trends in business and finance;
- concerns over inflation and wavering institutional or retail confidence levels;
- government or central bank actions, such as changes in government fiscal and monetary policy and foreign currency exchange rates;
- other legislative and regulatory changes;
- the availability of short-term and long-term funding and capital;
- the perceived attractiveness of the U.S. or European capital markets;
- the availability of alternative investment opportunities;
- changes in the level of trading activity in underlying instruments;
- changes and volatility in the prices of securities;
- changes in the volume of foreign currency transactions;
- changes in supply and demand for currencies;
- movements in currency exchange rates;
- the level and volatility of interest rates;
- changes in the financial strength of market participants;
- consolidation among market participants and market data subscribers;
- unforeseen market closures, suspensions of open outcry trading or other disruptions in trading and clearing; and
- disruptions due to terrorism, war, extreme weather events, pandemics or other catastrophes.

Any of these factors, individually or collectively, could have a material adverse effect on our business, financial condition and operating results by causing a substantial decline in the financial services markets and reducing trading and clearing volumes and demand for market data.

***Our business may be adversely affected by price competition.***

The securities industry is characterized by intense price competition, especially with respect to transaction fees. We may be required to adjust pricing to respond to actions by new or existing competitors, which could adversely impact our business, financial condition and operating results. We also compete with respect to the pricing of market data and value-added market data, such as historical market data.

In our options segment, the pricing model for trade execution has changed in response to competitive market conditions, and our competitors have adjusted transaction fees and fee structures accordingly, including by opening new exchanges, which allow them to offer multiple pricing models that can appeal to different segments of market participants. These changes have resulted in significant pricing pressures on us, especially on transaction fees and incentives for multi-listed products. As a result of these pricing pressures, our average rate per multi-listed options contract may decrease. It is likely that this pressure will continue and even intensify as our competitors continue to seek to increase their share of trading by further reducing their transaction fees or by offering other financial incentives to order providers and liquidity providers to induce them to direct orders to their markets.

In addition, one or more competitors may engage in aggressive pricing strategies and significantly decrease or completely eliminate their profit margin for a period of time in order to capture a greater share of trading volume. Some order-providing firms on our exchanges have taken ownership positions in options exchanges that compete with us and such exchanges have given those firms added economic incentives to direct orders to them.

With respect to our proprietary products, we compete with futures exchanges and swap execution facilities that offer similar products and other financial market participants that offer over-the-counter derivatives. We also compete against certain multi-listed options products, including SPY, which offer some of the features of our proprietary products.

To attract market share, we may offer “inverted” pricing specials or no-transaction fee trading from time to time. BZX also offers a “cross-asset add volume tier” that gives a bigger rebate for additional volume on both the BZX equities and options platforms. Similarly, EDGX offers a “cross-asset tier” that gives a reduced fee for volume on both the EDGX equities and options platforms. These forms of promotions may adversely affect our profitability.

If we are unable to compete successfully with respect to the pricing of our services and products, our business, financial condition and operating results may be materially and adversely affected. We could lose a substantial percentage of our share of trading if we are unable to price transactions in a competitive manner. Also, our profits could decline if competitive pressures or regulatory changes force us to reduce fees.

***A significant portion of our operating revenues is generated by our transaction and clearing-based business. If the amount of trading volume on our markets or clearing volume decreases, or the product mix shifts to lower revenue products, our revenues from transaction and clearing fees will most likely decrease.***

In 2020, approximately 63.2% of our revenues less cost of revenues were generated by our transaction and clearing-based business. This business is dependent on our ability to attract and maintain order flow, both in absolute terms and relative to other market centers. If the amount of trading volume on our Exchanges, CFE, and MATCHNow, notional value traded on Cboe FX, Cboe SEF and Cboe Europe Equities exchanges or clearing volumes at EuroCCP decreases, we are likely to see a decrease in fees.

Our total trading or clearing volumes could decline if our market participants reduce their trading or clearing activity for any reason, such as:

- heightened capital requirements;
- transaction tax;
- regulatory or legislative actions;
- reduced need to trade due to changes in volatility and/or passive investment trends;
- reduced access to capital required to fund trading activities;
- consolidation among market participants;
- suspensions of open outcry trading; or
- significant market disruptions.

Over the past few years, a number of legislative actions have been taken, both domestically and internationally, that may cause market participants to be subject to increased capital requirements and additional compliance burdens. These actions, including the Collins Amendment to Dodd-Frank, MiFID II and MiFIR, may cause market participants to reduce trading activity on our Exchanges.

In addition, the transaction fees generated are different based on type of product and other factors, including the type of customer and certain volume discounts. If the amount of our trading volume decreases, the mix traded shifts to our lower revenue per contract products, our revenues from transaction fees will most likely decrease. We can offer no assurance that we would be able to reduce our costs to match the amount of any such decrease.

***Revenues from our market data fees and access and capacity fees may be reduced due to declines in our market share, trading volumes or regulatory changes.***

The occurrence of any event that reduces the amount of market data fees that we receive, whether as a result of fee reductions, fewer members subscribing to the U.S. tape plans, declines in market share or trading volumes (or notional volume in the case of Cboe Europe Equities) or regulatory changes will have a direct negative impact on our business, financial condition and operating results. For example, if our market share of U.S. listed equities and options, or Cboe’s European equities trading, were to decline, our share of market data fees could also decline. Moreover, market data fees could decline as a result of a reduction in the numbers of market data users, for example because of consolidation among market data subscribers or due to a decline in professional subscriptions as a result of staff reductions in the financial services industry or otherwise.

Regulatory and legal developments could also impact the fees we receive from market data and access and capacity, or our cost in providing such services. In the U.S., we are generally required to file with the SEC any changes to the fees that we charge for our securities market data products and access and capacity fees. In recent years, certain industry groups have objected to the ability of exchanges to charge for certain market data products. In addition, the SEC and some media have scrutinized market data and market access. As discussed above, the implementation of the new Market Data Infrastructure rules could cause Cboe's equities exchanges, BZX, BYX, EDGX, and EDGA, to require additional resources to comply with or to challenge the new rules and they may have a material impact on our business, financial condition and operating results if, for example, there are lower SIP plan revenues or we must reduce the fees we charge for market data. See "Legal Proceedings" for more information.

In addition, as discussed above, the SEC issued a final Consolidated Data Plan Order that would require U.S. equities exchanges and FINRA to develop and file a new consolidated data plan. If the Consolidated Data Plan Order were to be implemented, it may have a negative impact on the market data fees we charge and there could be a negative impact on our revenues. See "Legal Proceedings" for more information.

We believe Cboe Europe Equities currently offers market data to customers on a non-discriminatory basis at a reasonable cost. As European regulators determine how market data should be disaggregated and what is a reasonable commercial basis for providing market data, it could affect our ability to offer market data products in the same manner that we do today thereby causing an adverse effect on our European market data revenues. While MiFID II and MiFIR aim to encourage a commercial solution to a consolidated tape in Europe, should this fail to materialize, policy makers might be encouraged to implement a mandatory solution that could impact our ability to develop our own commercial offering.

***The technology upon which we rely, including those of our service providers, may be vulnerable to security risks, cybersecurity risks, insider threats, unauthorized disclosure of confidential information, operational disruptions, and other risks and events that could harm our business.***

The secure and reliable operation of our technology, including our computer systems and communications networks, and those of our service providers and market participants, is a critical element of our operations. These systems and networks may be subject to various cybersecurity incidents, improper or inadvertent access to or disclosure of confidential, commercially sensitive, or personally identifiable information, data theft, corruption or destruction, cyber-attack, malware and other security problems, as well as acts of terrorism, natural disasters, human error, criminal insider activity, power loss and other events that are beyond our control. As previously disclosed, in 2018, we discovered and initiated an investigation of an internal theft of idled and deactivated computer servers and networking devices. We subsequently resolved the incident by, including, among other actions, terminating the employment of the responsible individual, reporting the matter to regulators and law enforcement, and improving our policies, procedures and controls over the physical security and protection of our computer systems and communications networks to help minimize the risk of reoccurrence.

We currently maintain policies, procedures and controls designed to protect the confidentiality, integrity, availability and reliability of our systems, networks and information more broadly, and to guard against cybersecurity incidents and unauthorized access. These policies, procedures and controls are subject to periodic monitoring, auditing, and evaluation practices, pursuant to our enterprise risk management program. Further, we developed and maintain cybersecurity and data privacy training programs for our employees and our third-party consultants who have access to our systems, which includes simulations, tabletop exercises, and response readiness tests. Independent third-party cybersecurity penetration assessments are also routinely performed. Collectively, these safeguards and measures may prove inadequate to prevent the attendant risk posed by cybersecurity incidents, subjecting us to contractual restrictions, liability and damages, loss of business, penalties, unfavorable publicity, and increased scrutiny by our regulators, and materially impacting our financial condition and operating results. We may be required to expend significant resources in the event of any real or threatened breaches in security or system failures, including to protect against threatened breaches, to alleviate harm caused by an actual breach, and to address any reputational harm or litigation or regulatory liability. Such harms also could cause us to lose market participants, experience lower trading volume, and negatively impact our competitive advantage and business, financial condition and operating results.

Additionally, as threats continue to evolve and increase, and as the regulatory environment related to information security, data collection and use, and privacy becomes increasingly rigorous, we may be required to devote significant additional resources to modify and enhance our security controls and to identify and remediate any security vulnerabilities, which could have an adverse effect on our business, financial condition and operating results.

***Intense competition could materially adversely affect our market share and financial performance.***

The market for trade execution services, clearing and products is intensely competitive in the asset classes and geographies in which we operate. Increased competition may result in a decline in our share of trading activity and a decline in our revenues from transaction and clearing fees and market data fees, thereby materially adversely affecting our operating results. We compete with a number of entities on several different fronts, including the cost, quality and speed of our trade execution, functionality and ease of use of our trading and clearing platforms, range of our products and services, our technological innovation and adaptation and our reputation. See “Business – Competition” for more information.

Some of our competitors and potential competitors have greater financial, marketing, technological, personnel and other resources than we do. These factors may enable them to develop similar or more innovative products, to offer lower transaction and clearing fees or better execution to their customers or to execute their business strategies more quickly or efficiently than we can. In addition, our business, financial condition and operating results may be materially adversely affected if we cannot successfully develop, introduce and/or market new services and products or if we need to adopt costly and customized technology for our services and products.

Furthermore, new or existing competitors may:

- respond more quickly to competitive pressures;
- develop products that compete with our products or are preferred by our customers;
- offer products and services at prices below ours to gain market share and to promote other businesses;
- develop and expand their technology and service offerings more efficiently;
- provide better, more user-friendly and more reliable technology;
- take greater advantage of acquisitions, alliances and other opportunities;
- market, promote, bundle and sell their products and services more effectively;
- leverage existing relationships with customers and alliance partners more effectively or exploit brand names to market and sell their services; and
- exploit regulatory disparities between traditional, regulated exchanges and alternative markets, including over-the-counter markets, that benefit from a reduced regulatory burden and lower-cost business model.

If our products, markets, services and technology are not competitive or we fail to anticipate or respond adequately to changes in technology, customer preferences and regulatory requirements or any significant delays in product development efforts our business, financial condition and operating results could be materially harmed.

***We depend on third-party service providers for certain services that are important to our business. An interruption, significant increase in fees or cessation or impairment of such service by any third party could have a material adverse effect on our business, financial condition and operating results.***

We depend on a number of service providers, including clearing organizations such as OCC, NSCC, DTC, CDS, LCH, EuroCCP, our wholly-owned subsidiary, and SIX x-clear; securities information processors such as the CTA, UTP Securities Information Processor and OPRA; regulatory and other service providers such as FINRA and OCC; the hosts of our data and disaster recovery centers; and various vendors of communications and networking products and services. In addition, we also depend on third party routing and clearing firms that are involved in processing transactions on our behalf. More specifically:

- If OCC, NSCC, DTC, CDS, LCH, EuroCCP and SIX x-clear were unable to perform clearing services for existing or new products, or their clearing members were unable or unwilling to clear through them, transactions could likely not occur on our markets or there may be delays, including until clearing is moved to another clearing agency. In 2020, approximately 58.0% of our net transaction and clearing fees were generated by options and futures that were cleared through OCC.
- OPRA, UTP Securities Information Processor and the CTA consolidate options and equities market information such as last sale reports and quotations. If any of them were unable to provide this information for a sustained period of time, we may be unable to offer trading on our options and equities markets.
- We are heavily dependent on technology for our markets, including our data and disaster recovery centers, some of which are housed by third parties, and certain communications and networking products and services. If this technology is unavailable, and cannot be replaced in a sufficiently short time period, we may be unable to operate our markets.

- We utilize Amazon Web Services (“AWS”) to maintain secondary offsite backups of our and our customers’ data and may utilize AWS in the future for additional services. We do not control the operations of AWS or their facilities and may be vulnerable to disruptions in our access to the platform as a result of a number of potential causes, including technical failure, natural disasters, fraud or security attacks that we cannot predict or prevent. Additionally, any vulnerability of AWS could expose our or our customers’ confidential data, which could result in harm to our business reputation.
- FINRA and OCC provide certain regulatory services and functions for our options, equities and futures exchanges, while we retain regulatory responsibilities for such services. If FINRA or OCC stopped providing services, or provided inadequate services, we may be subject to action by the SEC or CFTC, or may have limitations placed upon our markets.
- We rely on FINRA CAT LLC, a subsidiary of FINRA, to provide services for the implementation of the CAT. If FINRA CAT LLC stops providing services or provides inadequate services, we and the other execution venues may incur regulatory liability including enforcement action by the SEC or limitations placed upon our markets. In addition, until the SEC approves a funding model that shares the cost of the CAT between the SROs and industry members, the SROs may continue to incur additional significant costs, including as a result of replacing the plan processor, or result in not being able to collect on the promissory notes related to the funding of the implementation and operation of the CAT.
- We rely on third party routing and clearing firms to clear trades in U.S. listed equity securities routed by us to other markets, and to execute trades in options that we route to other markets.

With respect to options, all contracts traded on our exchanges must be cleared through clearing members of OCC. At December 31, 2020, there were 97 TPHs that are clearing members of OCC. Two clearing members accounted for approximately 62.9% of transaction and other fees collected through OCC in 2020. The next largest clearing member accounted for approximately 18.0% of transaction and other fees collected through OCC. Additionally, the two largest clearing members clear the majority of the market-maker sides of transactions at Cboe Options, C2, BZX, EDGX and at all of the options exchanges. Should one of these clearing members or liquidity providers exit the business or withdraw from our options exchanges, impose additional market-maker financial requirements or if market-makers were unable to transfer to another clearing member or other liquidity providers were unable to provide additional liquidity, this could create a significant disruption to the options markets, including ours.

We cannot provide assurance that any of these providers will be able to continue to provide these services in an efficient manner or that they will be able to adequately expand their services to meet our needs. An interruption or malfunction in or the cessation or impairment of an important service by a third party or disruption of a third party’s operations could cause us to halt trading in some or all of our products or our services, make us unable to conduct other aspects of our business, cause us to experience the loss of a significant number of market participants or cause us to experience a significant reduction in trading activity on our options and futures markets, each of which could have a material adverse effect on our business, financial condition and operating results. In addition, our inability to make alternative arrangements, such as moving clearing to another clearing agency, in a timely manner, or at all, could have a material adverse impact on our business, financial condition and operating results.

***Our operations outside of the U.S. expose us to currency risk.***

In addition to our operations in the U.S., we have operations in the UK, continental Europe, Canada, Ecuador, Hong Kong and Singapore. We, therefore, have exposure to exchange rate movements between the British pound, the Euro, the Canadian dollar, the Hong Kong dollar, and the Singapore dollar against the U.S. dollar. Significant inflation or changes in foreign exchange rates with respect to one or more of these currencies could occur as a result of general economic or political conditions, acts of war or terrorism, changes in governmental monetary or tax policy, Brexit or changes in local interest rates. These exchange rate differences will affect the translation of our non-U.S. results of operations and financial condition into U.S. dollars as part of our consolidated financial statements.

***We and our licensors may not be able to protect our respective intellectual property rights.***

We rely on patent, trade secret, copyright and trademark laws, the law of the doctrine of misappropriation and contractual provisions to protect our proprietary technology, proprietary products, index methodologies and other proprietary rights. In addition, we rely on the intellectual property rights of our licensors in connection with our listing of exclusively-licensed index options and futures products. We and our licensors may not be able to prevent third parties from copying, or otherwise obtaining and using, our intellectual property without authorization, listing our proprietary or exclusively-licensed index products without licenses or otherwise infringing on our rights. We and our licensors may have to rely on litigation to enforce our intellectual property rights, determine the validity and scope of the proprietary rights of

others or defend against claims of infringement or invalidity. We and our licensors may not be successful in this regard. Such litigation, whether successful or unsuccessful, could result in substantial costs to us, diversion of our resources or a reduction in our revenues, any of which could materially adversely affect our business.

***If we fail to attract or retain highly skilled management and other employees our business may be harmed.***

Our success largely depends on the skills, experience and continued efforts of management and other key personnel. As a result, to be successful, we must retain and motivate executives and other key employees. However, we have no assurances that these employees will remain with us. The roles and responsibilities of departing executive officers and employees will need to be filled either by existing or new officers and employees, which may require us to devote time and resources to identifying, hiring and integrating replacements for the departed executives and employees that could otherwise be used to pursue business opportunities, which could have a material adverse effect on our overall business, financial condition and operating results.

There is substantial competition for qualified and capable personnel in the technology space, which may make it difficult for us to retain and recruit qualified employees in sufficient numbers. If we fail to retain our current employees, it would be difficult and costly to identify, recruit and train replacements needed to continue to conduct and expand our business. In particular, failure to retain and attract qualified technology personnel could result in systems failures. Consequently, our reputation may be harmed, we may incur additional costs and our profitability could decline. There can be no assurance that we will be able to retain and motivate our employees in the same manner as we have historically done.

Additionally, effective succession planning is also important to our long-term success. Failure to ensure effective transfer of knowledge and smooth transitions involving our management team and key employees could hinder our strategic planning and execution.

***Our clearinghouse operations expose us to associated risks, including credit, liquidity, market and other risks related to the defaults of clearing participants and other counterparties.***

We are subject to risks related to operating our clearinghouse, EuroCCP, including the risks of failing to meet strict business continuity requirements and regulatory oversight, risks of default by clearing participants and counterparties, due to bankruptcy, lack of liquidity, operational failure or other reasons, and the risks associated with the adequacy of participants' margin and default funds. These risks could subject our business to substantial losses, reputational harm, regulatory consequences, including litigation, fines and enforcement actions, and the inability to operate our business, including the continued development of the European derivatives buildout.

To mitigate the credit risks related to defaults of clearing participants and other counterparties, including the market risk that we would only be able to close out a defaulting participant's positions at a loss, there are minimum participation criteria to become a clearing participant and clearing participants are required to provide collateral to cover the margin requirement and default fund contributions. No guarantee can be given that the collateral provided will at all times be sufficient or provide absolute assurance against us experiencing financial losses from defaults by the participants or counterparties on their obligations. In addition, although such collateral is preferably held in European central banks and central securities depositories, there are occasions where commercial banks are used, which can expose us to risk of default by those banks. In addition, EuroCCP entered into a €1.5 billion committed syndicated multicurrency revolving and swingline credit facility that is available to be drawn by EuroCCP towards (a) financing unsettled amounts in connection with the settlement of transactions in securities and other items processed through EuroCCP's clearing system and (b) financing any other liability or liquidity requirement of EuroCCP incurred in the operation of its clearing system, however we can give no assurance that this facility will be sufficient to meet all such obligations or sufficiently mitigate EuroCCP's liquidity risk to meet its payment obligations when due. Substantial amounts of the collateral, and any amounts drawn under this facility, may be at risk if a clearing participant defaults on its obligations to our clearinghouse and its margin and default fund deposits are insufficient to meet its obligations. This facility is expected to terminate on July 1, 2021 and we may not be able to enter into a replacement facility on commercially reasonable terms, or at all. We cannot assure you that the mitigating measures, policies, safeguards and risk management procedures will be sufficient to detect problems or to protect us from a default or that we will not be materially and adversely affected in the event of a significant default.



***Computer and communications systems failures and capacity constraints could harm our reputation and our business.***

Our business depends on the integrity and performance of our computer and communications systems. If our systems cannot expand to cope with increased demand or otherwise fail to perform, we could experience unanticipated disruptions in service, slower response times and delays in the introduction of new products and services. These consequences could result in trading outages, lower trading and clearing volumes, financial losses, decreased customer service and satisfaction and regulatory sanctions and could have a material adverse effect on our ability to conduct our business. Although we have a back-up plan of significant trading and key corporate systems, the back-up systems or disaster recovery plans may prove to be inadequate in the event of a systems failure or cyber-security breach. Despite having disaster recovery facilities, there can be no guarantees that we will be able to open an efficient, transparent and liquid marketplace, if we can open at all, following a systems failure. Moreover, with extended trading hours, we have to operate our systems longer and have fewer non-trading hours to address any potential concerns with the systems on which we rely.

Our markets and clearinghouse have experienced occasional systems failures and delays in the past and in the future our systems may fail, in whole or in part, or may operate slowly, causing one or more of the following:

- unanticipated disruption in service to our participants;
- failures or delays during peak trading times or times of unusual market volatility;
- slower response times and delays in trade execution, clearing and processing;
- incomplete or inaccurate accounting, recording, clearing or processing of trades; and
- distribution of inaccurate or untimely market data to participants who rely on this data in their trading activity.

Any of these events may cause:

- a loss in transaction, clearing or other fees due to the inability to provide services for a time;
- requests by market participants or others that we reimburse them for financial loss, either within the constraints of the limited liability provisions of our exchanges' rules or in excess of those amounts;
- trading and clearing volumes to diminish on our markets and clearinghouse due to dissatisfaction with the platforms; and
- one or more of our regulators to investigate or take enforcement action against us.

As a consequence of any of these events, our business, financial condition and results of operations could suffer materially.

In addition to other measures, we test our systems to confirm whether they will be able to handle anticipated present and future peak trading and clearing activity or times of unusual market volatility. However, we cannot assure you that our estimates of future trading or clearing volume will be accurate or that our systems will always be able to accommodate actual trading or clearing volume without failure or degradation of performance.

We anticipate that we will need to continue to make significant investments in hardware, software and telecommunications infrastructure to accommodate the increases in traffic. If we cannot increase the capacity and capabilities of our systems to accommodate increasing trading or clearing activity and to execute our business strategy, our ability to maintain or expand our businesses would be materially adversely affected.

***Our use of open source software code may subject our software to general release or require us to re-engineer our software, which could harm our business.***

Our technology platform uses open source software code. Companies that incorporate open source software into their products have, from time to time, faced claims challenging the ownership of open source software. As a result, we could be subject to suits by parties claiming ownership of what we believe to be open source software. In addition, some open source software licenses require users who distribute open source software as part of their software to publicly disclose all or part of the source code in their software and make any derivative works of the open source code available on unfavorable terms or at no cost. Open source license terms may be ambiguous, and many of the risks associated with usage of open source software cannot be eliminated. We believe that our use of open source software is in compliance with the relevant open source software licenses and does not require disclosure of any of our source code. However, if we were found to have inappropriately used open source software, we may be required to release our proprietary source

code, re-engineer or discontinue use of our software or take other remedial action any or all of which could cause disruptions in, or impose significant costs on, our business.

***Damage to our reputation could have a material adverse effect on our business, financial condition and operating results.***

We believe one of our competitive strengths is our strong industry reputation. Various issues may give rise to reputational risk, including issues relating to:

- the representation of our business in the media;
- the quality and benefits of using our proprietary products, including the reliability and functionality of our transaction-based business and the accuracy of our market data;
- the ability to execute our business plan, key initiatives or new business ventures and the ability to keep up with changing customer demands and regulatory initiatives;
- our regulatory compliance and our enforcement of compliance on our customers;
- the accuracy of our financial statements and other financial and statistical information;
- the quality of our corporate governance structure;
- the quality of our disclosure controls and internal controls over financial reporting, including any failures in supervision;
- the integrity and performance of our computer and communications systems;
- security breaches, including any unauthorized delivery of proprietary data to third parties;
- management of our outsourcing relationships, including our relationship with FINRA and NFA;
- any misconduct or fraudulent activity by our employees, especially senior management, or other persons formerly or currently associated with us;
- our listings business and our enforcement of our listing rules; and
- any negative publicity surrounding the ETPs that we serve as the listing destination.

Damage to our reputation could cause a reduction in the trading volume of our proprietary products or on our markets or cause us to lose customers. This, in turn, may have a material adverse effect on our business, financial condition and operating results.

***Financial or other problems experienced by third parties could have an adverse effect on our business.***

We are exposed to credit risk from third parties, including customers, clearing agents and counterparties. For example, we are exposed to credit risk for transaction fees we bill to customers on a monthly basis in arrears. Our customers and other third parties may default on their obligations to us due to a lack of liquidity, operational failure, bankruptcy or other reasons. For additional credit risks related to our clearinghouse operations, see the Risk Factor “Our clearinghouse operations expose us to associated risks, including credit, liquidity, market and other risks related to the defaults of clearing participants and other counterparties.”

In addition, with respect to orders Cboe Trading routes to other markets for execution on behalf of our customers, Cboe Trading is exposed to counterparty credit risk in the case of failure to perform on the part of our routing and clearing firms that are involved in processing equities and options transactions on our behalf, as well as failure on the part of such brokers to pass back any transactional rebates. Wedbush and Morgan Stanley guarantee equity trades until one day after the trade date, after which time NSCC provides a guarantee. Thus, Cboe Trading is potentially exposed to credit risk to the counterparty to an equity trade routed to another market center between the trade date and one day after the trade date in the event that Wedbush or Morgan Stanley fails to perform. With respect to U.S. listed equity options and futures, we deliver matched trades of our customers to the OCC, which acts as a central counterparty on all transactions occurring on Cboe Options, C2, BZX, EDGX, and CFE and, as such, guarantees clearance and settlement of all of our matched options and futures trades. With respect to Canadian equities, we deliver reports of matched trades of our customers to the CDS, which acts as a central counterparty on all transactions occurring on MATCHNow and, as such, guarantees clearance and settlement of all of our matched Canadian equities trades.

With respect to routed U.S. equity transactions, Cboe Trading has counterparty credit risk exposure to Wedbush and Morgan Stanley related to clearing until the day following the trade date. Cboe Trading uses Wedbush to clear trades routed through affiliates of Credit Suisse Securities (USA) LLC as well as for trades routed directly to other exchanges and optionally dark pools. Morgan Stanley clears trades routed through the Morgan Stanley routing brokers and also clears executions routed to most dark pools. Cboe Trading maintains counterparty credit risk exposure from routing

brokers with respect to rebates earned until completion of the routing brokers next invoice cycle following the execution. Additionally, BIDS Trading has counterparty credit risk exposure to BOA related to clearing until the day following the trade date.

With respect to U.S. listed equity and exchange traded product options, Cboe Trading is subject to counterparty credit risk exposure with respect to rebates earned from routing brokers until completion of the routing brokers' next invoice cycle has completed for an execution.

Our exposure to credit risk may be further impacted by volatile securities markets that may affect the ability of our customers, counterparties and other third parties to satisfy their obligations to us. Moreover, we may not be successful in managing our credit risk through mitigating measures, policies, safeguards and risk management procedures, reporting and control procedures or by maintaining credit standards. Any losses arising from such defaults or other credit losses could materially adversely affect our financial condition and operating results.

While neither Cboe FX nor Cboe SEF has direct counterparty risk, Cboe FX or Cboe SEF may suffer a decrease in transaction volume if a bank or prime broker experiences an event that causes other prime brokers to decrease or revoke the credit available to the prime broker experiencing the event. Therefore, Cboe FX and Cboe SEF may have risk that is related to the credit of the banks and prime brokers that trade spot FX on the Cboe FX platform, or NDFs on Cboe SEF.

***We may be required to assume ownership of a position in securities in connection with our order routing service, which could subject us to trading losses when our broker-dealer disposes of that position.***

We offer a smart-order routing service through our broker-dealer subsidiary, Cboe Trading, which provides its customers with access to other market centers when we route their orders to those market centers for execution. In connection with this service, we may assume ownership of a position in securities. This may occur, for example, when a market center to which we have routed a customer's order experiences systemic issues and is unable to determine the status of that order. When this happens, we may make a business decision to provide a cancellation notice to our customer, relieving our customer of any liability with respect to the order. We may be informed later, however, that the order was executed at the market center to which we routed it, in which case Cboe Trading would be required to take ownership of that securities position. Our third party clearing brokers maintain error accounts on behalf of Cboe Trading into which such positions settle, and we require the respective clearing broker to trade out of those positions as expeditiously as possible, which could result in our incurring trading losses.

***We may not effectively manage our growth, which could materially harm our business, financial condition and operating results.***

We expect that our business will continue to grow, which may place a significant strain on our management, personnel, systems and resources. We must continually improve our operational, financial and regulatory systems and managerial controls and procedures, and may need to continue to expand, train and manage our workforce. We must also maintain close coordination among our technology, legal, accounting, finance, marketing, sales, regulatory and compliance functions. If we fail to manage our growth effectively, our business, financial condition and operating results could be materially harmed. Furthermore, failure to successfully expand into new asset classes or new geographies may materially adversely affect our growth strategy and our future profitability.

Our continued growth will require increased investment by us in technology, facilities, personnel, and financial and management systems and controls. It also will require expansion of our procedures for monitoring and assuring our compliance with applicable regulations, and we will need to integrate, train and manage a growing employee base. The expansion of our existing businesses, any expansion into new businesses and the resulting growth of our employee base will increase our need for internal audit and monitoring processes, which may be more extensive and broader in scope than those we have historically required. We may not be successful in identifying or implementing all of the processes that are necessary. Further, unless our growth results in an increase in our revenues that is proportionally greater than or equal to the increase in our costs associated with this growth, our business, financial condition and operating results may be materially adversely affected.

***We selectively explore acquisition opportunities and strategic alliances relating to other businesses, products or technologies. We may not be successful in integrating other businesses, products or technologies with our business. Any such transaction also may not produce the results we anticipate, which could materially adversely affect our business, financial condition and operating results.***

We selectively explore and pursue acquisition and other opportunities to strengthen our business and grow our company. We may enter into business combination transactions, make acquisitions or enter into strategic partnerships, joint ventures or alliances, any of which may be material. The market for acquisition targets and strategic alliances is highly competitive, which could make it more difficult to find appropriate merger or acquisition opportunities. If we are required to raise capital by incurring debt or issuing additional equity for any reason in connection with a strategic acquisition or investment, financing may not be available or the terms of such financing may not be favorable to us and our stockholders, whose interests may be diluted by the issuance of additional stock.

For example, in 2020, we purchased Hanweck and the assets of FT Options, which are providers of risk analytics market data, the assets of Trade Alert, a real-time alerts and order flow analysis service provider, EuroCCP, an operator of a European clearinghouse, and MATCHNow, an operator of an equities ATS in Canada. At the end of 2020, we also purchased BIDS Trading, a registered broker-dealer and operator of the BIDS ATS in the U.S., which is not a registered national securities exchange or a facility thereof.

The process of integration may produce unforeseen regulatory issues and operating difficulties and expenditures and may divert the attention of management from the ongoing operation of our business and harm our reputation. We may not successfully achieve the integration objectives, and we may not realize the anticipated cost savings, revenue growth and synergies in full or at all, or it may take longer to realize them than expected, any of which could negatively impact our business, financial condition and operating results. However, the ATS operated by BIDS Trading is not a registered national securities exchange or a facility thereof, as such, Cboe intends to maintain the BIDS ATS as an independently managed and operated trading venue, separate from and not integrated with the Exchanges.

***We may be required to inject further capital into OCC or return dividends received back to OCC.***

OCC is the sole provider of clearing on all of our options and futures exchanges. In January 2020, upon receipt of SEC approval, OCC established a capital management policy providing that, if OCC's equity capital falls below certain defined thresholds, OCC can access additional capital through an operational loss fee charged to clearing members. Although Cboe Options does not have a legal or contractual obligation to contribute capital to OCC under OCC's capital management policy or otherwise, given OCC's importance to Cboe's businesses, if OCC were to experience financial difficulties, Cboe Options might nevertheless effectively (but not legally) be required to inject further capital into it in order for OCC to maintain sufficient working or regulatory capital. In a worst-case scenario, OCC might have its regulatory license suspended or withdrawn, or might have to wind down. This may result in a loss to Cboe Options of its investment in OCC and withdrawal of OCC as a clearing house, which could have a material adverse effect on our business, financial condition and operating results. In addition, while OCC's new capital management policy is now effective, there remains some degree of uncertainty as to the terms and conditions of the wind-down of OCC's prior capital plan, under which OCC's shareholders (including Cboe Options) provided equity capital to OCC and received annual dividends in respect thereof, and which was disapproved by the SEC on February 13, 2019. Depending on the terms on which the prior OCC capital plan is ultimately required to be unwound, Cboe Options could potentially be required to return dividend payments received from OCC during the time the capital plan was in effect.

## **Risks Relating to Legal and Regulatory Matters**

***We operate in a highly regulated industry and may be subject to censures, fines and other legal proceedings if we fail to comply with legal and regulatory obligations.***

Cboe Options, C2, BZX, BYX, EDGX, and EDGA are registered national securities exchanges and SROs, and, as such, are subject to comprehensive regulation by the SEC. CFE is a DCM and Cboe SEF is a SEF, each registered with the CFTC and subject to comprehensive regulation by the CFTC. In addition to its other SRO responsibilities, BZX, as a listing market, also is responsible for evaluating applications submitted by issuers interested in listing their securities on BZX and monitoring each issuer's compliance with BZX's continued listing standards. Failure to comply with these SRO responsibilities could result in potential sanctions or fines and a negative impact on Cboe's reputation and/or branding.

Our European businesses are subject to regulatory oversight in the UK by the FCA and in the Netherlands by the DNB and the AFM, which, through the "passporting" regime, provides authorization to carry on business in other Member

States of the EU and the EEA in accordance with the applicable EU legislation and regulation to which our European business is subject. MATCHNow is subject to regulatory oversight in Canada by the IIROC and the OSC. BIDS Trading is a registered broker-dealer subject to regulatory oversight in the U.S. by the SEC and FINRA and is expected to be maintained as an independently managed and operated trading venue, separate from and not integrated with the SROs. BIDS Trading Chief Executive Officer, Tim Mahoney, is expected to remain in his current role and lead BIDS Trading as an independent business within Cboe, reporting into an independent committee of the Board of Directors of Cboe Global Markets. If a regulatory authority makes a finding of non-compliance, conditional fines could be imposed, and our licenses could be revoked. Any such fine or revocation of a license could have a material adverse effect on our business, financial condition and operating results.

In addition to the requirements related to operating our U.S. markets imposed by the SEC and the CFTC, we also have certain responsibilities for regulating the TPHs and members that trade on our Exchanges. While we have entered into agreements under which FINRA, with respect to our options and equities exchanges provides certain regulatory services, we retain ultimate responsibility for the regulation of our TPHs and members. We have begun to perform internally more of the regulatory services that FINRA used to handle and now perform internally the regulatory functions that NFA previously handled on behalf of CFE.

Our ability to comply with applicable laws and rules is largely dependent on the establishment and maintenance of appropriate systems and procedures, our ability to attract and retain qualified personnel, the ability of FINRA and OCC to perform under their respective RSAs, the ability of FINRA and OCC to transition to us any other potential responsibilities under their respective RSAs, our ability to complete the new additional responsibilities for regulating our TPHs and members and our oversight of the work done by FINRA and OCC. The SEC and CFTC have broad powers to audit, investigate and enforce compliance and to punish noncompliance by, as applicable, SROs, DCMs and SEFs pursuant to applicable laws, rules and regulations.

If a regulatory authority were to find one of our programs of enforcement or compliance to be deficient, our SROs, DCM, or SEF could be the subject of investigations and enforcement proceedings that may result in substantial sanctions, including revocation of registration as a national securities exchange, DCM, or SEF. Any such investigations or proceedings, whether successful or unsuccessful, could result in substantial costs, the diversion of resources, including management time, and potential harm to our reputation, which could have a material adverse effect on our business, financial condition and operating results. In addition, our SROs, DCM, or SEF may be required to modify or restructure their regulatory functions in response to any changes in the regulatory environment, or they may be required to rely on third parties to perform regulatory and oversight functions, each of which may require us to incur substantial expenses and may harm our reputation if our regulatory services are deemed inadequate.

In addition, SROs are required by federal law to perform a variety of regulatory functions. In light of these responsibilities, some courts have held that SROs are immune to certain private causes of action relating to the performance of these regulatory functions. There is a risk that some courts may not apply this immunity doctrine to all claims. There is also a risk that legislative or regulatory developments may change the application of this immunity doctrine. Limitations on the application of the immunity doctrine could result in an increased exposure to litigation, and increase liability and/or other legal expenses. Further under the Commodity Exchange Act, CFE and Cboe SEF may be subject to litigation alleging that they have acted in bad faith. We also could be exposed to liability to regulators or other governmental authorities even in situations where immunity would bar a civil claim.

***Legislative or regulatory changes affecting our markets could have a material adverse effect on our business, financial condition and operating results.***

Changes in regulation by the SEC, CFTC, FCA, DNB, AFM, IIROC, OSC, foreign regulators or other government action, including SEC approval of rule filings by other SROs or entities, including OCC, could materially affect our markets and clearinghouse. In recent years, the securities and derivatives industries have been subject to regulatory changes as a result of increasing government and public scrutiny of the securities and derivatives industries. We have also experienced, and we may also experience due to the recent elections and changes in administrations in the U.S., an increase in rulemaking and legislation that could affect our business.

Starting in 2015, large U.S. banks were required to use a calculation methodology known as the current exposure method ("CEM") to compute regulatory capital requirements associated with the clearing guarantee provided by bank-affiliated OCC clearing members. U.S. banks, as well as European banks that also apply CEM, are required to maintain regulatory capital that is disproportionate to the risk of clearing options contracts and has led to further increases in capital requirements for bank holding companies and bank subsidiaries involved in the trading and clearing of derivatives. In

November 2019, the Board of Governors of the Federal Reserve, the Federal Deposit Insurance Corporation, and the Office of the Comptroller of the Currency approved replacing CEM with a more risk-sensitive calculation method known as the standardized approach to counterparty credit risk (“SA-CCR”), which is expected to reduce capital requirements associated with the clearing of listed options. Banks subject to the November 2019 Final Rule are required to adopt SA-CCR by January 1, 2022 but have been able to do so since April 1, 2020. If the implementation of SA-CCR does not occur earlier than 2022, during that time we may experience a reduction in trading in options and futures due to bank-affiliated clearing members charging their customers more to trade, reducing the type or number of customers or withdrawing from the business of market-maker clearing.

Further, Congress, regulators and some media have been increasingly scrutinizing electronic trading and the structure of equity markets in recent years. The SEC continues to consider various potential market structure changes, which could result in reduced trading volumes, or which could negatively affect our business. To the extent the SEC adopts regulatory changes, our business, financial condition and operating results could be negatively impacted. In addition, high frequency trading has been the subject of private litigation and we are party to one such matter. See Note 24 (“Commitments, Contingencies, and Guarantees—Legal Proceedings”) for more information. To the extent the SEC adopts additional regulatory changes related to market data and access and capacity, our business, financial condition and operating results could be negatively impacted.

In addition, as discussed above, in December 2018, the SEC approved the transaction fee pilot. The transaction fee pilot or a successor may cause Cboe’s equities exchanges, BZX, BYX, EDGX, and EDGA, to require additional resources to comply with or challenge the transaction fee pilot or a successor and it may have a material impact on our business, financial condition and operating results if, for example, shifts in order flow away from exchanges were to occur. On June 16, 2020, the Court of Appeals for the D.C. Circuit vacated the transaction fee pilot and remanded it back to the SEC for reconsideration. See “Legal Proceedings” for more information.

Under EU regulations, European banks and other European financial institutions become subject to punitive capital charges if they transact options or futures through a non-qualifying clearinghouse. OCC, our clearinghouse for options and futures, is not currently recognized as a qualified clearinghouse by the EU; however, the OCC is working with the EU to qualify as a foreign clearinghouse equivalent. As a prerequisite to becoming qualified, OCC could be required by the EU to contribute significant capital to its default waterfall applicable in the event of clearing member default. This capital could be required to be drawn before the default fund contributions of non-defaulting clearing members in the event that a defaulting clearing member’s margin and other contributions were to be exhausted. OCC’s stockholders, including Cboe Options, could effectively be required to fund this capital. If the EU does not recognize OCC as a qualified clearinghouse by June 15, 2021 (or by a subsequent date in the event that the current deadline is extended), then European market participants that clear through OCC would become subject to punitive capital charges. As a result, we could experience the loss of a significant number of European market participants and a significant reduction in trading activity on our options and futures markets, which could have a material adverse effect on our business, financial condition and operating results.

The implementation of MiFID II and MiFIR in Europe at the beginning of 2018 has encouraged competition among market centers in Europe. MiFID II and MiFIR have introduced a number of new rules, including enhanced internal organizational and compliance monitoring requirements, which apply directly to European trading venues such as our MTF and RM. The impact of MiFID II and MiFIR is significant, and the increased competition among market centers could reduce trading volumes and trading fees, while increasing our costs of operating in Europe. Additionally, European authorities are planning to continue to review MiFID in 2021 as a result of which new rules may come into effect that could have a material impact on our business.

The legislative and regulatory environment in which the spot FX market operates is evolving and has undergone significant changes in the recent past, and there may be future regulatory changes in the spot FX industry. The FX Global Code was published in 2017 and sets forth standards of conduct agreed by market participants and central banks on a global basis to apply to the wholesale FX market, and the effect of its publication on conduct and future regulation continues to evolve. Cboe FX issued a Statement of Commitment declaring its commitment to conduct its FX market activities in a manner consistent with the principles of the FX Global Code. Changes in the interpretation or enforcement of existing laws and regulations by applicable governmental bodies and regulatory organizations, or the adoption of new legal or regulatory requirements, may also adversely affect our spot FX business. Further, our FX NDF business may also be adversely affected by proposed regulatory changes to the rules governing swap execution facilities.

It is also possible that there will be additional legislative and regulatory changes or efforts in the environment in which we operate our businesses. Actions on any of the specific regulatory issues currently under review in the U.S. or Europe and other proposals could have a material impact on our business.

In addition, U.S. and foreign legislatures and regulators and other regulatory authorities could impose legislative or regulatory changes that could materially adversely impact the ability of our market participants to use our markets or participate in the securities industry at all. Any such changes could result in the loss of a significant number of market participants or a reduction in trading activity on our markets, either of which could have a material adverse effect on our business, financial condition and operating results. Changes or proposed changes in regulation may also result in additional costs of compliance and modification of market participants' trading activity on our Exchanges and markets.

***If one or more of the index providers from which we have licenses or service providers with respect to proprietary products fails to maintain the quality and integrity of their indices or fails to perform under our agreements with them or if customer preferences change, or if we fail to maintain the quality and integrity of our proprietary indices, revenues we generate from trading in these proprietary products or the calculation and dissemination of index values may suffer.***

We are a party to a number of license agreements pursuant to which we may list for trading securities options on various indices including license agreements that we have with S&P, for the S&P 500, S&P 100 and S&P Select Sectors Indices, DJIA, LSEG and MSCI. These license agreements provide that we are authorized to list products based on their indices, and some of the resulting index options and futures are among the most actively traded products on our exchanges. We also enter into licensing agreements pursuant to which we calculate and disseminate values of proprietary indices. The quality and integrity of each of these indices are dependent on the ability of the index providers, including us, to maintain the index, including by means of the calculation and rebalancing of the index, and are dependent on the index providers for a number of things, including the provision of index data. We also rely on index providers to enforce intellectual property rights against unlicensed uses of the indices and uses of the indices that infringe on our licenses. Furthermore, some of our agreements concerning our proprietary products provide for the parties to those agreements to provide important services to us. If any of our index providers, including us, are unable to maintain the quality and integrity of their indices, or if any of the index providers or service providers fail to perform their obligations under the agreements, trading in these products, and therefore transaction fees we receive, may be materially adversely affected or we may not receive the financial benefits of the agreements that we negotiated.

***Any infringement by us on intellectual property rights of others could result in litigation and could have a material adverse effect on our operations.***

Our competitors, as well as others, have obtained, or may obtain, patents or may otherwise hold intellectual property rights that are related to our technology or the types of products and services we offer or plan to offer. We may not be aware of all intellectual property that may pose a risk of infringement by our products, services or technologies. In addition, some potential patent applications in the U.S. are confidential until a patent is issued, and therefore we cannot evaluate the extent to which our products, services or technologies may be covered or asserted to be covered in pending patent applications. Thus, we cannot be sure that our products, services or technologies do not infringe on the rights of others or that others will not make claims of infringement against us. Claims of infringement are not uncommon in our industry, and even if we believe that such claims are without merit, they can be time-consuming and costly to defend and divert management resources and attention. If one or more of our products, services or technologies were determined to infringe a patent or other intellectual property right held by another party, we may be required to pay damages, stop using, developing or marketing those products, services or technologies, obtain a license from the intellectual property rights holders, or redesign those products, services or technologies to avoid infringement. If we were required to stop using, developing or marketing certain products, services or technologies, our business, financial condition and operating results could be materially harmed. Moreover, if we were unable to obtain required licenses, we may not be able to redesign our products, services or technologies to avoid infringement, which could materially adversely affect our business, financial condition and operating results.

***Misconduct by our TPHs, members, participants or others could harm us.***

We run the risk that our TPHs, members, participants, other persons who use our markets or our products, other persons for whom we clear transactions, our employees or those with which we have business relationships may engage in fraud, market or product manipulation, or other misconduct, which could result in regulatory and legal sanctions and penalties and serious harm to our reputation, especially because we are the parent company of SROs. It is not always possible to deter misconduct, or market or product manipulation, and the precautions we take to prevent and detect this activity may not be effective in all cases. In addition, misconduct, or market or product manipulation by, or failures of, participants on our or other exchanges may discourage trading on our Exchanges or of our products, which could reduce revenues.

***Potential conflicts of interest between our for-profit status and our regulatory responsibilities may adversely affect our business.***

As a for-profit business with regulatory responsibilities, we are responsible for disciplining TPHs and members for violating our rules, including by imposing fines and sanctions. This may create a conflict of interest between our business interests and our regulatory responsibilities. Any failure by us to fulfill our regulatory obligations could significantly harm our reputation, increase regulatory scrutiny or cause the SEC or CFTC to take action against us, all of which could materially adversely affect our business, results of operations or financial condition.

***BIDS Trading's ability to operate under its current regulatory framework is dependent upon the sufficiency of a novel operational and governance framework we have developed to govern our relationship with BIDS Trading and our ability to comply with such framework and if we fail to adhere to such framework or the BIDS Trading ATS is otherwise deemed a "facility" of our registered national securities exchanges, our business, financial condition and operating results may be adversely affected.***

The U.S. equities ATS operated by BIDS Trading is regulated as a broker-dealer sponsored alternative trading system and not a registered national securities exchange. Because we acquired BIDS Trading, it is now under common ownership with our registered national securities exchanges that, in some cases, offer trading in the same securities as those traded on the BIDS Trading ATS. Absent sufficient separation, this common ownership of an ATS and registered national securities exchanges offering trading in the same securities presents the potential for the BIDS Trading ATS to be deemed a "facility" of our registered national securities exchanges. If the BIDS Trading ATS were to be deemed to be a "facility" of our registered national securities exchanges, certain exchange regulations could be extended to the BIDS Trading ATS, which could have a material adverse impact on BIDS Trading's business model. This could reduce the BIDS Trading ATS' competitiveness and volumes and could result in a reduction of the value of the BIDS Trading ATS to us. This could also potentially result in fines or other penalties being assessed against us for our failure to operate the BIDS Trading ATS as a "facility," which could have a material adverse effect on our business, financial condition and operating results.

To mitigate the risk that the BIDS Trading ATS is deemed a "facility" of our registered national securities exchanges, we have developed and implemented an operational and governance framework for our ownership of BIDS Trading that is intended to preserve the strategic, technological, business, and operational independence of the BIDS Trading ATS from our registered national securities exchange businesses, such that the BIDS Trading ATS and our registered national securities exchanges would not be deemed to be integrated or otherwise linked for "facility" purposes. This framework is supported by highly detailed policies, procedures and controls. However, because of the lack of precedent for common ownership of an ATS and registered national security exchanges offering trading in the same securities, there is risk that our framework and supporting policies, procedures and controls could be deemed to be insufficient to prevent the BIDS Trading ATS from being deemed to be a "facility" of our registered national securities exchanges. In addition, because of the comprehensive and highly detailed nature of our framework and supporting policies, procedures and controls, there is risk that we could inadvertently fail to fully adhere to our operational and governance framework and related policies, procedures and controls. There is also risk that new legislation or regulation, or changes in existing regulation or other government action, relating to "facilities" of registered national securities exchanges and/or the common ownership of an ATS and registered national securities exchanges offering trading in the same securities could materially affect our ability to own and operate the BIDS Trading ATS under the current operational and governance framework, including without the BIDS Trading ATS being deemed a "facility" of our registered national securities exchanges. Occurrence of any of the risks described in this paragraph could result in the BIDS Trading ATS being deemed to be a "facility" of our registered national securities exchanges, which could reduce the BIDS Trading ATS' competitiveness and volumes and could result in a reduction of the value of the BIDS Trading ATS to us, and could also potentially result in fines or other penalties being assessed against us for our failure to operate the BIDS Trading ATS as a "facility," which could have a material adverse effect on our business, financial condition and operating results.

***Brexit could have a negative impact on the UK and EU economies and lead to considerable uncertainty while new treaties are negotiated.***

In addition to the economic uncertainty the Brexit Vote, Brexit and expiration of the Transition Period bring, there are a number of potential risks that investors should consider:

- *Political uncertainty.* Following the Brexit Vote, the UK entered into a period of acute political uncertainty both as to the nature and timing of the negotiations with the EU. Such uncertainty led to a high degree of economic and market disruption and legal uncertainty. While some certainty has been established following the EU and UK



trade deal, which is limited in scope, it is not possible to predict the outcome of future trade negotiations and the impact they will have on the UK in general and markets more broadly.

- *Legal uncertainty.* A significant proportion of English law currently derives from or is designed to operate in concert with EU law. This is especially true of English law relating to financial markets, financial services, prudential and conduct regulation of financial institutions, bank recovery and resolution, payment services and systems, settlement finality, and market infrastructure. This body of European law was formally incorporated into English law prior to the end of the Transition period. However, as the long-term relationship between the UK and EU with respect to financial services is negotiated, significant changes to English law may be required, and we cannot predict what these changes will be and how they may affect our business.
- *Regulatory uncertainty.* Because the EU and UK trade deal does not cover the entire financial sector, there is continued significant uncertainty about how the remaining EU countries ("EU27") financial institutions with assets (including branches) in the UK and UK financial institutions with assets in the EU27 will be regulated in the future. Prior to Brexit, EU single market regulation allowed regulated financial institutions (including credit institutions, investment firms, alternative investment fund managers, insurance and reinsurance undertakings) to benefit from a passporting system for regulatory authorizations required to conduct their businesses, as well as facilitating mutual rights of access to important elements of market infrastructure such as payment and settlement systems. EU law is also the framework for mutual recognition of bank recovery and resolution regimes.

Once the UK ceased to be a member state of the EU, new restrictions on share trading came into force when trading began on January 4, 2021, preventing EU firms from accessing UK venues in EEA-listed securities. Passporting arrangements ceased to be effective, as did the mutual rights of access to market infrastructure and arrangements for mutual recognition of bank recovery and resolution regimes.

Now that the UK has ceased to be a member state of the EU, the ability of regulated financial institutions to do business between the UK and the EU27 (and the wider EEA) is now subject to the potential development of future separate arrangements between the UK and the EEA. There can be no assurance that there will be any such arrangements concluded and, if they are concluded, on what terms.

- *Market uncertainty.* Since the Brexit Vote and Brexit, there has been volatility and disruption of the capital, currency, exchange rates and credit markets. If this disruption and uncertainty continues, it may adversely impact our business, financial condition and operating results.

In 2020, we derived 9.1% of our total revenues less cost of revenues from our UK operations. Depending on the outcome of the future separate arrangements between the UK and the EEA, companies with operations in the UK may face unfavorable business conditions to access the single market. In preparation for the current situation, Cboe Europe Equities established a regulated entity in the EU in addition to its existing entity in the UK so that it can continue offering its services to customers in both jurisdictions. Since the start of trading on January 4, 2021, the services of this new entity have been used more extensively, because Cboe Europe has seen a shift of almost all trading in EEA instruments from its UK to its EU venue. Similarly, EuroCCP participates in the UK Temporary Recognition Regime for CCP's allowing it to continue to operate in the UK as a CCP for up to three years after the UK ceases to be a member state of the EU pending permanent recognition under UK domestic law. Nevertheless, if the EU or the UK introduce new legislation that could restrict free competition or access to capital markets, the impact of such legislation could have a material adverse effect on our business, financial condition and operating results.

***If our risk management and compliance methods are not effective, our business, financial condition and operating results may be adversely affected.***

Our ability to comply with applicable laws and rules is largely dependent on our establishment and maintenance of compliance, risk, audit, and reporting systems and procedures, as well as our ability to attract and retain qualified compliance, risk and audit management personnel. These systems and procedures may not be fully effective. We face the risk of intervention by regulatory authorities, including extensive examination and surveillance activity. In the case of actual or alleged non-compliance with applicable laws or regulations, we could be subject to investigations and judicial or administrative proceedings that may result in penalties, settlements or civil lawsuits, including by customers, or third parties, for damages, which may be substantial. For example, the SEC has previously brought actions against exchange operators, including us, for failing to fulfill their obligations to have an effective regulatory system. Any failure to comply with applicable laws and rules could materially adversely affect our business, reputation, financial condition and operating

results and, in extreme cases, our ability to conduct our business or portions thereof. As the parent company for SROs, other markets, and a clearinghouse, we are responsible for maintaining markets that comply with securities and futures laws, SEC, FCA, AFM, DNB, IIROC, OSC, ESMA, and CFTC regulations and the rules of the respective exchanges, markets and clearinghouse.

We have methods to identify, monitor and manage our risks. Management of legal, compliance, and regulatory risk, among other risks, requires policies and procedures to properly monitor and manage risk. If our policies, procedures, and compliance systems are not effective or we are not successful in monitoring or evaluating the risks to which we are or may be exposed, our business, reputation, financial condition and operating results could be materially adversely affected. We cannot provide assurance that our policies and procedures will always be effective, or that our management, compliance department, risk department and related enterprise risk management program and internal audit department would be able to identify any such ineffectiveness. If these departments or the enterprise risk program, and related policies and procedures are not effective, we may be subject to monetary or other penalties by our regulators, and our insurance policies may not provide adequate coverage.

***Our ability to implement or amend rules could be limited or delayed because of regulation, which could negatively affect our ability to implement needed changes.***

Our Exchanges registered with the SEC must submit proposed rule changes to the SEC for its review and, in many cases, its approval. Even where a proposed rule change may be effective upon filing with the SEC, the SEC retains the right to suspend and disapprove such a rule change. Also, the CFTC may stay or disapprove rules that we file with it for CFE or Cboe SEF. The rule review process can be lengthy and can significantly delay the implementation of proposed rule changes that we believe are necessary to the operation of our markets. If the SEC or CFTC delays, including because of a government shutdown, or does not allow one of our Exchanges to implement a rule change, this could negatively affect our ability to make needed changes or implement business activities.

Similarly, the SEC must approve amendments to our exchange subsidiaries' certificates of incorporation and bylaws as well as certain amendments to the certificate of incorporation and bylaws of Cboe Global Markets. The SEC may decide not to approve a proposed amendment or may delay such approval in a manner that could negatively affect our ability to make a desired change, which could prevent or delay us from improving the operations of our markets or recognize income from new products.

***Changes in the tax laws and regulations affecting us, our products and our market participants could have a material adverse effect on our business.***

Legislation may be proposed, both domestically and internationally, that could add a transaction tax on our products or change the way that our market participants are taxed on the products they trade on our markets. More recently, a number of federal, state and local jurisdictions in the U.S. and EU Member States have considered a financial transaction tax, but many details remain to be discussed and agreed, including how to assess the tax. If such proposals were to become law, they could have a negative impact on the securities industry and on us by making transactions more costly to market participants, which may reduce trading or clearing and could make our markets less competitive, and they could result in a reduction in volumes and liquidity, which would have a negative impact on our operations.

In addition to proposed tax changes that could affect our market participants, like other corporations, we are subject to taxes at federal, state and local levels, as well as in non-U.S. jurisdictions. Changes in tax laws, regulations or policies or successful claims by tax authorities could result in our having to pay higher taxes, which would in turn reduce our net income. If this occurs, we may experience a higher effective tax rate.

#### **Risks Related to Our Common Stock and Indebtedness**

***We have outstanding indebtedness, which may decrease our business flexibility and adversely affect our business, financial condition and operating results.***

As of December 31, 2020, we had \$68.7 million outstanding under our term loan facility, \$645.9 million of senior unsecured notes due 2027, \$489.3 million of senior unsecured notes due 2030, no funds outstanding under our revolving credit facility and no funds outstanding under the EuroCCP credit facility. The financial and other covenants to which we have agreed and our indebtedness may have the effect of reducing our flexibility to respond to changing business and economic conditions, thereby placing us at a competitive disadvantage compared to competitors that have less indebtedness and making us more vulnerable to general adverse economic and industry conditions. Further, we may

default on our obligations or violate the covenants, in which case, we may be required to seek a waiver of such default or the debt obligations may be accelerated. A default under any of our indebtedness with cross default provisions could result in a default on our other indebtedness. Our indebtedness will also increase future borrowing costs, and the covenants pertaining thereto may also limit our ability to repurchase shares of our common stock, increase dividends or obtain additional financing to fund working capital, capital expenditures, acquisitions or general corporate requirements. We are also required to dedicate a larger portion of our cash flow from operations to payments on our indebtedness, thereby reducing the availability of our cash flow for other purposes, including working capital, capital expenditures and general corporate purposes. Further, a portion of our borrowings are at variable rates of interest, which exposes us to the risk of increased interest rates unless we enter into offsetting hedging transactions.

Our ability to make payments on and to refinance our debt obligations and to fund planned capital expenditures depend on our ability to generate cash from our operations. This, to a certain extent, is subject to general economic, financial, competitive, legislative, regulatory and other factors that are beyond our control.

We may not be able to refinance any of our indebtedness on commercially reasonable terms, or at all. If we cannot service our indebtedness, we may have to take actions such as selling assets, seeking additional equity or reducing or delaying capital expenditures, strategic acquisitions, investments and alliances, any of which could impede the implementation of our business strategy or prevent us from entering into transactions that would otherwise benefit our business. Additionally, we may not be able to affect such actions, if necessary, on commercially reasonable terms, or at all. Any of the foregoing consequences could materially adversely affect our business, financial condition and operating results.

***Deterioration in our credit profile may increase our costs of borrowing money.***

As of December 31, 2020, we have investment grade credit ratings from S&P Global Ratings (A-) and Moody's Investor Service (A3). Ratings from credit agencies are not recommendations to buy, sell or hold our securities, and each rating should be evaluated independently of any other rating. There is no assurance that we will maintain such credit ratings, since credit ratings may be lowered or withdrawn entirely by a rating agency if, in its judgment, the circumstances warrant. If a rating agency were to downgrade our rating below investment grade, our borrowing costs could increase.

***If our goodwill, long-lived assets, investments in non-consolidated subsidiaries and intangible assets become impaired, the resulting charge to earnings may be significant.***

We are required to assess investments in non-consolidated subsidiaries and intangible assets for impairment at least annually. Goodwill impairment testing is performed annually in the fiscal fourth quarter or more frequently if conditions exist that indicate that the asset may be impaired. In the future, we may take charges against earnings resulting from impairment. Any determination requiring the write-off of a significant portion of our goodwill, long-lived assets, intangible assets or investments in non-consolidated subsidiaries could materially adversely affect our results of operations and financial condition.

***Any decision to pay dividends on our common stock is at the discretion of our board of directors and depends upon the earnings and cash flow of our operating subsidiaries. Accordingly, there can be no guarantee that we will pay dividends to our stockholders.***

Any decision to pay dividends on our common stock in the future will be at the discretion of our board of directors, which may determine not to declare dividends at all or at a reduced amount. The board's determination to declare dividends will depend upon our profitability and financial condition, contractual restrictions, restrictions imposed by applicable law and the SEC and other factors that the board deems relevant. As a holding company with no significant business operations of its own, Cboe Global Markets depends entirely on distributions, if any, it may receive from its subsidiaries to meet its obligations and pay dividends to its stockholders. If these subsidiaries are not profitable, or even if they are and they determine to retain their profits for use in their businesses, we will be unable to pay dividends to our stockholders.

***Certain provisions in our organizational documents and governing law could prevent or delay a change of control.***

Our organizational documents contain provisions that could block actions that stockholders might find favorable, including discouraging, delaying or preventing a change of control or any unsolicited acquisition proposals for us. These include provisions:

- prohibiting stockholders from acting by written consent;
- requiring advance notice of director nominations and of business to be brought before a meeting of stockholders; and
- limiting the persons who may call special stockholders' meetings.

In addition, our organizational documents include provisions that:

- restrict any person from voting or causing the voting of shares of stock representing more than 20% of our outstanding voting capital stock; and
- restrict any person from beneficially owning shares of stock representing more than 20% of the outstanding shares of our capital stock.

Furthermore, our board of directors has the authority to issue shares of preferred stock in one or more series and to fix the rights and preferences of these shares without stockholder approval. Any series of our preferred stock is likely to be senior to our common stock with respect to dividends, liquidation rights and, possibly, voting rights. The ability of the board of directors to issue preferred stock also could have the effect of discouraging unsolicited acquisition proposals, thus materially adversely affecting the market price of our common stock.

Delaware law makes it difficult for stockholders that have recently acquired a large interest in a corporation to cause the merger or acquisition of the corporation against the board's wishes. Under Section 203 of the Delaware General Corporation Law, a Delaware corporation may not engage in any merger or other business combination with an interested stockholder for a period of three years following the date that the stockholder became an interested stockholder except in limited circumstances, including by approval of the corporation's board of directors.

Furthermore, the European countries where we operate regulated entities, such as the UK and Netherlands, may require prior governmental approval before an investor acquires 10% or more of the outstanding shares of our common stock.

**Item 1B. Unresolved Staff Comments**

Not applicable.

## Item 2. Properties

The Company is headquartered in Chicago with a network of domestic and global offices across the Americas, Europe and Asia, including main hubs in New York, London, Kansas City and Amsterdam. Our principal properties are listed in the table below:

Location	Classification	Owned/Leased	Lease Expiration	Approximate Size
400 South La Salle Street, Chicago, Illinois	Global headquarters, trading floor and office space	Owned*	N/A	300,000 sq. ft.
433 W. Van Buren Street, Chicago, Illinois	Planned new global headquarters and office space	Leased	August 2035	185,000 sq. ft.
8050 Marshall Drive, Lenexa, Kansas	Office space	Leased	February 2027, with two 5 year renewal options	62,000 sq. ft.
8050 Marshall Drive, Lenexa, Kansas	Office space	Leased	May 2023	18,500 sq. ft.
141 W. Jackson Boulevard, Chicago, Illinois	Planned new trading floor and office space	Leased	October 2032	40,000 sq. ft.
17 State Street, New York, New York	Office space	Leased	April 2024, with one 5 year renewal option	22,000 sq. ft.
11 Monument Street, London, United Kingdom	Principal UK office space	Leased	March 2022, with one 5 year renewal option	10,400 sq. ft.
Strawinskylaan 1847 Amsterdam, Netherlands	Office space	Leased	August 2023	8,000 sq. ft.

\*Through our wholly-owned subsidiary, Cboe Building Corporation, we own the building in which our principal officers are located and occupy approximately 300,000 square feet of this building. The building is currently classified as held for sale.

We believe that our properties are in good operating condition and adequately serve our current business operations. Generally, our properties are not earmarked for use by a particular segment. Instead, most of our properties are used by two or more segments. We also anticipate that suitable additional or alternative space will be available at commercially reasonable terms for future expansion to the extent necessary.

Our disaster recovery sites in the United States are located in Chicago, Illinois, Kansas City, Missouri, and Secaucus, New Jersey. In addition, we have agreements with a primary data center in Secaucus, New Jersey and a secondary data center in Chicago, Illinois. In Europe, our primary data center is in Slough, England. The secondary data center for Cboe Europe is in Park Royal, London. We operate a back-up location for our London operations in the United Kingdom.

See Note 8 (“Property and Equipment, Net”) and Note 25 (“Leases”) of the consolidated financial statements included herein for further information.

## Item 3. Legal Proceedings

Cboe incorporates herein by reference the discussion set forth in Note 22 (“Income Taxes”) and Note 24 (“Commitments, Contingencies, and Guarantees”) of the consolidated financial statements included herein.

### *Transaction Fee Pilot*

In December 2018, the SEC approved a transaction fee pilot in national market system (“NMS”) stocks (the “pilot”). The pilot will subject stock exchange transaction fee pricing, including maker-taker fee-and-rebate pricing models, to new temporary pricing restrictions across two test groups, and require the exchanges to prepare data to be submitted to the SEC. The pilot includes a test group that will prohibit rebates and linked pricing, as well as a test group that will impose a cap of \$0.0010 for removing or providing displayed liquidity. Once commenced, the pilot will last for up to two years with an automatic sunset at one year unless extended by the SEC. On February 15, 2019, the Company filed a Petition for Review in the Court of Appeals for the D.C. Circuit (the “D.C. Circuit”) asserting the pilot is unlawful. The pilot was published in the Federal Register on February 20, 2019 and was scheduled to become effective on April 22, 2019. On

March 28, 2019, the SEC granted a partial stay of the pilot, agreeing to delay implementing its fee-and-rebate and data-publication requirements until after the D.C. Circuit decides the pending challenges. The data-gathering requirement of the pilot's pre-pilot period remains in effect. On May 21, 2019, the SEC issued its notice to announce the effective period for the pre-pilot, which was designated as July 1, 2019 through December 31, 2019. On June 3, 2019, the Company, along with other equities exchanges, filed an opening brief with the D.C. Circuit. The SEC filed its opening brief with the D.C. Circuit on July 25, 2019, the exchanges' reply brief was filed on August 26, 2019 and final briefs were filed on September 10, 2019. Oral arguments were held on October 11, 2019. On June 16, 2020, the D.C. Circuit granted the Petition for Review, vacated the pilot and remanded the matter back to the SEC for reconsideration. The SEC did not file a petition for writ of certiorari to the U.S. Supreme Court by November 13, 2020. The matter is now concluded.

#### *Consolidated Data Plans*

On May 6, 2020, the SEC issued a final order (the "Consolidated Data Plan Order") that would require U.S. equities exchanges and FINRA to develop and file a new consolidated data plan (the "Plan") that would replace the three current U.S. equities tape data plans and require certain governance provisions, such as changes to the voting structure. Pursuant to the Consolidated Data Plan Order, the Company and the other U.S. equities exchanges and FINRA are required to file the proposed Plan for public comment before the SEC takes any definitive action on such new plan. Until and if the SEC approves a new plan, the current data plans will continue to govern. On June 29, 2020, the Company filed a Petition for Review in the Court of Appeals for the D.C. Circuit (the "D.C. Circuit") asserting the Consolidated Data Plan Order is unlawful. On October 14, 2020, the D.C. Circuit issued an order setting forth a briefing schedule and briefing will conclude on March 12, 2021. The Consolidated Data Plan Order may cause the Company's equities exchanges, BZX, BYX, EDGX, and EDGA, to require additional resources to comply with or challenge the Consolidated Data Plan Order and it may have a material impact on our business, financial condition and operating results if, for example, there is a negative impact on the market data fees the Company's equities exchanges are able to charge. The Company intends to litigate the matter vigorously.

#### *Market Data Infrastructure Rule*

On December 9, 2020, the SEC issued a Market Data Infrastructure Final Rule, which makes significant additions to the content available on the Securities Information Processors ("SIPs") and replaces the exclusive processors with a competing consolidator model. On February 5, 2021, the Company, along with other equity exchanges, filed: (1) a Motion to Stay of the Market Data Infrastructure Rule with the SEC, and (2) a Petition for Review in the Court of Appeals for the D.C. Circuit (the "D.C. Circuit"). The implementation of the new rules could cause Cboe's equities exchanges, BZX, BYX, EDGX, and EDGA, to require additional resources to comply with or to challenge the new rules and they may have a material impact on our business, financial condition and operating results if, for example, there are lower SIP plan revenues or we must reduce the fees we charge for market data. The Company intends to litigate the matter vigorously.

#### **Item 4. Mine Safety Disclosures**

Not applicable.

## PART II

### Item 5. Market for Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities

#### Common Stock

The Company's common stock is listed on Cboe BZX under the trading symbol CBOE. As of January 29, 2021, there were approximately 136 holders of record of our common stock.

#### Dividends

Each share of common stock, including restricted stock awards and restricted stock units, is entitled to receive dividend and dividend equivalents, respectively, if, as and when declared by the board of directors of the Company.

The Company's expectation is to continue to pay dividends. The decision to pay a dividend, however, remains within the discretion of the Company's board of directors and may be affected by various factors, including our earnings, financial condition, capital requirements, level of indebtedness and other considerations our board of directors deems relevant. Future debt obligations and statutory provisions, among other things, may limit, or in some cases prohibit, our ability to pay dividends.

As a holding company, the Company's ability to declare and continue to pay dividends in the future with respect to its common stock will also be dependent upon the ability of its subsidiaries to pay dividends to it under applicable corporate law.

#### Recent Sales of Unregistered Securities

Not applicable.

#### Use of Proceeds

Not applicable.

#### Purchases of Equity Securities by the Issuer and Affiliated Purchasers

##### *Share Repurchase Program*

In 2011, the board of directors approved an initial authorization for the Company to repurchase shares of its outstanding common stock of \$100 million and approved additional authorizations of \$100 million in each of 2012, 2013, 2014, 2015 and 2016, \$150 million in February 2018, \$100 million in August 2018, \$250 million in October 2019, and \$250 million in June 2020, for a total authorization of \$1.4 billion. The Company expects to fund repurchases primarily through the use of existing cash balances. The program permits the Company to purchase shares through a variety of methods, including in the open market or through privately negotiated transactions, in accordance with applicable securities laws. It does not obligate the Company to make any repurchases at any specific time or situation.

Under the program, for the year ended December 31, 2020, the Company repurchased 3,534,115 shares of common stock at an average cost per share of \$98.78, totaling \$349.1 million. Since inception of the program through December 31, 2020, the Company has repurchased 17,250,124 shares of common stock at an average cost per share of \$66.66, totaling \$1.1 billion.

As of December 31, 2020, the Company had \$200.1 million of availability remaining under its existing share repurchase authorizations.

Period	Total Number of Shares Purchased	Average Price Paid per Share	Total Number of Shares Purchased as Part of Publicly Announced Plans or Programs	Approximate Dollar Value of Shares that May Yet Be Purchased Under the Plans or Programs (in millions)
October 1 to October 31, 2020 . . . . .	419,330	\$ 82.46	419,330	\$ 253.5
November 1 to November 30, 2020 . . . . .	296,276	88.64	296,276	227.3
December 1 to December 31, 2020 . . . . .	298,103	91.06	298,103	200.1
Total . . . . .	1,013,709	\$ 86.79	1,013,709	

**Purchase of common stock from employees**

During the fiscal quarter ended December 31, 2020, we purchased shares from employees in connection with the settlement of employee tax withholding obligations arising from the vesting of restricted stock units, restricted stock awards, and stock options. The table below represents repurchases made by or on behalf of us or any “affiliated purchaser” of our common stock during the fiscal quarter ended December 31, 2020:

Period	Total number of shares purchased	Average price paid per share
October 1 to October 31, 2020 . . . . .	—	\$ —
November 1 to November 30, 2020 . . . . .	322	87.65
December 1 to December 31, 2020 . . . . .	—	—
Total . . . . .	322	87.65

**Stockholder Return Performance Graph**

The following graph compares the cumulative total return provided to stockholders on our common stock since our initial public offering against the return of the S&P 500 Index and a customized peer group that includes CME Group Inc., Intercontinental Exchange Inc., and Nasdaq, Inc.

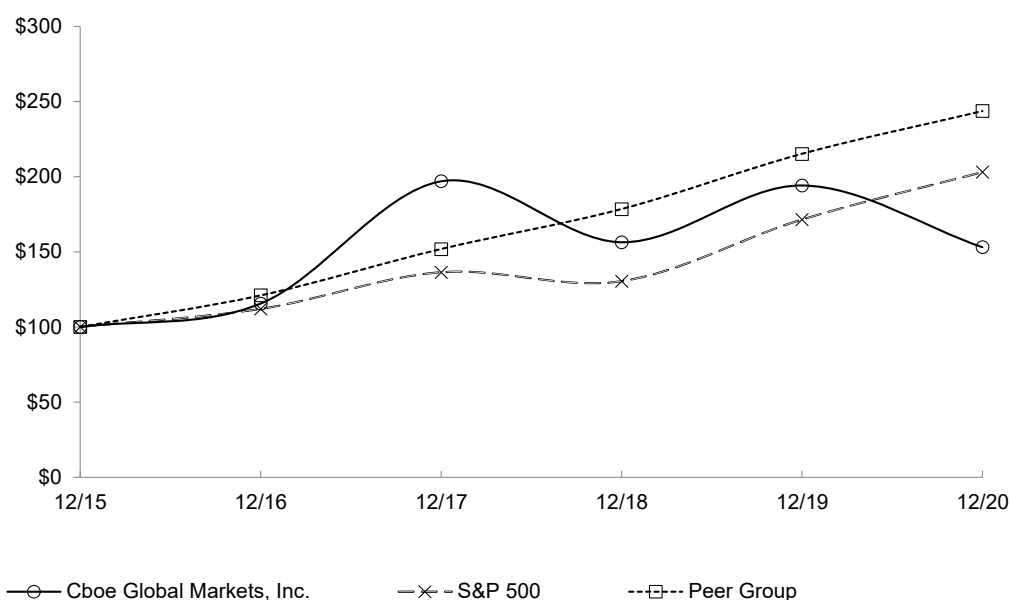


An investment of \$100, with reinvestment of all dividends, is assumed to have been made in our common stock, the index and the peer groups on December 31, 2015, and its performance is tracked on an annual basis through December 31, 2020.

**Comparison of Cumulative Total Return of the  
Company, Peer Groups, Industry Indices and/or Broad Markets**

**COMPARISON OF 5 YEAR CUMULATIVE TOTAL RETURN\***

Among Cboe Global Markets, Inc., the S&P 500 Index  
and a Peer Group



\*\$100 invested on 12/31/15 in stock or index, including reinvestment of dividends.  
Fiscal year ending December 31.

Data Source: Yahoo Finance, Closing Price(s)

	<u>12/15</u>	<u>12/16</u>	<u>12/17</u>	<u>12/18</u>	<u>12/19</u>	<u>12/20</u>
Cboe Global Markets, Inc.....	100.00	115.52	196.92	156.36	194.14	153.05
S&P 500.....	100.00	111.96	136.40	130.42	171.49	203.04
Peer Group.....	100.00	120.97	151.86	178.40	215.15	243.61

## Item 6. Selected Financial Data

The following selected financial and operating data should be read in conjunction with “Management’s Discussion and Analysis of Financial Condition and Results of Operations” and our consolidated financial statements and the accompanying notes included in Items 7 and 8, respectively of this Form 10-K. The information set forth below is not necessarily indicative of our future results for any period. We completed the acquisition of Bats during 2017 and included the financial results of Bats in our consolidated financial results from March 1, 2017. Additionally, the below tables include results of other acquisitions from the effective date of each acquisition.

	Year Ended December 31,				
	2020	2019	2018	2017	2016
	(in millions, except per share data)				
<b>Consolidated Statements of Operations Data:</b>					
Revenues:					
Transaction and clearing fees	\$ 2,418.0	\$ 1,716.2	\$ 1,986.9	\$ 1,564.9	\$ 509.3
Access and capacity fees	236.7	221.9	211.0	181.6	98.7
Market data fees	232.0	213.5	204.0	164.5	33.2
Regulatory fees	500.2	311.7	333.9	291.5	48.3
Other revenue	40.2	32.8	33.0	26.6	13.6
Total revenues	<u>3,427.1</u>	<u>2,496.1</u>	<u>2,768.8</u>	<u>2,229.1</u>	<u>703.1</u>
Cost of revenues:					
Liquidity payments	1,554.1	964.7	1,113.0	849.7	35.8
Routing and clearing	70.4	35.8	39.1	37.6	11.1
Section 31 fees (1)	465.0	271.4	302.4	260.0	11.8
Royalty fees	83.4	86.8	97.4	86.2	78.0
Other	(0.1)	0.5	—	—	—
Total cost of revenues	<u>2,172.8</u>	<u>1,359.2</u>	<u>1,551.9</u>	<u>1,233.5</u>	<u>136.7</u>
Revenues less cost of revenues	1,254.3	1,136.9	1,216.9	995.6	566.4
Operating expenses:					
Compensation and benefits	224.9	199.0	228.8	201.4	113.2
Depreciation and amortization	158.5	176.6	204.0	192.2	44.4
Technology support services	54.5	46.2	47.9	42.1	22.5
Professional fees and outside services	60.6	68.3	68.3	66.0	53.1
Travel and promotional expenses	6.6	11.9	13.0	17.2	11.0
Facilities costs	17.6	11.0	11.5	10.3	5.7
Acquisition-related costs	45.2	48.5	30.0	84.4	13.6
Other expenses	24.2	38.2	14.0	10.1	4.7
Total operating expenses	<u>592.1</u>	<u>599.7</u>	<u>617.5</u>	<u>623.7</u>	<u>268.2</u>
Operating income	662.2	537.2	599.4	371.9	298.2
Non-operating (expenses) income:					
Interest expense, net	(37.6)	(35.9)	(38.2)	(41.3)	(5.7)
Other income, net	35.8	0.1	10.0	3.8	14.1
Income before income tax provision	<u>660.4</u>	<u>501.4</u>	<u>571.2</u>	<u>334.4</u>	<u>306.6</u>
Income tax provision	192.2	130.6	146.0	(66.2)	120.9
Net income	<u>\$ 468.2</u>	<u>\$ 370.8</u>	<u>\$ 425.2</u>	<u>\$ 400.6</u>	<u>\$ 185.7</u>
Net loss attributable to redeemable noncontrolling interest	—	4.1	1.3	1.1	1.1
Net income excluding redeemable noncontrolling interest	468.2	374.9	426.5	401.7	186.8
Change in redemption value of redeemable noncontrolling interest	—	(0.5)	(1.3)	(1.1)	(1.1)
Net income allocated to participating securities	(1.2)	(1.7)	(3.1)	(3.9)	(0.8)
Net income allocated to common stockholders	<u>\$ 467.0</u>	<u>\$ 372.7</u>	<u>\$ 422.1</u>	<u>\$ 396.7</u>	<u>\$ 184.9</u>
Basic earnings per share	\$ 4.28	\$ 3.35	\$ 3.78	\$ 3.70	\$ 2.27
Diluted earnings per share	\$ 4.27	\$ 3.34	\$ 3.76	\$ 3.69	\$ 2.27
Basic weighted average shares outstanding	109.1	111.4	111.8	107.2	81.4
Diluted weighted average shares outstanding	109.3	111.8	112.2	107.5	81.4
Distributions per share	\$ 1.56	\$ 1.34	\$ 1.16	\$ 1.04	\$ 0.96

(1) As national securities exchanges, Cboe Options, C2, BZX, BYX, EDGX, and EDGA are assessed fees pursuant to Section 31 of the Exchange Act. Section 31 fees are assessed on the notional value traded and are designed to recover the costs to the government of supervision and regulation of securities markets and securities professionals. Section 31 fees are paid directly to the SEC, and our national securities exchanges then pass these costs along to our members as regulatory transaction fees, recognizing these amounts as incurred in cost of revenues and revenues, respectively.

	As of December 31,				
	2020	2019	2018	2017	2016
	(in millions)				
<b>Balance Sheet Data:</b>					
Assets:					
Cash and cash equivalents . . . . .	\$ 245.4	\$ 229.3	\$ 275.1	\$ 143.5	\$ 97.3
Financial investments . . . . .	92.4	71.0	35.7	47.3	—
Accounts receivable, net of \$0.6 allowance for credit losses at December 31, 2020 and \$0.7 at December 31, 2019 . . . . .	337.3	234.7	287.3	217.3	76.7
Margin deposits and clearing funds . . . . .	812.1	—	—	—	—
Current assets . . . . .	1,566.8	607.6	683.7	434.7	235.1
Goodwill and intangible assets, net . . . . .	4,624.1	4,272.0	4,411.6	4,610.0	35.2
Total assets . . . . .	6,516.5	5,113.9	5,321.0	5,265.7	476.7
Liabilities and stockholders' equity:					
Margin deposits and clearing funds . . . . .	\$ 812.1	\$ —	\$ —	\$ —	\$ —
Short-term and long-term debt . . . . .	1,203.9	867.6	1,215.4	1,237.9	—
Current liabilities . . . . .	1,313.3	281.6	595.9	334.0	89.9
Total liabilities . . . . .	3,167.6	1,758.3	2,070.6	2,145.7	146.2
Total redeemable noncontrolling interest . . . . .	—	—	9.4	9.4	12.6
Total stockholders' equity . . . . .	3,348.9	3,355.6	3,241.0	3,110.6	317.9
Total liabilities, redeemable noncontrolling interest, and stockholders' equity . . . . .	6,516.5	5,113.9	5,321.0	5,265.7	476.7

## Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations

*Management's Discussion and Analysis of Financial Condition and Results of Operations ("MD&A") should be read in conjunction with the consolidated financial statements of the Company and the notes thereto included in Item 8 of this Annual Report on Form 10-K. The following discussion contains forward-looking statements. Actual results could differ materially from the results discussed in the forward-looking statements. See "Risk Factors" and "Forward-Looking Statements" above.*

*A detailed comparison of the Company's 2019 operating results to its 2018 operating results can be found in the Management's Discussion and Analysis of Financial Condition and Results of Operations section in the Company's 2019 Annual Report on Form 10-K filed February 21, 2020 at [www.sec.gov](http://www.sec.gov).*

### INTRODUCTION

Management's Discussion and Analysis of Financial Condition and Results of Operations is organized as follows:

- **Executive Summary** – Includes an overview of the Company's business; a description of notable recent developments, current economic, competitive and regulatory trends relevant to our business; the Company's current business strategy; and the Company's primary sources of operating and non-operating revenues and expenses.
- **Results of Operations** – Includes an analysis of the Company's 2020 and 2019 financial results and a discussion of any known events or trends which are likely to impact future results.
- **Liquidity and Capital Resources** – Includes a discussion of the Company's future cash requirements, capital resources, and financing arrangements.
- **Critical Accounting Policies** – Provides an explanation of accounting policies which may have a significant impact on the Company's financial results and the estimates, assumptions and risks associates with those policies.
- **Recent Accounting Pronouncements** – Includes an evaluation of recent accounting pronouncements and the potential impact of their future adoption on the Company's financial results.

### EXECUTIVE SUMMARY

#### Overview

Cboe Global Markets, Inc. ("Cboe" or "the Company") is one of the world's largest exchange holding companies, offering cutting-edge trading and investment solutions to investors around the world. The Company is committed to defining markets to benefit its participants and drive the global marketplace forward through product innovation, leading edge technology and seamless trading solutions.

Cboe offers trading across a diverse range of products in multiple asset classes and geographies, including options, futures, U.S., Canadian and European equities, exchange-traded products ("ETPs"), global foreign exchange ("FX") and volatility products based on the VIX Index, recognized as the world's premier gauge of U.S. equity market volatility.

Cboe's subsidiaries include the largest options exchange and the third largest stock exchange operator in the U.S. In addition, the Company operates one of the largest stock exchanges by value traded in Europe, and owns EuroCCP, a leading pan-European equities clearinghouse, MATCHNow, a leading equities ATS in Canada, and as of December 31, 2020, BIDS Trading, the leading block-trading ATS by volume in the U.S. Cboe also is a leading market globally for ETP listings and trading.

The Company is headquartered in Chicago with offices in Kansas City, New York, London, San Francisco, Sarasota Springs, Toronto, Belfast, Amsterdam, Calgary, Singapore, Hong Kong, and Ecuador.

## Recent Developments

### ***Acquisitions of Hanweck, FT Options and Trade Alert***

On February 3, 2020, the Company purchased Hanweck Associates, LLC (“Hanweck”) and the assets of FT Providers, LLC (“FT Options”). Hanweck is a real-time risk analytics company based in New York. FT Options is a portfolio management platform provider based in Chicago. Both companies are providers of risk analytics market data and included in the Company’s Options segment. Additionally, on June 1, 2020, the Company purchased the assets of Trade Alert, LLC (“Trade Alert”), a real-time alerts and order flow analysis service provider included in the Company’s Options segment. Hanweck, FT Options, and TradeAlert are being integrated with Cboe Information Solutions’ comprehensive suite of data solutions, analytics and indices that help market participants understand and access financial markets. See Note 5 (“Acquisitions”) for more information.

### ***Chicago Trading Floor***

On March 13, 2020, the Cboe Options trading floor was temporarily closed and transitioned to all-electronic trading mode as a precautionary measure to reduce the risk of COVID-19. The Cboe Options trading floor reopened on June 15, 2020 and is accommodating open-outcry trading activity with a modified floor layout, with stringent health and safety protocols in place for the well-being of the trading floor community, which includes Cboe associates and trading permit holders.

### ***Acquisition of EuroCCP***

On July 1, 2020, the Company completed the acquisition of the remaining 80% interest in EuroCCP which is included in the Company’s European Equities segment. EuroCCP is a European equities central counterparty that provides post-trade services to stock exchanges, MTFs and for over-the-counter trades. EuroCCP clears equities from eighteen European markets and from the United States, as well as Depositary Receipts, ETFs, and exchanged traded currencies. In connection with the acquisition, EuroCCP put in place a committed revolving credit facility of up to €1.5 billion, see Note 13 (“Debt”) for more information.

### ***Acquisition of MATCHNow***

On August 4, 2020, the Company completed the acquisition of MATCHNow, one of the largest equities ATSS in Canada, which is included in the Company’s North American Equities segment. MATCHNow is a Canadian marketplace that offers execution for institutional, proprietary, and retail orders by combining frequent call matches and continuous execution opportunities in a fully confidential trading book. See Note 5 (“Acquisitions”) for more information.

### ***Acquisition of BIDS Holdings***

On December 31, 2020, the Company completed the acquisition of BIDS Holdings, which is included in the Company’s North American Equities segment. BIDS Holdings owns BIDS Trading, a registered broker-dealer and the operator of the BIDS ATS. The BIDS ATS is not a registered national securities exchange or a facility thereof. BIDS Trading’s proven block trading capability provides the Company a foothold in the off-exchange segment of the U.S. equities market. Additionally, BIDS Trading’s differentiated network of global buy-side investment managers and sell-side constituents provides the foundation for Cboe to potentially build more off-exchange products and services in non-U.S. equities or options products and in other geographies beyond the U.S.

## Business Segments

The Company reports five business segments: Options, North American Equities, Futures, European Equities, and Global FX. Segment performance is primarily based on operating income (loss). The Company has aggregated all of its corporate costs and eliminations, as well as other business ventures, within Corporate Items and Eliminations; however, operating expenses that relate to activities of a specific segment have been allocated to that segment. Our management allocates resources, assesses performance and manages our business according to these segments:

**Options.** The Options segment includes listed options on market indices (“index options”), as well as on the stocks of individual corporations (“equity options”) and options on ETPs, such as exchange-traded funds (“ETFs”) and exchange-traded notes (“ETNs”), which are “multi-listed” options and listed on a non-exclusive basis. These options trade on Cboe Options, C2 Options, BZX Options, and EDGX Options, all U.S. national security exchanges. Cboe Options is the

Company's primary options market and offers trading in listed options through a single system that integrates electronic trading and traditional open outcry trading on the Cboe Options trading floor in Chicago. There was a temporary suspension of open outcry trading between March 13, 2020 and June 14, 2020 in response to the COVID-19 pandemic. C2 Options, BZX Options, and EDGX Options are all-electronic options exchanges, and typically operate with different market models and fee structures than Cboe Options. The Options segment also includes applicable market data revenue generated from the consolidated tape plans, the licensing of proprietary options market data, index licensing, and access and capacity services.

**North American Equities (formerly U.S. Equities).** The North American Equities segment includes listed U.S. equities and ETP transaction services that occur on fully electronic exchanges owned and operated by BZX Equities, BYX Equities, EDGX Equities, and EDGA Equities and Canadian equities and other transaction services that occur on or through the MATCHNow ATS. This segment was previously referred to as the U.S. Equities segment, but has been updated as a result of the acquisition of MATCHNow, which provides Canadian equities and other transaction services. In addition, in connection with the closing of the acquisition of BIDS Trading, starting January 1, 2021, this segment also includes equities transactions that occur on the BIDS Trading platforms. The North American Equities segment also includes ETP listings on BZX, the Cboe Global Markets, Inc. common stock listing, applicable market data revenue generated from the consolidated tape plans, the licensing of proprietary equities market data, routing services, access and capacity services and advertising activity from ETF.com.

**Futures.** The Futures segment includes transaction services provided by the Company's fully electronic futures exchange, CFE, which includes offerings for trading VIX futures and other futures products, the licensing of proprietary market data, as well as access and capacity services.

**European Equities.** The European Equities segment includes the pan-European listed equities transaction services, ETPs, exchange traded commodities, and international depository receipts that are hosted on MTFs operated by Cboe Europe Equities. It also includes the ETP listings business on RMs and clearing activities of EuroCCP. Cboe Europe Equities operates lit and dark books, a periodic auctions book, and a Large-in-Scale ("LIS") trading negotiation facility. Cboe NL, launched in October 2019, operates similar business functionality to that offered by Cboe Europe, and provides for trading only in European Economic Area symbols. Cboe Europe Equities also includes revenue generated from the licensing of proprietary market data and from access and capacity services.

**Global FX.** The Global FX segment includes institutional FX trading services that occur on the Cboe FX fully electronic trading platform, non-deliverable forward FX transactions ("NDFs") offered for execution on Cboe SEF and Cboe Swiss, as well as revenue generated from the licensing of proprietary market data and from access and capacity services.

## General Factors Affecting Results of Operations

In broad terms, our business performance is impacted by a number of drivers, including macroeconomic events affecting the risk and return of financial assets, investor sentiment, the regulatory environment for capital markets, geopolitical events, tax policies, central bank policies and changing technology, particularly in the financial services industry. We believe our future revenues and net income will continue to be influenced by a number of domestic and international economic trends, including:

- trading volumes on our proprietary products such as VIX options and futures and SPX options;
- trading volumes in listed equity securities and ETPs in both North America and Europe, clearing volumes in listed equity securities and ETPs in Europe, volumes in listed equity options, and volumes in institutional FX trading;
- the demand for and pricing structure of the U.S. tape plan market data distributed by the Securities Information Processors (SIPs), which determines the pool size of the industry market data revenue we receive based on our market share;
- consolidation and expansion of our customers and competitors in the industry;
- the demand for information about, or access to, our markets, which is dependent on the products we trade, our importance as a liquidity center and the quality and pricing of our data and access and capacity services;
- continuing pressure in transaction fee pricing due to intense competition in the United States and Europe;
- significant fluctuations in foreign currency translation rates or weakened value of currencies; and
- regulatory changes relating to market structure and increased capital requirements, and those which affect certain types of instruments, transactions, pricing structures, capital market participants or reporting or compliance requirements, including any changes resulting from Brexit.

A number of significant structural, political and monetary issues and the COVID-19 pandemic continue to confront the global economy, and instability could continue, resulting in an increased or subdued level of market volatility, changes in trading volumes and greater uncertainty.

On March 11, 2020, the World Health Organization declared COVID-19 a global pandemic. We are closely monitoring developments around COVID-19 and following guidance provided by governmental and public health agencies. In response to COVID-19, we have provided frequent communications to employees, customers, regulators, critical vendors, technology equipment suppliers, data and disaster recovery centers, and other service providers and instructed non-essential employees to work from home on a temporary basis, implemented travel restrictions, and temporarily suspended open outcry trading between March 13, 2020 and June 14, 2020, without any known significant disruptions to our business or control processes. We expect to continue to take further actions as necessary in response to addressing COVID-19. As of the date of this report, it is too early to determine the full impact this virus may have on the global financial markets and the overall economy. Our business and operations could be materially and adversely affected by the effects of COVID-19, however, the extent to which our results could be affected by COVID-19 largely depends on future developments which cannot be accurately predicted and are uncertain. Further, changes in trading behavior, additional suspensions of open outcry trading, market disruptions and other future developments caused by the effects of COVID-19 could impact trading volumes and the demand for our products, market data, and services, which could have a material adverse effect on our business, financial condition, operating results and cash flows for fiscal year 2021 and could be material during any future period impacted either directly or indirectly by this pandemic.

## **Components of Revenues**

### ***Transaction and Clearing Fees***

Transaction fees represent fees charged by the Company for the performance obligation of executing a trade on its markets. These fees can be variable based on trade volume tiered discounts; however, as all tiered discounts are calculated monthly, the actual discount is recorded on a monthly basis. Transaction fees are recognized across all segments. Clearing fees, which include settlement fees, are charged by the Company for transactions cleared and settled by EuroCCP. Clearing fees can be variable based on trade volume tiered discounts; however, as all tiered discounts are calculated monthly, the actual discount is recorded on a monthly basis. Clearing fees are recognized in the European Equities segment. Transaction and clearing fees, as well as any tiered volume discounts, are calculated and billed monthly in accordance with the Company's published fee schedules.

### ***Access and Capacity Fees***

Access and capacity fees represent fees assessed for the opportunity to trade, including fees for trading-related functionality across all segments, terminal and other equipment rights, maintenance services, trading floor space and telecommunications services. Facilities, systems services and other fees are generally monthly fee-based. These fees are billed monthly in accordance with the Company's published fee schedules and recognized on a monthly basis when the performance obligation is met. All access and capacity fees associated with the trading floor are recognized in the Options segment. There is no remaining performance obligation after revenue is recognized.

### ***Market Data Fees***

Market data fees represent the fees from the U.S. tape plans and fees from customers for proprietary market data. Fees from the U.S. tape plans are collected monthly based on published fee schedules and distributed quarterly to the U.S. Exchanges based on a known formula using trading and/or quoting activity. A contract for proprietary market data is entered into and charged on a monthly basis in accordance with the Company's published fee schedules as the service is provided. Both types of market data are satisfied over time, and revenue is recognized on a monthly basis as the customer receives and consumes the benefit as the Company provides the data. U.S. tape plan market data is recognized in the North American Equities and Options segments. Proprietary market data fees are recognized across all segments.

### ***Regulatory Fees***

Regulatory fees primarily represent fees collected by the Company to cover the Section 31 fees charged to the Exchanges under the authority of the SEC (Cboe Options, C2, BZX, BYX, EDGX, and EDGA) and are charged by the SEC. Consistent with industry practice, the fees charged to customers are based on the fee set by the SEC per notional value of U.S. Equities exchange transactions and per round turn of Options transactions executed on the Company's U.S.

securities markets. These fees are calculated and billed monthly and are recognized in the North American Equities and Options segments. As the Exchanges are responsible for the ultimate payment to the SEC, the Exchanges are considered the principals in these transactions. Regulatory fees also include the options regulatory fee ("ORF") which supports the Company's regulatory oversight function in the Options segment, along with other miscellaneous regulatory fees, and neither can be used for non-regulatory purposes. The ORF and miscellaneous fees are recognized when the performance obligation is fulfilled.

### ***Other Revenue***

Other revenue primarily includes among other items, revenue from various licensing agreements, interest income from clearing operations, all fees related to the trade reporting facility operated in the European Equities segment, and revenue associated with advertisements through the Company's websites.

## **Components of Cost of Revenues**

### ***Liquidity Payments***

Liquidity payments are directly correlated to the volume of securities traded on our markets. As stated above, we record the liquidity rebates paid to market participants providing liquidity, in the case of C2, BZX, EDGX, and Cboe Europe Limited, as cost of revenue. BYX and EDGA offer a pricing model where we rebate liquidity takers for executing against an order resting on our book, which is also recorded as a cost of revenue.

### ***Routing and Clearing***

Various rules require that U.S. options and equities trade executions occur at the National Best Bid/Offer ("NBBO") displayed by any exchange. Linkage order routing consists of the cost incurred to provide a service whereby Cboe equities and options exchanges deliver orders to other execution venues when there is a potential for obtaining a better execution price or when instructed to directly route an order to another venue by the order provider. The service affords exchange order flow providers an opportunity to obtain the best available execution price and may also result in cost benefits to those clients. Such an offering improves our competitive position and provides an opportunity to attract orders which would otherwise bypass our exchanges. We utilize third-party brokers or our broker-dealer, Cboe Trading, to facilitate such delivery. Also included within routing and clearing are settlement costs incurred for the settlement process executed by EuroCCP.

### ***Section 31 Fees***

Exchanges under the authority of the SEC (Cboe Options, C2, BZX, BYX, EDGX, and EDGA) are assessed fees pursuant to the Exchange Act designed to recover the costs to the U.S. government of supervision and regulation of securities markets and securities professionals. We treat these fees as a pass-through charge to customers executing eligible listed equities and listed equity options trades. Accordingly, we recognize the amount that we are charged under Section 31 as a cost of revenues and the corresponding amount that we charge our customers as regulatory transaction fees revenue. Since the regulatory transaction fees recorded in revenues are equal to the Section 31 fees recorded in cost of revenues, there is no impact on our operating income. CFE, Cboe Europe Limited and Cboe FX are not U.S. national securities exchanges, and accordingly are not charged Section 31 fees.

### ***Royalty Fees***

Royalty fees primarily consist of license fees paid by us for the use of underlying indices in our proprietary products usually based on contracts traded. The Company has licenses with the owners of the S&P 500 Index, S&P 100 Index and certain other S&P indices, FTSE Russell indices, the DJIA, MSCI, and certain other index products. This category also includes fees related to the dissemination of market data related to S&P indices and PULSe system terminal fees.

## **Components of Operating Expenses**

### ***Compensation and Benefits***

Compensation and benefits represent our largest expense category and tend to be driven by our staffing requirements, financial performance, and the general dynamics of the employment market. Stock-based compensation is



a non-cash expense related to equity awards. Stock-based compensation can vary depending on the quantity and fair value of the award on the date of grant and the related service period.

#### ***Depreciation and Amortization***

Depreciation and amortization expense results from the depreciation of long-lived assets purchased, the amortization of purchased and internally developed software, and the amortization of intangible assets.

#### ***Technology Support Services***

Technology support services consists primarily of costs related to the maintenance of computer equipment supporting our system architecture, circuits supporting our wide area network, support for production software, operating system license and support fees, fees paid to information vendors for displaying data and off-site system hosting fees.

#### ***Professional Fees and Outside Services***

Professional fees and outside services consist primarily of consulting services, which include supplemental staff activities primarily related to systems development and maintenance, legal, regulatory and audit, and tax advisory services.

#### ***Travel and Promotional Expenses***

Travel and promotional expenses primarily consist of advertising, costs for special events, sponsorship of industry conferences, options education seminars and travel-related expenses.

#### ***Facilities Costs***

Facilities costs primarily consist of expenses related to owned and leased properties including rent, maintenance, utilities, real estate taxes and telecommunications costs.

#### ***Acquisition-Related Costs***

Acquisition-related costs relate to acquisitions and other strategic opportunities, including the Merger. The acquisition-related costs include fees for investment banking advisors, lawyers, accountants, tax advisors, public relations firms, severance and retention costs, impairment of goodwill, capitalized software and facilities, and other external costs directly related to the mergers and acquisitions, as well as compensation-related expenses.

#### ***Other Expenses***

Other expenses represent costs necessary to support our operations that are not already included in the above categories.

#### **Non-Operating Income (Expense)**

Income and expenses incurred through activities outside of our core operations are considered non-operating and are classified as other income (expense). These activities primarily include interest earned on the investing of excess cash, interest expense related to outstanding debt facilities, dividend income, income and unrealized gains and losses related to investments held in a rabbi trust for the Company's non-qualified retirement and benefit plans, and equity earnings or losses from our investments in other business ventures.

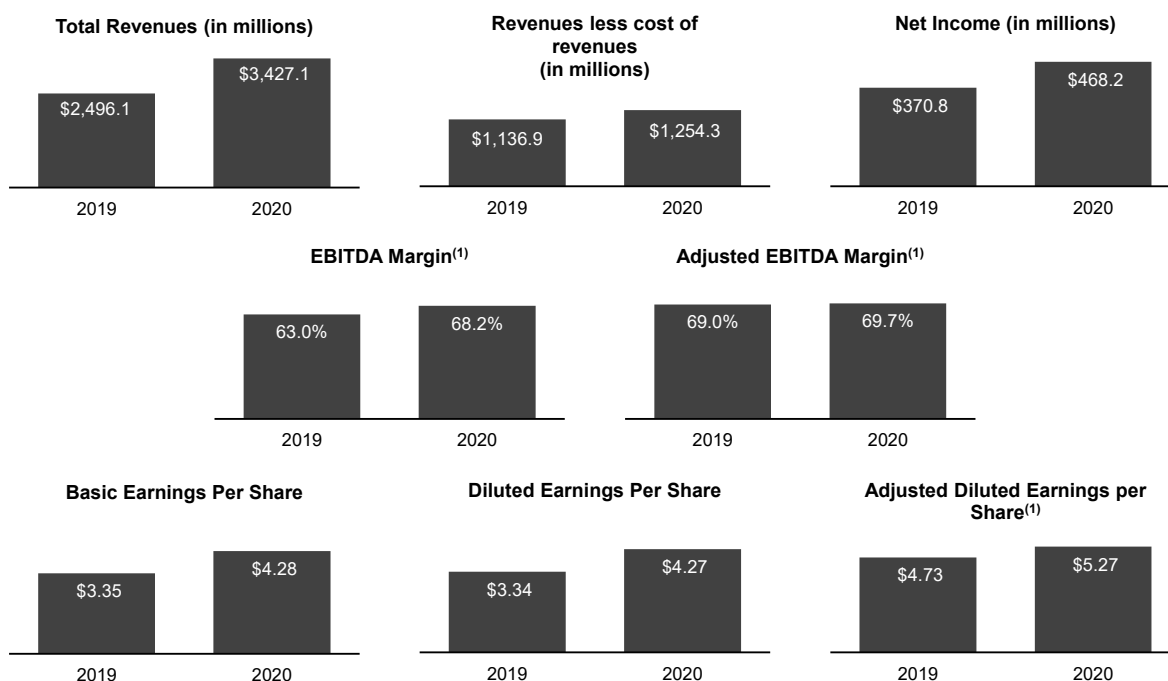
#### **RESULTS OF OPERATIONS**

The following are summaries of changes in financial performance and include certain non-GAAP financial measures. These non-GAAP financials measures assist management in comparing our performance on a consistent basis for purposes of business decision making by removing the impact of certain items management believes do not reflect our underlying operations. Please see the footnotes below for additional information and reconciliations from our consolidated financial statements.

## Comparison of Years Ended December 31, 2020 and 2019

### Overview

The following summarizes changes in financial performance for the year ended December 31, 2020, compared to the year ended December 31, 2019:



(1) These are Non-GAAP figures for which reconciliations are provided below.

	Year Ended December 31,		Increase/ (Decrease)	Percent Change
	2020	2019		
	<i>(in millions, except percentages, earnings per share, and as noted below)</i>			
Total revenues	\$ 3,427.1	\$ 2,496.1	\$ 931.0	37.3 %
Total cost of revenues	2,172.8	1,359.2	813.6	59.9 %
Revenues less cost of revenues	1,254.3	1,136.9	117.4	10.3 %
Total operating expenses	592.1	599.7	(7.6)	(1.3)%
Operating income	662.2	537.2	125.0	23.3 %
Income before income tax provision	660.4	501.4	159.0	31.7 %
Income tax provision	192.2	130.6	61.6	47.2 %
Net income	\$ 468.2	\$ 370.8	\$ 97.4	26.3 %
Basic earnings per share	\$ 4.28	\$ 3.35	\$ 0.93	27.7 %
Diluted earnings per share	4.27	3.34	0.93	27.8 %
Organic net revenue <sup>(1)</sup>	\$ 1,212.9	\$ 1,136.9	\$ 76.0	6.7 %
EBITDA <sup>(2)</sup>	\$ 855.3	\$ 715.8	\$ 139.5	19.5 %
EBITDA margin <sup>(3)</sup>	68.2 %	63.0 %	5.2 %	*
Adjusted EBITDA <sup>(2)</sup>	\$ 874.6	\$ 784.1	\$ 90.5	11.5 %
Adjusted EBITDA margin <sup>(4)</sup>	69.7 %	69.0 %	0.7 %	*
Adjusted earnings <sup>(5)</sup>	\$ 576.5	\$ 528.6	\$ 47.9	9.1 %
Adjusted earnings margin <sup>(5)</sup>	46.0 %	46.5 %	(0.5)%	*
Diluted weighted average shares outstanding	109.3	111.8	(2.5)	(2.2)%
Adjusted Diluted earnings per share <sup>(6)</sup>	\$ 5.27	\$ 4.73	\$ 0.54	11.4 %

\* Not meaningful

- (1) Organic net revenue is defined as revenues less cost of revenues excluding revenues less cost of revenues of any acquisition for the year the business was acquired through the following comparable year. Organic net revenue does not represent, and should not be considered as, an alternative to revenues less cost of revenues, or net revenue, as determined in accordance with GAAP. We have presented organic net revenue because we consider it an important supplemental measure of our performance and we use it as the basis for monitoring our operating financial performance before the effects of acquisitions. We also believe that it is frequently used by analysts, investors and other interested parties in the evaluation of companies. We believe that investors may find this non-GAAP measure useful in evaluating our performance compared to that of peer companies in our industry. Other companies may calculate organic net revenue differently that we do. Organic net revenue has limitations as an analytical tool, and you should not consider it in isolation or as a substitute for analysis of our results as reported under GAAP.

	Year Ended December 31,	
	2020	2019
Revenues less cost of revenues . . . . .	\$ 1,254.3	\$ 1,136.9
Recent acquisitions:		
Acquisition revenues less cost of revenues (since acquisition) . . . . .	\$ (41.4)	\$ —
Organic net revenue . . . . .	<u>\$ 1,212.9</u>	<u>\$ 1,136.9</u>

- (2) EBITDA is defined as income before interest, income taxes, depreciation and amortization. Adjusted EBITDA is defined as EBITDA before acquisition-related costs, provision for notes receivable, bargain purchase gain, and impairment charges attributed to noncontrolling interest. EBITDA and adjusted EBITDA do not represent, and should not be considered as, alternatives to net income as determined in accordance with GAAP. We have presented EBITDA and adjusted EBITDA because we consider them important supplemental measures of our performance and believe that they are frequently used by analysts, investors and other interested parties in the evaluation of companies. In addition, we use adjusted EBITDA as a measure of operating performance for preparation of our forecasts and evaluating our leverage ratio for the debt to earnings covenant included in our outstanding credit facility. Other companies may calculate EBITDA and adjusted EBITDA differently than we do. EBITDA and adjusted EBITDA have limitations as analytical tools, and you should not consider them in isolation or as substitutes for analysis of our results as reported under GAAP.
- (3) EBITDA margin represents EBITDA divided by revenues less cost of revenues.
- (4) Adjusted EBITDA margin represents adjusted EBITDA divided by revenues less cost of revenues.
- (5) Adjusted earnings is defined as net income adjusted for amortization of purchased intangibles, acquisition-related costs, provision for notes receivable, bargain purchase gain, change in redemption value of noncontrolling interest, tax effect of adjustments, deferred tax re-measurements, impairment charges attributed to noncontrolling interest, and net income allocated to participating securities, net of the income tax effects of these adjustments. Adjusted earnings does not represent, and should not be considered as, an alternative to net income, as determined in accordance with GAAP. We have presented adjusted earnings because we consider it an important supplemental measure of our performance and we use it as the basis for monitoring our own core operating financial performance relative to other operators of exchanges. We also believe that it is frequently used by analysts, investors and other interested parties in the evaluation of companies. We believe that investors may find this non-GAAP measure useful in evaluating our performance compared to that of peer companies in our industry. Other companies may calculate adjusted earnings differently than we do. Adjusted earnings has limitations as an analytical tool, and you should not consider it in isolation or as a substitute for analysis of our results as reported under GAAP.
- (6) Adjusted diluted earnings per share represents adjusted earnings divided by diluted weighted average shares outstanding.

The following is a reconciliation of net income (loss) allocated to common stockholders to EBITDA and adjusted EBITDA:

	Year Ended December 31,						
	2020						
	Options	North American Equities	Futures	European Equities (in millions)	Global FX	Corporate	Total
Net income (loss) allocated to common stockholders . . .	\$ 278.6	\$ 132.0	\$ 25.4	\$ 46.7	\$ 5.8	\$ (21.5)	\$ 467.0
Interest expense, net . . . . .	—	—	—	6.9	—	30.7	37.6
Income tax provision (benefit) . . . . .	151.8	27.3	28.3	12.4	—	(27.6)	192.2
Depreciation and amortization . . . . .	30.9	68.7	3.2	29.1	26.6	—	158.5
EBITDA . . . . .	461.3	228.0	56.9	95.1	32.4	(18.4)	855.3
Acquisition-related costs . . . . .	12.9	15.1	—	—	—	17.2	45.2
Provision for notes receivable . . . . .	1.7	5.0	—	—	—	—	6.7
Bargain purchase gain . . . . .	—	—	—	(32.0)	—	(0.6)	(32.6)
Adjusted EBITDA . . . . .	\$ 475.9	\$ 248.1	\$ 56.9	\$ 63.1	\$ 32.4	\$ (1.8)	\$ 874.6

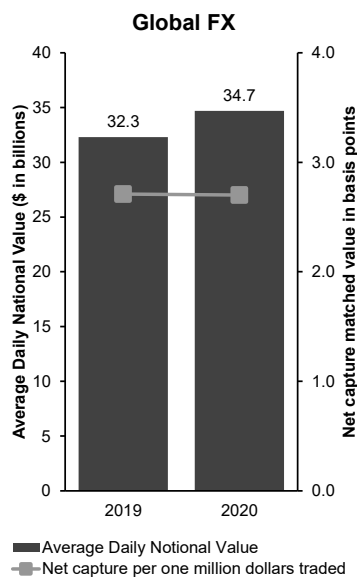
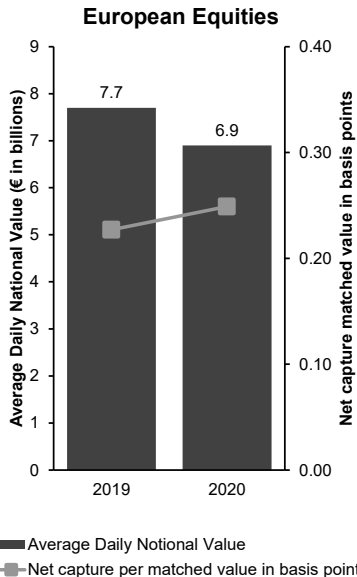
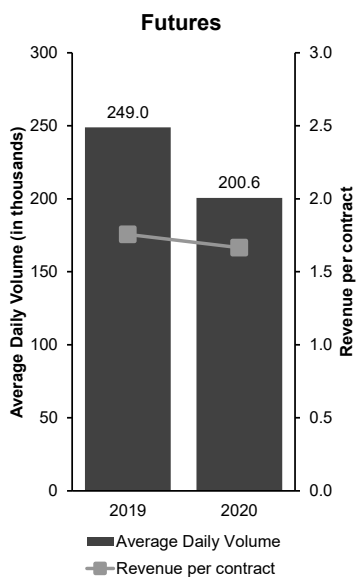
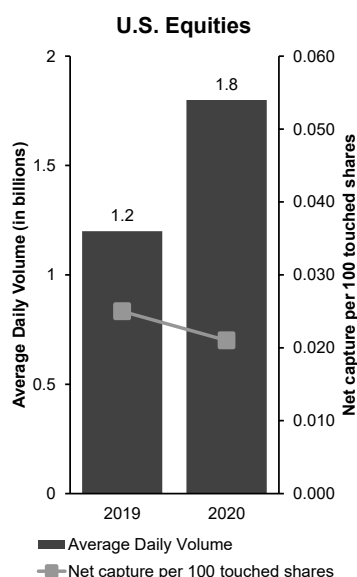
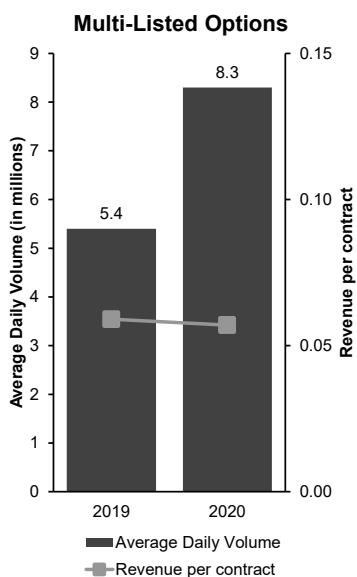
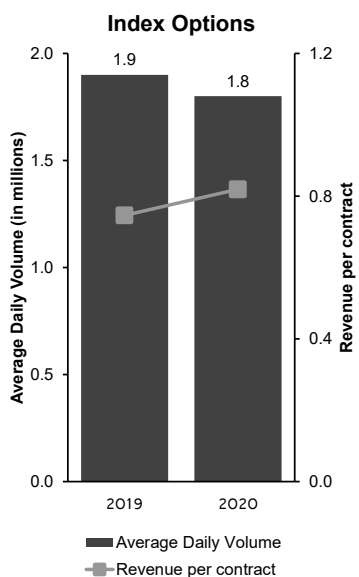
  

	Year Ended December 31,						
	2019						
	Options	North American Equities	Futures	European Equities (in millions)	Global FX	Corporate	Total
Net income (loss) allocated to common stockholders . . .	\$ 202.7	\$ 111.8	\$ 45.5	\$ 18.3	\$ (5.0)	\$ (0.6)	\$ 372.7
Interest expense (income), net . . . . .	—	—	—	(0.4)	—	36.3	35.9
Income tax provision (benefit) . . . . .	124.8	20.2	37.4	3.2	0.1	(55.1)	130.6
Depreciation and amortization . . . . .	38.5	76.0	2.5	28.7	29.9	1.0	176.6
EBITDA . . . . .	366.0	208.0	85.4	49.8	25.0	(18.4)	715.8
Acquisition-related costs . . . . .	20.5	—	—	1.7	0.3	26.0	48.5
Provision for notes receivable . . . . .	6.1	17.3	—	—	—	—	23.4
Impairment charges attributable to noncontrolling interest . . . . .	—	—	—	—	—	(3.6)	(3.6)
Adjusted EBITDA . . . . .	\$ 392.6	\$ 225.3	\$ 85.4	\$ 51.5	\$ 25.3	\$ 4.0	\$ 784.1

The following is a reconciliation of net income allocated to common stockholders to adjusted earnings:

	Year Ended December 31,	
	2020	2019
	(in millions)	
Net income allocated to common stockholders . . . . .	\$ 467.0	\$ 372.7
Amortization . . . . .	124.7	138.5
Acquisition-related costs . . . . .	45.2	48.5
Provision for notes receivable . . . . .	6.7	23.4
Bargain purchase gain . . . . .	(32.6)	—
Change in redemption value of noncontrolling interest . . . . .	—	0.5
Tax effect of adjustments . . . . .	(38.0)	(50.7)
Deferred tax re-measurements . . . . .	4.1	—
Impairment charges attributed to noncontrolling interest . . . . .	—	(3.6)
Net income allocated to participating securities . . . . .	(0.6)	(0.7)
Adjusted earnings . . . . .	\$ 576.5	\$ 528.6

The following summarizes changes in certain operational and financial metrics for the year ended December 31, 2020, compared to the year ended December 31, 2019. The metrics listed for Canadian Equities and EuroCCP in the table on the following page are newly added for the year ended December 31, 2020 as a result of acquisitions completed during the year. Therefore, the table does not include results from 2019 or the periods preceding each acquisition for the applicable metrics.



	Year Ended December 31,		Increase/ (Decrease)	Percent Change
	2020	2019		
<b>Options:</b>				
Average daily volume (ADV) (in millions of contracts):				
Total touched contracts	10.1	7.3	2.8	38.4 %
Market ADV	29.5	19.4	10.1	52.1 %
Index contract ADV	1.8	1.9	(0.1)	(5.3)%
Multi-Listed contract ADV	8.3	5.4	2.9	53.7 %
Number of trading days	253	252	1	0.4 %
Total Options revenue per contract (RPC) (1)	\$ 0.193	\$ 0.235	\$ (0.042)	(17.9)%
Multi-Listed Options RPC (1)	0.057	0.059	(0.002)	(3.4)%
Index Options RPC (1)	0.819	0.746	0.073	9.8 %
Total Options Market Share	34.3 %	37.7 %	(3.4)%	*
Multi-Listed Options Market Share	30.0 %	31.1 %	(1.1)%	*
Index Options Market Share	99.2 %	99.2 %	— %	*
<b>North American Equities:</b>				
<b>U.S. Equities:</b>				
ADV:				
Total touched shares (in billions)	1.8	1.2	0.6	50.0 %
Market ADV (in billions)	10.9	7.0	3.9	55.7 %
Trading days	253	252	1	0.4 %
Market share	15.8 %	16.3 %	(0.5)%	*
U.S. Equities (net capture per one hundred touched shares) (2)	\$ 0.021	\$ 0.025	\$ (0.004)	(16.0)%
U.S. ETPs: launches (number of launches)	114	57	57	100.0 %
U.S. ETPs: listings (number of listings)	437	353	84	23.8 %
<b>Canadian Equities:</b>				
ADV (matched shares, in millions)	43.1	—	43.1	— %
Trading days	104	—	104	— %
Net capture (per 10,000 touched shares, in Canadian dollars) (3)	8.264	—	8.264	— %
<b>Futures:</b>				
ADV (in thousands)	200.6	249.0	(48.4)	(19.4)%
Trading days	253	252	1	0.4 %
Revenue per contract	\$ 1.665	\$ 1.756	\$ (0.091)	(5.2)%
<b>European Equities:</b>				
ADNV:				
Matched and touched ADNV (in billions)	€ 6.9	€ 7.7	€ (0.8)	(10.4)%
Market ADNV (in billions)	40.1	37.9	2.2	5.8 %
Trading days	258	256	2	0.8 %
Market share	17.2 %	20.2 %	(3.0)%	*
European Equities (net capture per matched notional value in basis points) (4)	0.249	0.227	0.022	9.7 %
<b>EuroCCP:</b>				
Trades cleared (5)	545.5	—	545.5	— %
Fee per trade cleared (6)	€ 0.011	€ —	€ 0.011	— %
Net settlement volume (7)	4.1	—	4.1	— %
Net fee per settlement (8)	€ 0.811	€ —	€ 0.811	— %
<b>Global FX:</b>				
ADNV (in billions)	\$ 34.7	\$ 32.3	\$ 2.4	7.4 %
Trading days	260	259	1	0.4 %
Global FX (net capture per one million dollars traded) (9)	2.70	2.71	(0.01)	(0.4)%
Average British pound/U.S. dollar exchange rate	\$ 1.283	\$ 1.277	\$ 0.006	0.5 %
Average Canadian dollar/U.S. dollar exchange rate	\$ 0.746	\$ —	\$ 0.746	— %
Average Euro/U.S. dollar exchange rate	\$ 1.141	\$ 1.119	\$ 0.022	2.0 %
Average Euro/British pound exchange rate	£ 0.889	£ 0.877	£ 0.012	1.4 %

\* Not meaningful

- (1) Revenue per contract represents transaction fees less liquidity payments and routing and clearing costs divided by total contracts traded during the period.
- (2) Net capture per one hundred touched shares refers to transaction fees less liquidity payments and routing and clearing costs divided by the product of one-hundredth ADV of touched shares on BZX, BYX, EDGX and EDGA and the number of trading days for the period.
- (3) Net capture per 10,000 shares refers to transaction fees divided by the product of one-ten thousandth ADV of shares for MATCHNow and the number of trading days for the period.
- (4) Net capture per matched notional value in basis points refers to transaction fees less liquidity payments in British pounds divided by the product of ADV in British pounds of shares matched on Cboe Europe Limited and the number of trading days for the period.
- (5) Trades cleared refers to the total number of non-interoperable trades cleared.
- (6) Fee per trade cleared refers to clearing fees divided by number of non-interoperable trades cleared.
- (7) Net settlement volume refers to the total number of settlements executed after netting.
- (8) Net fee per settlement refers to settlement fees less direct costs incurred to settle divided by the number of settlements executed after netting.
- (9) Net capture per one million dollars traded refers to net transaction and clearing fees, divided by the product of one one-millionth of ADV traded on the Cboe FX market, the number of trading days, and two, which represents the buyer and seller that are both charged on the transaction for the period.

## Revenues

Total revenues for the year ended December 31, 2020 increased \$931.0 million, or 37.3%, compared to the prior period primarily due to a \$701.8 million, or 40.9% increase in transaction and clearing fees as a result of an increase in market volumes on the U.S. Equities exchanges and in the Options segment, coupled with an increase in regulatory fees. The following summarizes changes in revenues for the year ended December 31, 2020 compared to the year ended December 31, 2019:

	Year Ended December 31,		Increase/ (Decrease)	Percent Change
	2020	2019		
	(in millions, except percentages)			
Transaction and clearing fees . . . . .	\$ 2,418.0	\$ 1,716.2	\$ 701.8	40.9 %
Access and capacity fees . . . . .	236.7	221.9	14.8	6.7 %
Market data fees . . . . .	232.0	213.5	18.5	8.7 %
Regulatory fees . . . . .	500.2	311.7	188.5	60.5 %
Other revenue . . . . .	40.2	32.8	7.4	22.6 %
Total revenues . . . . .	<u>\$ 3,427.1</u>	<u>\$ 2,496.1</u>	<u>\$ 931.0</u>	37.3 %

### Transaction and Clearing Fees

Transaction and clearing fees increased for the year ended December 31, 2020 compared to the same period in 2019, primarily due to a 55.7% increase in U.S. Equities exchange market ADV, a 53.7% increase in multi-listed options ADV, and additional revenue attributed to EuroCCP, which was acquired in the third quarter of 2020, partially offset by a 19.4% decrease in Futures ADV.

### Access and Capacity Fees

Access and capacity fees increased for the year ended December 31, 2020 compared to the same period in 2019, primarily due to an increase in logical port revenue in the Options, European Equities, and North American Equities segments.

### Market Data Fees

Market data fees increased for the year ended December 31, 2020 compared to the same period in 2019, primarily due to additional revenue attributed to the acquisitions of Hanweck, FT Options, and Trade Alert during 2020, partially offset by a decrease in tape plan market data revenue within the North American Equities segment resulting from a decline in market share.

### Regulatory Fees

Regulatory transaction fees increased for the year ended December 31, 2020 compared to the same period in 2019, primarily due to an increase in Section 31 fees as a result of higher volumes in the North American Equities segment, coupled with an increase in the average Section 31 fee rate for 2020.

### Other Revenue

Other revenue increased for the year ended December 31, 2020 compared to the same period in 2019 primarily due to additional net interest income from EuroCCP, which the Company acquired in the third quarter of 2020.



## Cost of Revenues

Cost of revenues increased in the year ended December 31, 2020 compared to the same period in 2019 primarily due to higher liquidity payments driven by an increase in volumes traded on the U.S. Equities and Options exchanges, as well as an increase in Section 31 fees within the North American Equities and Options segments, which increased \$172.1 million and \$21.5 million, respectively. The following summarizes changes in cost of revenues for the year ended December 31, 2020 compared to the prior year:

	Year Ended December 31,		Increase/ (Decrease)	Percent Change
	2020	2019		
	(in millions, except percentages)			
Liquidity payments	\$ 1,554.1	\$ 964.7	\$ 589.4	61.1 %
Routing and clearing	70.4	35.8	34.6	96.6 %
Section 31 fees	465.0	271.4	193.6	71.3 %
Royalty fees	83.4	86.8	(3.4)	(3.9)%
Other	(0.1)	0.5	(0.6)	(120.0)%
Total	<u>\$ 2,172.8</u>	<u>\$ 1,359.2</u>	<u>\$ 813.6</u>	59.9 %

### Liquidity Payments

Liquidity payments increased for the year ended December 31, 2020 compared to the same period in 2019, primarily due to an increase in volumes traded on the U.S. Equities and Options exchanges.

### Routing and Clearing

The increase in routing and clearing fees for the year ended December 31, 2020 compared to the same period in 2019 was primarily due to an increase in routed shares on the U.S. Equities exchanges.

### Section 31 Fees

Section 31 fees increased for the year ended December 31, 2020 compared to the same period in 2019, primarily due to higher volumes in the North American Equities segment, coupled with an increase in the average Section 31 fee rate for 2020.

### Royalty Fees

Royalty fees decreased for the year ended December 31, 2020 compared to the same period in 2019, primarily due to a decline in trading volume in licensed products.

## Revenues Less Cost of Revenues

Revenues less cost of revenues increased \$117.4 million, or 10.3%, in the year ended December 31, 2020 compared to the same period in 2019, primarily due to a \$77.8 million, or 10.9%, increase in transaction and clearing fees less liquidity payments and routing and clearing costs, coupled with increases in market data fees and access and capacity fees.

The following summarizes the components of revenues less cost of revenues for the year ended December 31, 2020, presented as a percentage of revenues less cost of revenues and compared to the prior year:

	Year Ended		Percent Change	Percentage of Revenues Less Cost of Revenues	
	December 31,			Year Ended	
	2020	2019		2020	2019
	(in millions, except percentages)				
Transaction and clearing fees less liquidity payments and routing and clearing costs	\$ 793.5	\$ 715.7	10.9 %	63.2 %	63.0 %
Access and capacity fees	236.7	221.9	6.7 %	18.9 %	19.5 %
Market data fees	232.0	213.5	8.7 %	18.5 %	18.8 %
Regulatory fees, less Section 31 fees	35.2	40.3	(12.7)%	2.8 %	3.5 %
Royalty fees	(83.4)	(86.8)	3.9 %	(6.6)%	(7.6)%
Other	40.3	32.3	24.8 %	3.2 %	2.8 %
Revenues less cost of revenues	<u>\$ 1,254.3</u>	<u>\$ 1,136.9</u>	10.3 %	<u>100.0 %</u>	<u>100.0 %</u>

#### *Transaction and Clearing Fees Less Liquidity Payments and Routing and Clearing Costs*

Transaction and clearing fees less liquidity payments and routing and clearing costs (“Net Transaction and Clearing Fees”) increased for the year ended December 31, 2020 compared to the same period in 2019, primarily due to a 53.7% increase in multi-listed options ADV, a 55.7% increase in U.S. Equities exchange market ADV, and additional revenues attributed to EuroCCP, which was acquired in the third quarter of 2020.

#### *Access and Capacity Fees*

Access and fees increased for the year ended December 31, 2020 compared to the same period in 2019, primarily due to an increase in logical port revenue in the Options, European Equities, and North American Equities segments.

#### *Market Data Fees*

Market data fees increased for the year ended December 31, 2020 compared to the same period in 2019, primarily due to additional revenue attributed to the acquisitions of Hanweck, FT Options, and Trade Alert during 2020, partially offset by a decrease in tape plan market data revenue within the North American Equities segment resulting from a decline in market share.

#### *Regulatory Fees, Less Section 31 Fees*

Regulatory fees, less Section 31 Fees, decreased for the year ended December 31, 2020 compared to the same period in 2019, primarily due to a decrease in fines and assessment fees.

#### *Royalty Fees*

Royalty fees decreased for the year ended December 31, 2020 compared to the same period in 2019, primarily due to lower trading volumes in licensed products in 2020.

#### *Other*

Other revenue increased for the year ended December 31, 2020 compared to the same period in 2019 primarily due to additional net interest income from EuroCCP, which the Company acquired in the third quarter of 2020.

#### *Operating Expenses*

For the year ended December 31, 2020 compared to the year ended December 31, 2019, total operating expenses decreased primarily due to declines in depreciation and amortization and other expenses, partially offset by an increase in

compensation and benefits. The following summarizes changes in operating expenses for the year ended December 31, 2020 compared to the prior year:

	Year Ended December 31,		Increase/ (Decrease)	Percent Change
	2020	2019		
	(in millions, except percentages)			
Operating Expenses:				
Compensation and benefits	\$ 224.9	\$ 199.0	\$ 25.9	13.0 %
Depreciation and amortization	158.5	176.6	(18.1)	(10.2)%
Technology support services	54.5	46.2	8.3	18.0 %
Professional fees and outside services	60.6	68.3	(7.7)	(11.3)%
Travel and promotional expenses	6.6	11.9	(5.3)	(44.5)%
Facilities costs	17.6	11.0	6.6	60.0 %
Acquisition-related costs	45.2	48.5	(3.3)	(6.8)%
Other expenses	24.2	38.2	(14.0)	(36.6)%
Total operating expenses	<u>\$ 592.1</u>	<u>\$ 599.7</u>	<u>\$ (7.6)</u>	(1.3)%

#### *Compensation and Benefits*

Compensation and benefits increased for the year ended December 31, 2020 compared to the same period in 2019, primarily due to an increase in compensation expense related to acquisitions of \$16.3 million and a decline in capitalized wages of \$8.7 million due to a decrease in software projects eligible for capitalization, partially offset by a \$2.2 million decline in benefits primarily due to healthcare rebates received.

#### *Depreciation and Amortization*

Depreciation and amortization decreased for the year ended December 31, 2020 compared to the same period in 2019, due to a decline in amortization under the discounted cash flow method for the intangibles acquired in the Bats acquisition, coupled with the write-off of the Cboe Command software in the fourth quarter of 2019.

#### *Technology Support Services*

Technology support services costs increased for the year ended December 31, 2020 compared to the same period in 2019, primarily due to increases in purchased hardware and market data support services fees related to the acquisitions in 2020.

#### *Professional Fees and Outside Services*

Professional and outside services fees decreased for the year ended December 31, 2020 compared to the same period in 2019, primarily due to declines in regulatory service fees of \$5.3 million, legal fees of \$3.9 million, and accounting fees of \$1.2 million, partially offset by a \$2.7 million increase in contract services due to the acquisition of EuroCCP.

#### *Travel and Promotional Expenses*

Travel and promotional expenses decreased for the year ended December 31, 2020 compared to the same period in 2019, primarily due to travel restrictions implemented in March 2020 in response to the COVID-19 pandemic coupled with a decline in marketing expenses also driven by lack of sponsored events due to the COVID-19 pandemic.

#### *Facilities Costs*

Facilities costs increased for the year ended December 31, 2020 compared to the same period in 2019, primarily due to additional rent expense incurred for the new headquarters location beginning in January 2020 and for the new trading

floor location beginning in May 2020, coupled with a reversal of deferred rent expense of \$1.3 million in the first quarter of 2019 that did not recur in 2020.

#### ***Acquisition-Related Costs***

Acquisition-related costs decreased for the year ended December 31, 2020 compared to the same period in 2019, primarily due to severance costs incurred in the third quarter of 2019 that did not recur in 2020, coupled with the write down of goodwill attributed to a 2016 acquisition recorded in the second quarter of 2019, offset by the costs related to the six acquisitions closed in 2020. Acquisition-related costs include fees for investment banking advisors, lawyers, accountants, tax advisors, public relations firms, severance and retention costs, impairment of goodwill, capitalized software and facilities, and other external costs directly related to the mergers and acquisitions, as well as compensation-related expenses.

#### ***Other Expenses***

Other expenses decreased for the year ended December 31, 2020 compared to the same period in 2019, primarily due to a \$23.4 million provision for the notes receivable recorded in the fourth quarter of 2019 as a result of circumstances associated with the development of the CAT, partially offset by a \$6.7 million provision recorded in the third quarter of 2020, also related to the CAT.

#### ***Operating Income***

As a result of the items above, operating income for the year ended December 31, 2020 was \$662.2 million, compared to \$537.2 million for the year ended December 31, 2019, an increase of \$125 million, or 23.3%.

#### ***Interest Expense, Net***

Net interest expense increased in the year ended December 31, 2020 primarily due to the commitment fees related to the EuroCCP Credit Facility and fees related to the amended Revolving Credit Agreement, partially offset by the decrease in the variable interest rate on the term loan agreement.

#### ***Other Income, Net***

Net other income increased in the year ended December 31, 2020 compared to the same period in 2019 primarily due to a \$32.6 million bargain purchase gain related to the EuroCCP acquisition recorded in the third quarter of 2020.

#### ***Income Before Income Tax Provision***

As a result of the above, income before income tax provision for the year ended December 31, 2020 was \$660.4 million compared to \$501.4 million for the year ended December 31, 2019, an increase of \$159.0 million, or 31.7%.

#### ***Income Tax Provision***

For the year ended December 31, 2020, the income tax provision was \$192.2 million compared with \$130.6 million for the year ended December 31, 2019, an increase of \$61.6 million, primarily due to the increase in income before income tax provision and a higher tax rate for the year ended December 31, 2020. The effective tax rate for the year ended December 31, 2020 was 29.1%, compared to a rate of 26.0% for the year ended December 31, 2019.

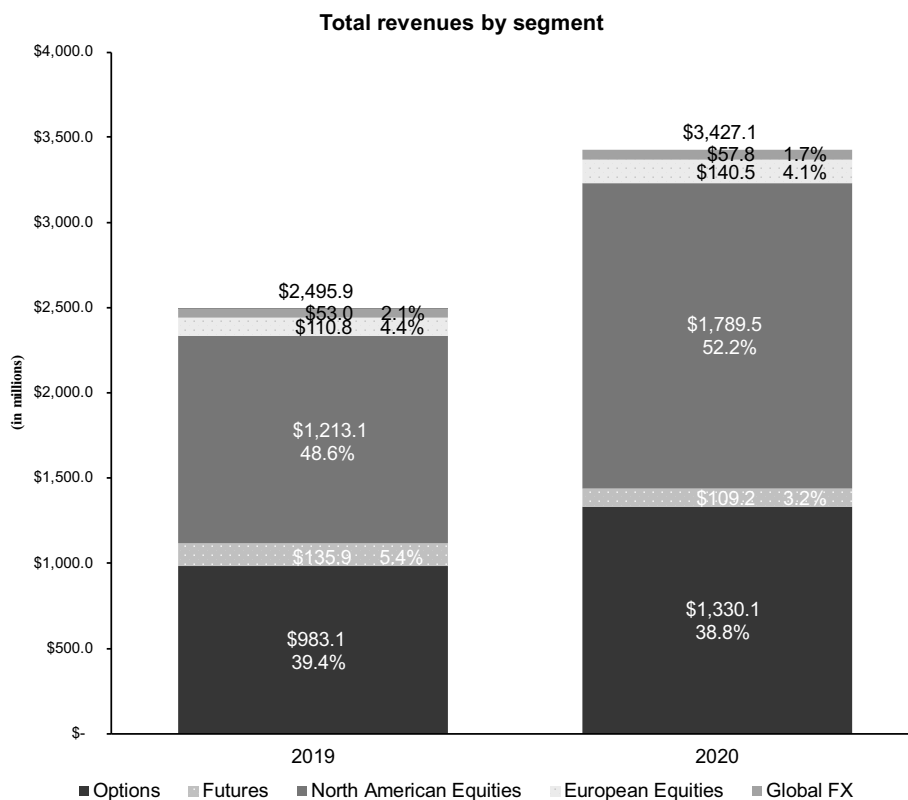
#### ***Net Income***

As a result of the items above, net income for the year ended December 31, 2020 was \$468.2 million, or 37.3% of revenues less cost of revenues, compared to \$370.8 million, or 32.6% of revenues less cost of revenues, for the year ended December 31, 2019, an increase of \$97.4 million, or 26.3%.

## Segment Operating Results

We report results from our five segments: Options, North American Equities, Futures, European Equities, and Global FX. Segment performance is primarily based on operating income (loss). We have aggregated all corporate costs, as well as other business ventures, within the Corporate Items and Eliminations as those activities should not be used to evaluate a segment's operating performance. All operating expenses that relate to activities of a specific segment have been allocated to that segment.

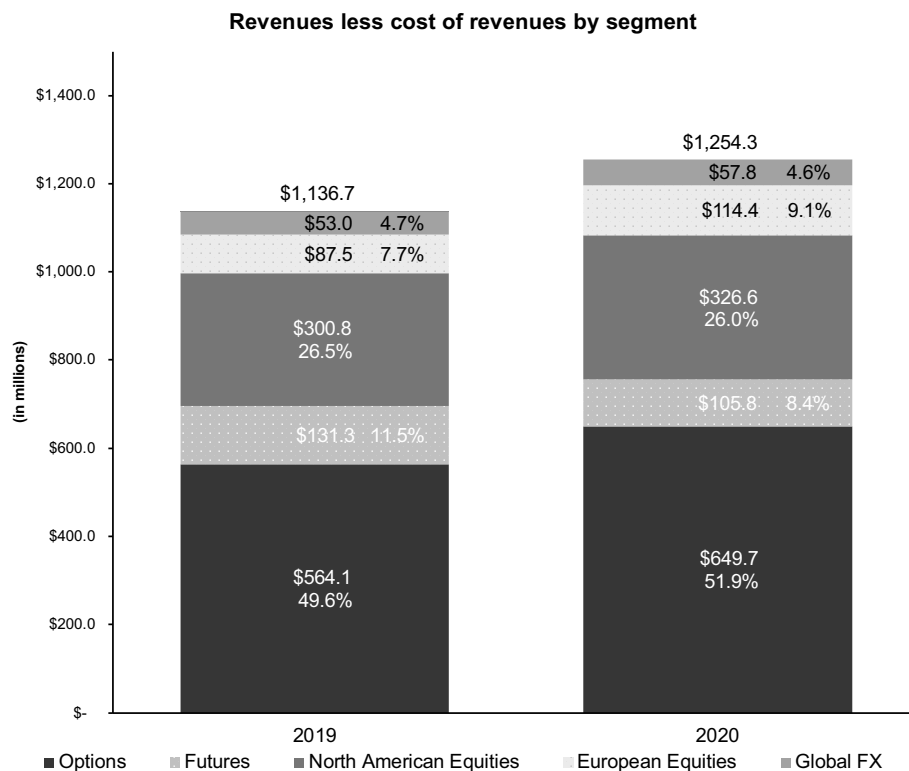
The following summarizes our total revenues by segment:



Note, the chart excludes Corporate revenues of \$0.2 million for the year ended December 31, 2019.

	Year Ended December 31,		Percent Change	Percentage of Total Revenues	
	2020	2019		Year Ended December 31, 2020	2019
	(in millions, except percentages)				
Options	\$ 1,330.1	\$ 983.1	35.3 %	38.8 %	39.4 %
North American Equities	1,789.5	1,213.1	47.5 %	52.2 %	48.6 %
Futures	109.2	135.9	(19.6)%	3.2 %	5.4 %
European Equities	140.5	110.8	26.8 %	4.1 %	4.4 %
Global FX	57.8	53.0	9.1 %	1.7 %	2.1 %
Corporate	—	0.2	(100.0)%	— %	— %
<b>Total revenues</b>	<b>\$ 3,427.1</b>	<b>\$ 2,496.1</b>	<b>37.3 %</b>	<b>100.0 %</b>	<b>100.0 %</b>

The following summarizes our revenues less cost of revenues by segment:



Note, the chart excludes Corporate revenues less cost of revenues of \$0.2 million for the year ended December 31, 2019.

	Year Ended December 31,		Percent Change	Percentage of Total Revenues less Cost of Revenues Year Ended December 31,	
	2020	2019		2020	2019
	(in millions, except percentages)				
Options	\$ 649.7	\$ 564.1	15.2 %	51.9 %	49.6 %
North American Equities	326.6	300.8	8.6 %	26.0 %	26.5 %
Futures	105.8	131.3	(19.4)%	8.4 %	11.5 %
European Equities	114.4	87.5	30.7 %	9.1 %	7.7 %
Global FX	57.8	53.0	9.1 %	4.6 %	4.7 %
Corporate	—	0.2	(100.0)%	— %	— %
<b>Total revenues less cost of revenues</b>	<b>\$ 1,254.3</b>	<b>\$ 1,136.9</b>	<b>10.3 %</b>	<b>100.0 %</b>	<b>100.0 %</b>

## Options

The following summarizes revenues less cost of revenues, operating expenses, operating income, EBITDA and EBITDA margin for our Options segment:

	Year Ended December 31,		Percent Change	Percentage of Total Revenues	
	Year Ended December 31,			Year Ended December 31,	
	2020	2019		2020	2019
	(in millions, except percentages)				
Revenues less cost of revenues . . . . .	\$ 649.7	\$ 564.1	15.2 %	48.8 %	57.4 %
Operating expenses . . . . .	219.3	229.8	(4.6)%	16.5 %	23.4 %
Operating income . . . . .	<u>\$ 430.4</u>	<u>\$ 334.3</u>	<u>28.7 %</u>	<u>32.4 %</u>	<u>34.0 %</u>
EBITDA(1) . . . . .	\$ 461.3	\$ 366.0	26.0 %	34.7 %	37.2 %
EBITDA margin(2) . . . . .	71.0 %	64.9 %	*	*	*

\* Not meaningful

- (1) See footnote (1) to the table under "Overview" above for a reconciliation of net income to EBITDA, and management's reasons for using such non-GAAP measures.
- (2) EBITDA margin represents EBITDA divided by revenues less cost of revenues.

Revenues less cost of revenues increased \$85.6 million for the year ended December 31, 2020 compared to the year ended December 31, 2019, primarily due to a 53.7% increase in multi-listed options ADV, coupled with a 9.8% increase in index options RPC and an increase in proprietary market data revenue as a result of the acquisitions of Hanweck, FT Options, and Trade Alert. For the year ended December 31, 2020, operating income increased \$96.1 million compared to the year ended December 31, 2019 primarily due to higher revenues less cost of revenues. Operating expenses decreased \$10.5 million for the year ended December 31, 2020 compared to the prior period, primarily due to decreases in professional fees and outside services, acquisition-related costs, and depreciation and amortization, partially offset by an increase in compensation and benefits, facilities costs, and technology support services.

## North American Equities

The following summarizes revenues less cost of revenues, operating expenses, operating income, EBITDA and EBITDA margin for our North American Equities segment:

	Year Ended December 31,		Percent Change	Percentage of Total Revenues	
	Year Ended December 31,			Year Ended December 31,	
	2020	2019		2020	2019
	(in millions, except percentages)				
Revenues less cost of revenues . . . . .	\$ 326.6	\$ 300.8	8.6 %	18.3 %	24.8 %
Operating expenses . . . . .	167.1	168.3	(0.7)%	9.3 %	13.9 %
Operating income . . . . .	<u>\$ 159.5</u>	<u>\$ 132.5</u>	<u>20.4 %</u>	<u>8.9 %</u>	<u>10.9 %</u>
EBITDA(1) . . . . .	\$ 228.0	\$ 208.0	9.6 %	12.7 %	17.1 %
EBITDA margin(2) . . . . .	69.8 %	69.1 %	*	*	*

\* Not meaningful

- (1) See footnote (1) to the table under "Overview" above for a reconciliation of net income to EBITDA, and management's reasons for using such non-GAAP measures.
- (2) EBITDA margin represents EBITDA divided by revenues less cost of revenues.

Revenues less cost of revenues increased \$25.8 million for the year ended December 31, 2020 compared to the year ended December 31, 2019, primarily due to a 50.0% increase in volumes traded and shares routed on our U.S. Equities exchanges. For the year ended December 31, 2020, the North American Equities segment's operating income increased \$27.0 million compared to the year ended December 31, 2019 as a result of higher revenues less cost of revenues. Operating expenses decreased slightly for the year ended December 31, 2020 compared to the year ended

December 31, 2019, primarily due to a decrease in other expenses and depreciation and amortization, offset by an increase in acquisition-related costs.

### **Futures**

The following summarizes revenues less cost of revenues, operating expenses, operating income, EBITDA, and EBITDA margin for our Futures segment:

	Year Ended December 31,		Percent Change	Percentage of Total Revenues	
	Year Ended December 31,			Year Ended December 31,	
	2020	2019		2020	2019
	(in millions, except percentages)				
Revenues less cost of revenues . . . . .	\$ 105.8	\$ 131.3	(19.4)%	96.9 %	96.6 %
Operating expenses . . . . .	52.0	48.2	7.9 %	47.6 %	35.5 %
Operating income . . . . .	\$ 53.8	\$ 83.1	(35.3)%	49.3 %	61.1 %
EBITDA(1) . . . . .	\$ 56.9	\$ 85.4	(33.4)%	52.1 %	62.8 %
EBITDA margin(2) . . . . .	53.8 %	65.0 %	*	*	*

\* Not meaningful

- (1) See footnote (1) to the table under “Overview” above for a reconciliation of net income to EBITDA, and management’s reasons for using such non-GAAP measures.
- (2) EBITDA margin represents EBITDA divided by revenues less cost of revenues.

Revenues less cost of revenues decreased \$25.5 million for the year ended December 31, 2020 compared to the year ended December 31, 2019, primarily due to a 19.4% decline in Futures ADV, coupled with a 5.2% decrease in revenue per contract. For the year ended December 31, 2020, the Futures segment’s operating income decreased \$29.3 million compared to the year ended December 31, 2019 due to lower revenues less cost of revenues. Operating expenses increased \$3.8 for the year ended December 31, 2020 compared to the year ended December 31, 2019, primarily due to an increase in compensation and benefits.

### **European Equities**

The following summarizes revenues less cost of revenues, operating expenses, operating income, EBITDA and EBITDA margin for our European Equities segment:

	Year Ended December 31,		Percent Change	Percentage of Total Revenues	
	Year Ended December 31,			Year Ended December 31,	
	2020	2019		2020	2019
	(in millions, except percentages)				
Revenues less cost of revenues . . . . .	\$ 114.4	\$ 87.5	30.7 %	81.4 %	79.0 %
Operating expenses . . . . .	80.9	67.2	20.4 %	57.6 %	60.6 %
Operating income . . . . .	\$ 33.5	\$ 20.3	65.0 %	23.8 %	18.3 %
EBITDA(1) . . . . .	\$ 95.1	\$ 49.8	91.0 %	67.7 %	44.9 %
EBITDA margin(2) . . . . .	83.1 %	56.9 %	*	*	*

\* Not meaningful

- (1) See footnote (1) to the table under “Overview” above for a reconciliation of net income to EBITDA, and management’s reasons for using such non-GAAP measures.
- (2) EBITDA margin represents EBITDA divided by revenues less cost of revenues.

Revenues less cost of revenues increased \$26.9 million for the year ended December 31, 2020 compared to the year ended December 31, 2019, primarily due to additional revenue attributable to the acquisition of EuroCCP, as well as a 9.7% increase in net capture and a 5.8% increase in market ADNV. For the year ended December 31, 2020, operating income increased \$13.2 million compared to the year ended December 31, 2019 as a result of higher revenues less cost



of revenues. Operating expenses increased \$13.7 million for the year ended December 31, 2020 compared to the year ended December 31, 2019, primarily due to an increase in compensation and benefits, professional fees and outside services, and technology support services as a result of the EuroCCP acquisition, partially offset by a decrease in other expenses and acquisition-related costs.

### **Global FX**

The following summarizes revenues less cost of revenues, operating expenses, operating income, EBITDA and EBITDA margin for our Global FX segment:

	Year Ended December 31,		Percent Change	Percentage of Total Revenues	
	2020	2019		2020	2019
	(in millions, except percentages)				
Revenues less cost of revenues .....	\$ 57.8	\$ 53.0	9.1 %	100.0 %	100.0 %
Operating expenses .....	51.8	57.9	(10.5)%	89.6 %	109.2 %
Operating income (loss) .....	\$ 6.0	\$ (4.9)	222.4 %	10.4 %	(9.2)%
EBITDA(1) .....	\$ 32.4	\$ 25.0	29.6 %	56.1 %	47.2 %
EBITDA margin(2) .....	56.1 %	47.2 %	*	*	*

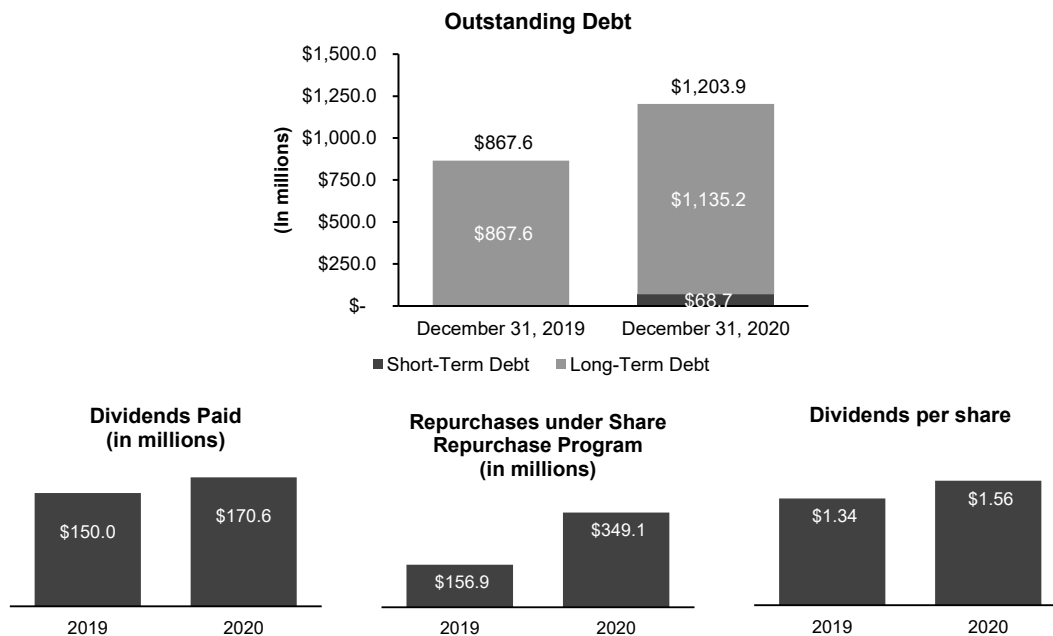
\* Not meaningful

- (1) See footnote (1) to the table under "Overview" above for a reconciliation of net income to EBITDA, and management's reasons for using such non-GAAP measures.
- (2) EBITDA margin represents EBITDA divided by revenues less cost of revenues.

Revenues less cost of revenues increased \$4.8 million for the year ended December 31, 2020 compared to the year ended December 31, 2019, primarily due to a 7.4% increase in Global FX ADNV during 2020. For the year ended December 31, 2020, the Global FX segment's operating income increased \$10.9 million compared to the year ended December 31, 2019 due to a decline in operating expenses, coupled with higher revenues less costs of revenues. Operating expenses decreased \$6.1 million for the year ended December 31, 2020 compared to the year ended December 31, 2019, primarily due to decreases in depreciation and amortization, professional fees and outside services, and travel and promotional expenses.

## LIQUIDITY AND CAPITAL RESOURCES

Below are charts that reflect our capital allocation:



We expect our cash on hand at December 31, 2020 and other available resources, including cash generated from operations, to be sufficient to continue to meet our cash requirements for the foreseeable future. In the near term, we expect that our cash from operations and availability under the Revolving Credit Facility will meet our cash needs to fund our operations, capital expenditures, interest payments on debt, debt repayments, any dividends, potential strategic acquisitions, and opportunities for common stock repurchases under the previously announced program. We may also utilize excess cash on hand to pay down amounts outstanding under the Term Loan Agreement. See Note 13 (“Debt”) of the consolidated financial statements for further information.

On July 1, 2020, in connection with the Company’s acquisition of EuroCCP, EuroCCP as borrower and the Company as guarantor of scheduled interest and fees on borrowings (but not the principal amount of any borrowings), entered into a €1.5 billion committed syndicated multicurrency revolving and swingline credit facility agreement (the “Facility”). The Facility is available to be drawn by EuroCCP towards (a) financing unsettled amounts in connection with the settlement of transactions in securities and other items processed through EuroCCP’s clearing system and (b) financing any other liability or liquidity requirement of EuroCCP incurred in the operation of its clearing system. Borrowings under the Facility are secured by cash, eligible government bonds and eligible equity assets deposited by EuroCCP into secured accounts. As a result, should the Facility be drawn by EuroCCP it could potentially impact EuroCCP’s liquidity, and we can give no assurance that this Facility will be sufficient to meet all of such obligations or sufficiently mitigate EuroCCP’s liquidity risk to meet its payment obligations when due. Additionally, a default of the Facility may allow lenders, under certain circumstances, to accelerate any related drawn amounts and may result in the acceleration of the Company’s other outstanding debt to which a cross-acceleration or cross-default provision applies, which may limit the Company’s liquidity, business and financing activities. The Facility is expected to terminate on July 1, 2021 and we may not be able to enter into a replacement facility on commercially reasonable terms, or at all.

Our long-term cash needs will depend on many factors, including an introduction of new products, enhancements of current products, the geographic mix of our business and any potential acquisitions. We believe our cash from operations and the availability under our Revolving Credit Facility will meet any long-term needs unless a significant acquisition is identified, in which case we expect that we would be able to borrow the necessary funds and/or issue additional shares of our common stock to complete such an acquisition. In addition, we do not expect COVID-19 to have a material impact on our liquidity or capital resources, including cash from operations or uses of cash, or change our ability to access capital markets in the near term or the foreseeable future.

Cash and cash equivalents include cash in banks and all non-restricted, highly liquid investments with original maturities of three months or less at the time of purchase. Cash and cash equivalents as of December 31, 2020 increased

\$16.1 million from December 31, 2019 primarily due to proceeds from long-term debt and net income, partially offset by acquisitions net of cash of acquired of \$351.5 million and share repurchases of \$349.1 million. See "Cash Flow" below for further discussion.

Our cash and cash equivalents held outside of the United States in various foreign subsidiaries totaled \$128.2 million and \$85.1 million as of December 31, 2020 and December 31, 2019, respectively. The remaining balance was held in the United States and totaled \$117.2 million and \$144.1 million as of December 31, 2020 and December 31, 2019, respectively. Any offshore cash repatriated to the United States could subject us to additional United States income taxes, less applicable foreign tax credits.

Our financial investments include deferred compensation plan assets, as well as investments with original or acquired maturities longer than three months but that mature in less than one year from the balance sheet date and are recorded at fair value. As of December 31, 2020, financial investments consisted of U.S. Treasury securities and deferred compensation plan assets.

### **Cash Flow**

The following table summarizes our cash flow data for the years ended December 31, 2020, 2019 and 2018:

	For the Year Ended December 31,		
	2020	2019 (in millions)	2018
Net cash provided by operating activities.....	\$ 1,458.8	\$ 632.8	\$ 534.7
Net cash used in investing activities.....	(430.5)	(15.9)	(25.6)
Net cash used in financing activities.....	(201.7)	(662.9)	(371.6)
Effect of foreign currency exchange rate changes on cash, cash equivalents, and restricted cash and cash equivalents.....	1.6	0.2	(5.9)
Increase (decrease) in cash, cash equivalents, and restricted cash and cash equivalents.....	<u>\$ 828.2</u>	<u>\$ (45.8)</u>	<u>\$ 131.6</u>
		As of December 31,	
	2020	2019 (in millions)	2018
Reconciliation of cash, cash equivalents, and restricted cash and cash equivalents:			
Cash and cash equivalents.....	\$ 245.4	\$ 229.3	\$ 275.1
Restricted cash and cash equivalents (margin deposits and clearing funds) . . .	812.1	—	—
Total.....	<u>\$ 1,057.5</u>	<u>\$ 229.3</u>	<u>\$ 275.1</u>

### **Net Cash Flows Provided by Operating Activities**

During the year ended December 31, 2020, net cash provided by operating activities was \$990.6 million higher than net income. The variance is primarily attributed to the addition of \$812.1 million of restricted cash and cash equivalents (margin deposits and clearing funds) resulting from the EuroCCP acquisition, the adjustment for depreciation and amortization expense of \$158.5 million, the change in accounts payable and accrued liabilities of \$59.4 million, and the change in Section 31 fees payable of \$53.9 million, partially offset by the change in accounts receivable of \$90.0 million.

Net cash provided by operating activities was \$1,458.8 million and \$632.8 million for the years ended December 31, 2020 and 2019, respectively. The increase in net cash flows provided by operating activities was primarily due to the addition of margin deposits and clearing funds resulting from the EuroCCP acquisition and the increase in net income.

Net cash provided by operating activities was \$262.0 million higher than net income for the fiscal year ended December 31, 2019. The variance is primarily attributed to the adjustment for depreciation expense of \$176.6 million and the change in accounts receivable of \$50.3 million, partially offset by the adjustment for provision of deferred taxes of \$37.2 million, the change in accounts payable and accrued liabilities of \$25.7 million, and other prepaid expenses of \$16.9 million.

Net cash provided by operating activities was \$632.8 million and \$534.7 million for the years ended December 31, 2019 and 2018, respectively. The increase in net cash flows provided by operating activities was primarily due to higher net income.

### **Net Cash Flows Used in Investing Activities**

Net cash flows used in investing activities was \$430.5 million and \$15.9 million for the years ended December 31, 2020 and 2019, respectively. The variance is primarily due to acquisitions, net of cash acquired in 2020 and the return of capital from investments in 2019.

Net cash flows used in investing activities totaled \$15.9 million and \$25.6 million for the years ended December 31, 2019 and 2018, respectively. Expenditures for capital and other assets totaled \$35.1 million and \$36.3 million for the years ended December 31, 2019 and 2018, respectively, primarily representing purchases of systems hardware and development of software to develop and enhance our trading platform and operations. In 2019 and 2018, investing activities primarily represented purchases of property and equipment.

Capital expenditures are expected to be in the range of \$60 to \$65 million, reflecting expenditures associated with the Company's planned trading floor relocation in 2021 and ongoing capacity and technology-related investments.

### **Net Cash Flows Used in Financing Activities**

For the year ended December 31, 2020, the Company received proceeds from long-term debt of \$493.7 million, of which \$70.0 million was used to pay down the revolving credit facility draw taken in the third quarter of 2020, repurchased \$349.1 million of common stock, paid dividends totaling \$170.6 million, and paid down \$155.0 million of long-term debt.

Net cash flows used in financing activities totaled \$662.9 million for the year ended December 31, 2019. The Company paid down \$350.0 million of long-term debt, repurchased \$156.9 million of common stock, and paid dividends of \$150.0 million. Net cash flows used in financing activities totaled \$371.6 million for the year ended December 31, 2018. The \$291.3 million decrease in net cash flows provided by financing activities resulted primarily from the long-term debt repayment in 2019.

### **Financial Assets**

The following summarizes our financial assets excluding margin deposits and clearing funds as of December 31, 2020, 2019 and 2018:

	<b>As of December 31,</b>		
	<b>2020</b>	<b>2019</b>	<b>2018</b>
		(in millions)	
Cash and cash equivalents .....	\$ 245.4	\$ 229.3	\$ 275.1
Financial investments .....	92.4	71.0	35.7
Less deferred compensation plan assets .....	(24.5)	(23.4)	—
Less cash collected for Section 31 Fees .....	(103.0)	(69.0)	(53.1)
Adjusted Cash(1) .....	<u>\$ 210.3</u>	<u>\$ 207.9</u>	<u>\$ 257.7</u>

(1) 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. 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.

## Debt

The following summarizes our debt obligations as of December 31, 2020, 2019 and 2018:

	As of December 31,		
	2020	2019	2018
		(in millions)	
Debt:			
Term Loan Agreement	\$ 70.0	\$ 225.0	\$ 275.0
3.650% Senior Notes	650.0	650.0	650.0
1.950% Senior Notes	—	—	300.0
1.625% Senior Notes	500.0	—	—
Revolving Credit Agreement	—	—	—
EuroCCP Credit Facility	—	—	—
Less unamortized discount and debt issuance costs	(16.1)	(7.4)	(9.6)
Total debt	<u>\$ 1,203.9</u>	<u>\$ 867.6</u>	<u>\$ 1,215.4</u>

At December 31, 2020, we were in compliance with the covenants of our debt agreements.

In addition to the debt outstanding, as of December 31, 2020 we had an additional \$250.0 million available through our revolving credit facility, with the ability to borrow another \$100.0 million by increasing the commitments under the facility. Together with Adjusted Cash, we had \$460.3 million available to fund our operations, capital expenditures, potential acquisitions, debt repayments and any dividends as of December 31, 2020.

## Dividends

The Company's expectation is to continue to pay dividends. The decision to pay a dividend, however, remains within the discretion of the Company's board of directors and may be affected by various factors, including our earnings, financial condition, capital requirements, level of indebtedness and other considerations our board of directors deems relevant. Future debt obligations and statutory provisions, among other things, may limit, or in some cases prohibit, our ability to pay dividends.

## Share Repurchase Program

In 2011, the board of directors approved an initial authorization for the Company to repurchase shares of its outstanding common stock of \$100 million and approved additional authorizations of \$100 million in each of 2012, 2013, 2014, 2015 and 2016, \$150 million in February 2018, \$100 million in August 2018, \$250 million in October 2019, and \$250 million in June 2020, for a total authorization of \$1.4 billion. The program permits the Company to purchase shares through a variety of methods, including in the open market or through privately negotiated transactions, in accordance with applicable securities laws. It does not obligate the Company to make any repurchases at any specific time or situation.

Under the program, for the year ended December 31, 2020, the Company repurchased 3,534,115 shares of common stock at an average cost per share of \$98.78, totaling \$349.1 million. Since inception of the program through December 31, 2020, the Company has repurchased 17,250,124 shares of common stock at an average cost per share of \$66.66, totaling \$1.1 billion.

As of December 31, 2020, the Company had \$200.1 million of availability remaining under its existing share repurchase authorizations.

## OCC Capital Management Policy

The Company's contributed capital to OCC has been recorded under investments in the consolidated balance sheets as of December 31, 2020. Under OCC's current capital management policy, which was approved by the SEC on January 24, 2020, if OCC's equity capital falls below certain defined thresholds, OCC can access additional capital through an operational loss fee charged to clearing members. None of OCC's shareholders (including Cboe Options) has any obligation to contribute capital to OCC under the capital management policy, nor does any shareholder have the right to receive dividends from OCC under such policy. OCC did not pay its shareholders any dividend or other return on the retained portion of their capital contributions. As such, the Company reversed the \$8.8 million OCC dividend declared in

2018, which was to be paid in 2019, in other expense, net in the consolidated statement of income for the year ended December 31, 2019.

### **Lease and Obligations**

The Company currently leases additional office space, data centers and remote network operations center, with lease terms remaining from 4 months to 180 months as of December 31, 2020. In September 2019, we entered into two leases that commenced in 2020 for a new principal office space and trading floor space, both located in Chicago, Illinois.

Total rent expense related to current and former lease obligations for the years ended December 31, 2020, 2019 and 2018 totaled \$20.2 million, \$12.4 million and \$10.1 million, respectively. In addition to our lease obligations, we have contractual obligations related to certain operating leases, data and telecommunications agreements, and our long-term debt outstanding.

Purchase obligations include our estimate of the minimum outstanding obligations under agreements to purchase goods or services that we believe are enforceable and legally binding and that specify all significant terms, including fixed or minimum quantities to be purchased; fixed or minimum and maximum amounts to be paid; and the approximate timing of the transaction. Purchase obligations include licensing agreements with various licensors which contain annual minimum fee requirements that total \$361.6 million for the next five years. Purchase obligations exclude agreements that are cancellable at any time without penalty.

We have excluded from the contractual obligations listed below \$812.1 million in cash margin deposits and clearing funds. Clearing participants of EuroCCP are required to make deposits to a clearing fund. The cash deposits made by clearing participants are recorded in the consolidated balance sheet as current assets with equal and offsetting current liabilities. See Note 15 (“Clearing Operations”) to our consolidated financial statements for additional information on EuroCCP and the margin deposits and clearing funds.

Future minimum payments under these leases and agreements were as follows as of December 31, 2020:

	Payments Due by Period				
	Total	Less than 1 year	1-3 years (in millions)	4-5 years	More than 5 years
<b>Contractual Obligations</b>					
Operating leases . . . . .	\$ 157.7	\$ 16.4	\$ 33.1	\$ 21.4	\$ 86.8
Purchase obligations . . . . .	963.0	70.1	143.5	148.0	601.4
Principal payments of debt . . . . .	1,220.0	70.0	—	—	1,150.0
Interest payments on debt. . . . .	224.9	32.7	63.7	63.7	64.8
Total . . . . .	<u>\$ 2,565.6</u>	<u>\$ 189.2</u>	<u>\$ 240.3</u>	<u>\$ 233.1</u>	<u>\$ 1,903.0</u>

### **Commercial Commitments and Contractual Obligations**

As of December 31, 2020, our commercial commitments and contractual obligations included operating leases, data and telecommunications agreements, equipment leases, our long-term debt outstanding, contingent considerations and other obligations. See Note 24 (“Commitments, Contingencies, and Guarantees”) to the consolidated financial statements for a discussion of commitments and contingencies, Note 13 (“Debt”) for a discussion of the outstanding debt, Note 15 (“Clearing Operations”) for information on EuroCCP’s clearinghouse exposure guarantee, and Note 25 (“Leases”) for discussion on operating leases and equipment leases.

### **Off-Balance Sheet Arrangements**

See Note 15 (“Clearing Operations”) for discussion of contingent assets and liabilities related to clearing operations in connection with the Company’s acquisition of EuroCCP.

### **Guarantees**

We use Wedbush and Morgan Stanley to clear our routed equities transactions for our U.S. Equities exchanges. Wedbush and Morgan Stanley guarantee the trade until one day after the trade date, after which time the NSCC provides a guarantee. In the case of failure to perform on the part of one of our clearing firms, Wedbush or Morgan Stanley, we provide the guarantee to the counterparty to the trade. OCC acts as a central counterparty on all transactions in listed equity options in our Options segment, and as such, guarantees clearance and settlement of all of our options transactions. We believe that any potential requirement for us to make payments under these guarantees is remote and

accordingly, have not recorded any liability in the consolidated financial statements for these guarantees. Similarly, with respect to U.S. listed equity options and futures, we deliver matched trades of our customers to the OCC, which acts as a central counterparty on all transactions occurring on Cboe Options, C2, BZX, EDGX, and CFE and, as such, guarantees clearance and settlement of all of our matched options and futures trades. With respect to Canadian equities, we deliver matched trades of our customers to The Canadian Depository for Securities, which acts as a central counterparty on all transactions occurring on MATCHNow and, as such, guarantees clearance and settlement of all of our matched Canadian equities trades. The BIDS Trading ATS platform delivers matched trades to BofA Securities, Inc., which delivers the matched trades to the NSCC.

## **CRITICAL ACCOUNTING POLICIES**

The preparation of consolidated financial statements in conformity with U.S. GAAP requires our management to make estimates and assumptions that affect the reported amounts of assets and liabilities, disclosure of the amounts of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ materially from those estimates. On an ongoing basis, the Company evaluates its estimates, including those related to areas that require a significant level of judgment or are otherwise subject to an inherent degree of uncertainty. The Company bases its estimates on historical experience, observance of trends in particular areas, information available from outside sources and various other assumptions that are believed to be reasonable under the circumstances. Information from these sources form the basis for making judgments about the carrying values of assets and liabilities that may not be readily apparent from other sources.

We have identified the policies below as critical to our business operations and the understanding of our results of operations. The impact of, and any associated risks related to, these policies on our business operations is discussed throughout "Management's Discussion and Analysis of Financial Condition and Results of Operations." For a detailed discussion on the application of these and other accounting policies, see Note 2 ("Summary of Significant Accounting Policies") to our consolidated financial statements and related notes included elsewhere in this Annual Report on Form 10-K.

### ***Revenue Recognition***

For further discussion related to revenue recognition of fees, such as transaction and clearing fees, access and capacity fees, market data fees, and regulation transaction and Section 31 fees, see Note 4 ("Revenue Recognition").

### ***Goodwill and Other Intangible Assets***

Our acquisitions of Bats, Cboe Vest Financial Group Inc. ("Vest"), Silexx Financial Systems, LLC ("Silexx"), LiveVol, Hanweck, FT Options, Trade Alert, MATCHNow, and BIDS Holdings resulted in the recording of goodwill and other intangible assets, while our acquisition of EuroCCP, resulted in a bargain purchase gain and other intangible assets. In accordance with ASC 350—*Intangibles—Goodwill and Other*, we test the carrying values of goodwill and indefinite-lived intangible assets for impairment at least annually, or more frequently when events or changes in circumstances signal indicators of impairment are present. We perform our annual impairment test of goodwill and other indefinite-lived intangible assets during the fourth quarter of our fiscal year, using the October 1 carrying values. Goodwill is tested for impairment at the reporting unit level in accordance with ASC 350-20. If the carrying value of the reporting unit exceeds its fair value, an impairment loss will be recognized in an amount equal to the excess. If the fair value of indefinite-lived intangible assets is less than their carrying value, an impairment loss will be recognized in an amount equal to the difference. We performed our annual goodwill impairment test as of October 1, 2020 and determined that no impairment existed.

The estimated fair values of our reporting units are based on the market approach and the income approach (using discounted estimated future cash flows). The estimated fair values of indefinite-lived intangibles used the income approach. The discounted cash flow analysis requires significant judgment, including judgments about the discount rate, forecasted revenue growth rate, and operating expenses, that are inherent in these fair value estimates over the estimated remaining operating period. As such, actual results may differ from these estimates and lead to a revaluation of our goodwill and indefinite-lived intangible assets. If updated estimates indicate that the fair value of goodwill or any indefinite-lived intangibles is less than the carrying value of the asset, an impairment charge is expected to be recorded in the consolidated statements of income in the period of the change in estimate.

## **Purchase Accounting**

Tangible and intangible assets acquired and liabilities assumed in an acquired business are recorded at their estimated fair values on the date of acquisition. The difference between the purchase price amount and the net fair value of assets acquired and liabilities assumed is recognized as goodwill on the balance sheet if the purchase price exceeds the estimated net fair value or as a bargain purchase gain on the income statement if the purchase price is less than the estimated net fair value. Determining the fair value of assets acquired and liabilities assumed requires management's judgment, often utilizes independent valuation experts and involves the use of significant estimates and assumptions with respect to the timing and amounts of future cash inflows and outflows, discount rates, market prices and asset lives, among other items. The judgments made in the determination of the estimated fair value assigned to the assets acquired and liabilities assumed, as well as the estimated useful life of each asset and the duration of each liability, could significantly impact the financial statements in periods after acquisition, such as through depreciation and amortization expense. When available, the estimated fair values of these assets and liabilities are determined based on observable inputs, such as quoted market prices, information from comparable transactions, offers made by other prospective acquirers, in such cases where we may have certain rights to acquire additional interests in existing investments, and the replacement cost of assets in the same condition or stage of usefulness (Level 1 and 2). Unobservable inputs, such as expected future cash flows or internally developed estimates of value (Level 3), are used if observable inputs are not available. As noted in ASC 805—*Business Combinations*, the allocation of the purchase price may be modified up to twelve months after the acquisition date as more information is obtained about the fair value of assets acquired and liabilities assumed. See Note 5 ("Acquisitions") for additional information.

## **Income Taxes**

Deferred taxes are provided on a liability method whereby deferred tax assets are recognized for deductible temporary differences and operating loss and tax credit carryforwards and deferred tax liabilities are recognized for taxable temporary differences. Temporary differences are the differences between the reported amounts of assets and liabilities and their tax bases. Deferred tax assets are reduced by a valuation allowance when, in our opinion, it is more likely than not that all or some portion of the deferred tax assets will not be realized. Deferred tax assets and liabilities are adjusted for the effects of changes in tax laws and rates on the date of enactment.

The Company recognizes the tax benefit from an uncertain tax position only if it is more likely than not that the tax position will be sustained on examination by the taxing authorities, based upon the technical merits of the position. The tax benefit recognized in the consolidated financial statements from such a position is measured based on the largest benefit that has a greater than 50% likelihood of being realized upon ultimate settlement. Also, interest and penalties expense is recognized on the full amount of deferred benefits for uncertain tax positions. The Company's policy is to include interest and penalties related to unrecognized tax benefits in the income tax provision within the consolidated statements of income.

## **RECENT ACCOUNTING PRONOUNCEMENTS**

See Note 3 ("Recent Accounting Pronouncements") to the consolidated financial statements for further discussion of recently adopted and recently issued accounting pronouncements that are applicable to the Company.



## Item 7A. Quantitative and Qualitative Disclosures about Market Risk

As a result of our operating activities, we are exposed to market risks such as foreign currency exchange rate risk, equity risk, credit risk, and interest rate risk. We have implemented policies and procedures to measure, manage and monitor and report risk exposures, which are reviewed regularly by management and our board of directors.

### Foreign Currency Exchange Rate Risk

Our operations in Europe, Canada and Asia are subject to increased currency translation risk as revenues and expenses are denominated in foreign currencies, primarily the British pound, Canadian dollar, Singapore dollar, Hong Kong dollar, and the Euro. We also have de minimis exposure to other foreign currencies, including the Swiss Franc, Norwegian Kroner, Swedish Krona and Danish Kroner.

For the year ended December 31, 2020, our exposure to foreign-denominated revenues and expenses is presented by primary foreign currency in the following table:

	Year Ended December 31, 2020		
	British Pound (1)	Euro (1)	Canadian Dollar (1)
	(in millions, except percentages)		
Foreign denominated % of:			
Revenues . . . . .	1.8 %	0.9 %	0.1 %
Cost of revenues . . . . .	0.6 %	0.3 %	— %
Operating expenses . . . . .	4.9 %	2.9 %	0.4 %
Impact of 10% adverse currency fluctuation on:			
Revenues . . . . .	\$ 5.4	\$ 4.0	\$ 0.3
Cost of revenues . . . . .	1.3	0.9	—
Operating expenses . . . . .	2.8	2.2	0.2

(1) An average foreign exchange rate to the U.S. dollar for the period was used. See Item 7 (“Management’s Discussion and Analysis”) for the table summarizing the changes in certain operational and financial metrics for more information.

### Equity Risk

Our investment in European and Canadian operations is exposed to volatility in currency exchange rates through translation of our net assets or equity to U.S. dollars. The assets and liabilities of our European business are denominated in British pounds or Euros. The assets and liabilities of our Canadian business are denominated in Canadian dollars. Fluctuations in currency exchange rates may create volatility in our reported results as we are required to translate foreign currency reported statements of financial condition and operational results into U.S. dollars for consolidated reporting. The translation of these non-U.S. dollar statements of financial condition into U.S. dollars for consolidated reporting results in a cumulative translation adjustment, which is recorded in accumulated other comprehensive income (loss) within stockholders’ equity on our consolidated balance sheet.

Our primary exposure to this equity risk as of December 31, 2020 is presented by foreign currency in the following table:

	British Pound (1)	Euro (1)	Canadian Dollars (1)
	(in millions)	(in millions)	(in millions)
Net equity investment in Cboe Europe Limited, EuroCCP, and MATCHNow . . . . .	\$ 694.8	\$ 84.7	\$ 143.4
Impact on consolidated equity of a 10% adverse currency fluctuation . . . . .	69.5	8.5	14.3

(1) Converted to U.S. dollars using the foreign exchange rate of British pounds per U.S. dollar, Euros per U.S. dollar, and Canadian dollars per U.S. dollar, respectively, as of December 31, 2020.

## **Credit Risk**

We are exposed to credit risk from third parties, including customers, counterparties and clearing agents. These parties may default on their obligations due to bankruptcy, lack of liquidity, operational failure or other reasons. We limit our exposure to credit risk by considering such risk when selecting the counterparties with which we make investments and execute agreements.

We do not have counterparty credit risk with respect to trades matched on our exchanges in the U.S., Canada, and Europe. With respect to listed equities, we deliver matched trades of our customers to the National Security Clearing Corporation (“NSCC”) without taking on counterparty risk for those trades. NSCC acts as a central counterparty on all equity transactions occurring on BZX, BYX, EDGX and EDGA and, as such, guarantees clearance and settlement of all of our matched equity trades. Similarly, with respect to U.S. listed equity options and futures, we deliver matched trades of our customers to the OCC, which acts as a central counterparty on all transactions occurring on Cboe Options, C2, BZX, EDGX and CFE and, as such, guarantees clearance and settlement of all of our matched options and futures trades. With respect to Canadian equities, we deliver matched trades of our customers to The Canadian Depository for Securities, which acts as a central counterparty on all transactions occurring on MATCHNow and, as such, guarantees clearance and settlement of all of our matched Canadian equities trades. The BIDS Trading ATS platform delivers matched trades to BofA Securities, Inc., which delivers the matched trades to the NSCC.

With respect to orders Cboe Trading routes to other markets for execution on behalf of our customers, Cboe Trading is exposed to some counterparty credit risk in the case of failure to perform on the part of our clearing firms, Morgan Stanley or Wedbush. Morgan Stanley and Wedbush guarantee trades until one day after the trade date, after which time NSCC provides a guarantee. Thus, Cboe Trading is potentially exposed to credit risk to the counterparty to a trade routed to another market center between the trade date and one day after the trade date in the event that Morgan Stanley or Wedbush fails. We believe that any potential requirement for us to make payments under these guarantees is remote and accordingly, have not recorded any liability in the consolidated financial statements for these guarantees.

Historically, we have not incurred any liability due to a customer’s failure to satisfy its contractual obligations as counterparty to a system trade. Credit difficulties or insolvency, or the perceived possibility of credit difficulties or insolvency, of one or more larger or more visible market participants could also result in market-wide credit difficulties or other market disruptions.

We do not have counterparty credit risk with respect to institutional spot FX trades occurring on our platform because Cboe FX is not a counterparty to any FX transactions. All transactions occurring on our platform occur bilaterally between two banks or prime brokers as counterparties to the trade. While Cboe FX does not have direct counterparty risk, Cboe FX may suffer a decrease in transaction volume if a bank or prime broker experiences an event that causes other prime brokers to decrease or revoke the credit available to the prime broker experiencing the event. Therefore, Cboe FX may have risk that is related to the credit of the banks and prime brokers that trade FX on the Cboe FX platform.

We also have credit risk related to transaction fees that are billed in arrears to customers on a monthly basis. Our potential exposure to credit losses on these transactions is represented by the receivable balances in our balance sheet. Our customers are financial institutions whose ability to satisfy their contractual obligations may be impacted by volatile securities markets.

As a result of the acquisition of EuroCCP on July 1, 2020, the Company is exposed to further credit risk through our clearing operations. EuroCCP holds material amounts of clearing participant collateral, both cash and non-cash deposits, which are held or invested primarily to provide security of capital while minimizing credit risk as well as liquidity and market risks. The following is a summary of the risks associated with these deposits and how these risks are mitigated:

- **Credit Risk** - The credit risk is predominantly in the event a clearing participant fails to meet a financial or contractual obligation. EuroCCP attempts to mitigate this risk through minimum participant requirements for clearing participants and monitoring their financial health. To cover potential loss to EuroCCP in the event of a clearing participant default, collateral is required from clearing participants. Besides potential defaults of clearing participants, the main credit risk faced by the clearinghouse is exposure to clearing participants when a trade fails to settle. To help mitigate this risk, a fail fee is charged to discourage late settlements. This fee covers EuroCCP’s costs but also acts as a deterrent as required by Regulation (EU) No 236/2012 on short selling, together with certain aspects of credit default swaps.
- **Liquidity Risk** - Liquidity risk is the risk EuroCCP may not be able to meet its payment obligations in the right currency, in the right place and at the right time. To help mitigate this risk, EuroCCP monitors its liquidity requirements

closely and maintains funds and assets in a manner which attempt to minimize the risk of loss or delay in the access by the clearinghouse to such funds and assets. For example, holding funds with a central bank where possible or making only short-term investments serves to help reduce liquidity risks. Liquidity is mainly required for securities settlement. The payment and settlement obligations generally stem from the function of EuroCCP as a cash equity clearinghouse: shares are bought and sold by clearing participants on a trading platform or OTC, and netted to settle two days later. During the settlement the actual payment for and delivery of the shares take place, this process requires intraday liquidity. If counterparties, which receive shares against payment, are unable to settle, an overnight liquidity need arises. The overnight liquidity is typically very short term, and is usually limited to a few days.

- **Market Risk** - EuroCCP is also exposed to market risk in the event that a clearing participant defaults and the market prices of the securities in its open positions have moved adversely so the clearinghouse can only close out the participant's obligations at a loss. To help mitigate market risk, EuroCCP collects collateral from clearing participants to cover for the probable loss during normal market conditions, together with contributions to the clearing fund to cover losses if a default occurred during extreme but plausible market conditions. Adverse movements in exchange rates affecting the value of obligations and collateral are factored into the calculation of the amount of collateral to be collected.

On a regular basis, we review and evaluate changes in the status of our counterparties' creditworthiness. Credit losses such as those described above could adversely affect our consolidated financial position and results of operations. Any such effects to date have been minimal.

### ***Interest Rate Risk***

We have exposure to market risk for changes in interest rates relating to our cash and cash equivalents, financial investments, and indebtedness. As of December 31, 2020 and 2019, our cash and cash equivalents and financial investments were \$337.8 million and \$300.3 million, respectively, of which \$128.0 million and \$85.1 million is held outside of the United States in various foreign subsidiaries in 2020 and 2019, respectively. The remaining cash and cash equivalents and financial investments are denominated in U.S. dollars. We do not use our investment portfolio for trading or other speculative purposes. Due to the nature of these investments, we have not been exposed to, nor do we anticipate being exposed to, material risks due to changes in interest rates, assuming no change in the amount or composition of our cash and cash equivalents and financial investments.

As of December 31, 2020, we had \$1,203.9 million in outstanding debt, of which \$1,135.2 million relates to our Senior Notes, which bear interest at fixed interest rates. Changes in interest rates will have no impact on the interest we pay on fixed-rate obligations. The remaining amounts outstanding of \$68.7 million relates to the Term Loan Agreement, which bears interest at fluctuating rates and, therefore, subjects us to interest rate risk. A hypothetical 100 basis point increase in interest rates relating to the amounts outstanding under the Term Loan Agreement as of December 31, 2020 would decrease annual pre-tax earnings by \$0.7 million, assuming no change in the composition of our outstanding indebtedness. We are also exposed to changes in interest rates as a result of borrowings under our Revolving Credit Agreement and the EuroCCP Credit Facility, as these facilities bear interest at fluctuating rates. As of December 31, 2020, there were no outstanding borrowings under our Revolving Credit agreement and no outstanding borrowings under the EuroCCP Credit Facility. See Note 13 ("Debt") to the consolidated financial statements for a discussion of debt agreements.

### ***Liquidity Risk***

We are exposed to liquidity risk under certain circumstances in relation to the cross-acceleration and cross-default provisions within the Term Loan Agreement and the Revolving Credit Agreement as a result of the Company, as guarantor, entering into the EuroCCP Credit Facility. A default of the Facility may allow lenders to accelerate any related drawn amounts and may result in the acceleration of the Company's other outstanding debt to which a cross-acceleration or cross-default provision applies, which may limit the Company's liquidity, business and financing activities. See Note 13 ("Debt") to the consolidated financial statements and "Liquidity and Capital Resources" within Item 7 ("Management's Discussion and Analysis") for a discussion of debt agreements.

**Item 8. Financial Statements and Supplementary Data**

**INDEX TO CONSOLIDATED FINANCIAL STATEMENTS**

**Cboe Global Markets, Inc. and Subsidiaries**

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## Report of Independent Registered Public Accounting Firm

To the Stockholders and Board of Directors  
Cboe Global Markets, Inc.:

### *Opinion on the Consolidated Financial Statements*

We have audited the accompanying consolidated balance sheet of Cboe Global Markets, Inc. and subsidiaries (the Company) as of December 31, 2020, the related consolidated statements of income, comprehensive income, changes in stockholders' equity, and cash flows for the year then ended, and the related notes (collectively, the consolidated financial statements). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2020, and the results of its operations and its cash flows for the year then ended, in conformity with U.S. generally accepted accounting principles.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the Company's internal control over financial reporting as of December 31, 2020, based on criteria established in Internal Control – Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission, and our report dated February 19, 2021 expressed an unqualified opinion on the effectiveness of the Company's internal control over financial reporting.

### *Basis for Opinion*

These consolidated financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these consolidated financial statements based on our audit. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audit in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud. Our audit included performing procedures to assess the risks of material misstatement of the consolidated financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements. Our audit also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. We believe that our audit provides a reasonable basis for our opinion.

### *Critical Audit Matters*

The critical audit matters communicated below are matters arising from the current period audit of the consolidated financial statements that were communicated or required to be communicated to the audit committee and that: (1) relate to accounts or disclosures that are material to the consolidated financial statements and (2) involved our especially challenging, subjective, or complex judgments. The communication of critical audit matters does not alter in any way our opinion on the consolidated financial statements, taken as a whole, and we are not, by communicating the critical audit matters below, providing separate opinions on the critical audit matters or on the accounts or disclosures to which they relate.

#### *Evaluation of goodwill impairment analysis for the Global FX reporting unit*

As discussed in Notes 2 and 11 to the consolidated financial statements, the Company tests goodwill for impairment at the reporting unit level annually, or in interim periods if certain events occur indicating that the carrying value may be impaired. This involves estimating the fair value of reporting units using discounted cash flow models.

We identified the evaluation of goodwill impairment analysis for the Global FX reporting unit as a critical audit matter. The determination of the fair value of the Global FX reporting unit requires management to make assumptions about the discount rate, forecasted revenue growth rates, and operating expenses used within the discounted cash flow model. A

higher degree of auditor judgment was required to evaluate these assumptions. Changes to these assumptions could have a substantial impact on the estimated fair value of the Global FX reporting unit.

The following are the primary procedures we performed to address this critical audit matter. We evaluated the design and tested the operating effectiveness of certain internal controls related to the Global FX reporting unit goodwill impairment assessment process, including controls over the development and selection of forecasted revenue growth rates, operating expense, and discount rate assumptions. We evaluated the reasonableness of the Company's forecasted revenue growth rates for the Global FX reporting unit by comparing the assumptions to forecasted revenue growth rates in the Company's and peer companies' analyst reports. We also evaluated the Company's ability to forecast revenue growth and operating expenses by comparing historical revenue growth and operating expense forecasts to actual results. In addition, we involved valuation professionals with specialized skills and knowledge, who assisted in:

- evaluating the discount rate used in the valuation by comparing it against a discount rate range that was independently developed using publicly available data for comparable entities
- developing an estimate of the Global FX reporting unit's fair value using the reporting unit's cash flow forecast and an independently developed discount rate and compared the results to the Company's estimate of fair value.

#### *Evaluation of unrecognized tax benefits*

As discussed in Notes 2 and 22 to the consolidated financial statements, the Company recognizes the tax benefit from an uncertain tax position only if it is more likely than not that the tax position will be sustained on examination by the taxing authorities, based upon the technical merits of the position. The tax benefit recognized in the consolidated financial statements from such a position is measured based upon the largest benefit that has greater than 50% likelihood of being realized upon ultimate settlement.

We identified the evaluation of unrecognized tax benefits in certain jurisdictions as a critical audit matter. A higher degree of auditor judgement was required to evaluate the Company's estimate of tax benefits to be realized upon ultimate settlement of its tax positions.

The following are the primary procedures we performed to address this critical audit matter. We evaluated the design and tested the operating effectiveness of certain internal controls over the Company's unrecognized tax benefits process, including controls over the estimate of tax benefits to be realized upon ultimate settlement of tax positions. We evaluated the Company's ability to estimate its unrecognized tax benefits by comparing historical unrecognized tax benefits to actual results upon the conclusion of examinations by applicable taxing authorities. In addition, we involved tax professionals with specialized skills and knowledge who assisted in:

- analyzing the Company's tax positions, including the measurement of unrecognized tax benefits
- evaluating changes in applicable laws and regulations
- inspecting settlements with applicable taxing authorities.

*/s/ KPMG LLP*

We have served as the Company's auditor since 2020.

Chicago, Illinois  
February 19, 2021

## **REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM**

To the Stockholders and the Board of Directors of Cboe Global Markets, Inc.

### **Opinion on the Financial Statements**

We have audited the accompanying consolidated balance sheet of Cboe Global Markets, Inc. and subsidiaries (the "Company") as of December 31, 2019, the related consolidated statements of income, comprehensive income, stockholders' equity, and cash flows, for each of the two years in the period ended December 31, 2019, and the related notes (collectively referred to as the "financial statements"). In our opinion, the financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2019, and the results of its operations and its cash flows for each of the two years in the period ended December 31, 2019, in conformity with accounting principles generally accepted in the United States of America.

### **Basis for Opinion**

These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the Company's financial statements based on our audits. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. Our audits included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that our audits provide a reasonable basis for our opinion.

/s/ DELOITTE & TOUCHE LLP  
Chicago, Illinois  
February 21, 2020

We began serving as the Company's auditor in 1973. In 2020 we became the predecessor auditor.

## Report of Independent Registered Public Accounting Firm

To the Stockholders and Board of Directors  
Cboe Global Markets, Inc.:

### *Opinion on Internal Control Over Financial Reporting*

We have audited Cboe Global Markets, Inc. and subsidiaries' (the Company) internal control over financial reporting as of December 31, 2020, based on criteria established in Internal Control – Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission. In our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2020, based on criteria established in Internal Control – Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the consolidated balance sheet of the Company as of December 31, 2020, the related consolidated statements of income, comprehensive income, changes in stockholders' equity, and cash flows for the year then ended, and the related notes (collectively, the consolidated financial statements), and our report dated February 19, 2021 expressed an unqualified opinion on those consolidated financial statements.

Management's assessment of the effectiveness of the Company's internal control over financial reporting as of December 31, 2020, excluded EuroCCP, acquired with effect from July 1, 2020; MATCHNow, acquired with effect from August 4, 2020; and BIDS Holdings, acquired with effect from December 31, 2020. These acquired businesses had aggregate total assets and total stockholders' equity of \$1.3 billion and \$205.2 million, respectively, and total revenues and revenues less cost of revenues of \$30.4 million and \$24.2 million, respectively, which are included in the Company's consolidated financial statements as of and for the year ended December 31, 2020. Our audit of internal control over financial reporting of the Company also excluded an evaluation of the internal control over financial reporting of EuroCCP, MATCHNow, and BIDS Holdings.

### *Basis for Opinion*

The Company's management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying Management's Annual Report on Internal Control over Financial Reporting. Our responsibility is to express an opinion on the Company's internal control over financial reporting based on our audit. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audit in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audit also included performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

### *Definition and Limitations of Internal Control Over Financial Reporting*

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting



principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

*/s/ KPMG LLP*

Chicago, Illinois  
February 19, 2021

**Cboe Global Markets, Inc. and Subsidiaries**  
**Consolidated Balance Sheets**  
**December 31, 2020 and 2019**  
(In millions, except share and per share data)

	<u>December 31,</u> <u>2020</u>	<u>December 31,</u> <u>2019</u>
<b>Assets</b>		
Current assets:		
Cash and cash equivalents .....	\$ 245.4	\$ 229.3
Financial investments .....	92.4	71.0
Accounts receivable, net of \$0.6 allowance for credit losses at December 31, 2020 and \$0.7 at December 31, 2019 .....	337.3	234.7
Margin deposits and clearing funds .....	812.1	—
Income taxes receivable .....	53.1	56.8
Other current assets .....	26.5	15.8
Total current assets .....	<u>1,566.8</u>	<u>607.6</u>
Investments .....	42.7	61.2
Property and equipment, net .....	82.6	47.0
Property held for sale .....	13.0	21.1
Operating lease right of use assets .....	111.0	53.4
Goodwill .....	2,895.1	2,682.1
Intangible assets, net .....	1,729.0	1,589.9
Other assets, net .....	76.3	51.6
Total assets .....	<u>\$ 6,516.5</u>	<u>\$ 5,113.9</u>
<b>Liabilities, Redeemable Noncontrolling Interest and Stockholders' Equity</b>		
Current liabilities:		
Accounts payable and accrued liabilities .....	\$ 250.0	\$ 171.9
Section 31 fees payable .....	152.9	99.0
Deferred revenue .....	10.2	4.5
Margin deposits and clearing funds .....	812.1	—
Income taxes payable .....	4.2	4.0
Current portion of long-term debt .....	68.7	—
Current portion of contingent consideration liabilities .....	15.2	2.2
Total current liabilities .....	<u>1,313.3</u>	<u>281.6</u>
Long-term debt .....	1,135.2	867.6
Unrecognized tax benefits .....	164.7	135.9
Deferred income taxes .....	377.6	399.7
Non-current operating lease liabilities .....	132.1	46.7
Contingent consideration liabilities .....	17.5	—
Other non-current liabilities .....	27.2	26.8
Total liabilities .....	<u>3,167.6</u>	<u>1,758.3</u>
Commitments and contingencies		
Stockholders' Equity:		
Preferred stock, \$0.01 par value: 20,000,000 shares authorized, no shares issued and outstanding at December 31, 2020 and December 31, 2019 .....	—	—
Common stock, \$0.01 par value: 325,000,000 shares authorized, 125,998,967 and 107,299,933 shares issued and outstanding, respectively at December 31, 2020 and 125,701,889 and 110,656,892 shares issued and outstanding, respectively at December 31, 2019 .....	1.2	1.2
Common stock in treasury, at cost, 18,699,034 shares at December 31, 2020 and 15,044,997 shares at December 31, 2019 .....	(1,250.4)	(887.1)
Additional paid-in capital .....	2,713.3	2,691.3
Retained earnings .....	1,809.8	1,512.6
Accumulated other comprehensive income, net .....	75.0	37.6
Total stockholders' equity .....	<u>3,348.9</u>	<u>3,355.6</u>
Total liabilities, redeemable noncontrolling interest, and stockholders' equity .....	<u>\$ 6,516.5</u>	<u>\$ 5,113.9</u>

See accompanying notes to consolidated financial statements.

**Cboe Global Markets, Inc. and Subsidiaries**  
**Consolidated Statements of Income**  
**Years ended December 31, 2020, 2019 and 2018**  
(In millions, except per share data)

	<u>2020</u>	<u>2019</u>	<u>2018</u>
Revenues:			
Transaction and clearing fees .....	\$ 2,418.0	\$ 1,716.2	\$ 1,986.9
Access and capacity fees .....	236.7	221.9	211.0
Market data fees .....	232.0	213.5	204.0
Regulatory fees .....	500.2	311.7	333.9
Other revenue .....	40.2	32.8	33.0
Total revenues .....	<u>3,427.1</u>	<u>2,496.1</u>	<u>2,768.8</u>
Cost of revenues:			
Liquidity payments .....	1,554.1	964.7	1,113.0
Routing and clearing .....	70.4	35.8	39.1
Section 31 fees .....	465.0	271.4	302.4
Royalty fees .....	83.4	86.8	97.4
Other .....	(0.1)	0.5	—
Total cost of revenues .....	<u>2,172.8</u>	<u>1,359.2</u>	<u>1,551.9</u>
Revenues less cost of revenues .....	1,254.3	1,136.9	1,216.9
Operating expenses:			
Compensation and benefits .....	224.9	199.0	228.8
Depreciation and amortization .....	158.5	176.6	204.0
Technology support services .....	54.5	46.2	47.9
Professional fees and outside services .....	60.6	68.3	68.3
Travel and promotional expenses .....	6.6	11.9	13.0
Facilities costs .....	17.6	11.0	11.5
Acquisition-related costs .....	45.2	48.5	30.0
Other expenses .....	24.2	38.2	14.0
Total operating expenses .....	<u>592.1</u>	<u>599.7</u>	<u>617.5</u>
Operating income .....	662.2	537.2	599.4
Non-operating (expenses) income:			
Interest expense, net .....	(37.6)	(35.9)	(38.2)
Other income, net .....	35.8	0.1	10.0
Income before income tax provision .....	660.4	501.4	571.2
Income tax provision .....	192.2	130.6	146.0
Net income .....	468.2	370.8	425.2
Net loss attributable redeemable noncontrolling interest .....	—	4.1	1.3
Net income excluding redeemable noncontrolling interest .....	468.2	374.9	426.5
Change in redemption value of redeemable noncontrolling interest .....	—	(0.5)	(1.3)
Net income allocated to participating securities .....	(1.2)	(1.7)	(3.1)
Net income allocated to common stockholders .....	<u>\$ 467.0</u>	<u>\$ 372.7</u>	<u>\$ 422.1</u>
Basic earnings per share .....	\$ 4.28	\$ 3.35	\$ 3.78
Diluted earnings per share .....	\$ 4.27	\$ 3.34	\$ 3.76
Basic weighted average shares outstanding .....	109.1	111.4	111.8
Diluted weighted average shares outstanding .....	109.3	111.8	112.2

See accompanying notes to consolidated financial statements.

**Cboe Global Markets, Inc. and Subsidiaries**  
**Consolidated Statements of Comprehensive Income**  
**Years ended December 31, 2020, 2019 and 2018**  
(In millions)

	<u>2020</u>	<u>2019</u>	<u>2018</u>
Net income . . . . .	\$ 468.2	\$ 370.8	\$ 425.2
Other comprehensive income (loss), net of income tax:			
Foreign currency translation adjustments . . . . .	36.5	26.1	(39.2)
Unrealized holding losses on available-for-sale investments . . . . .	(0.3)	—	—
Post-retirement benefit obligations . . . . .	1.2	—	—
Comprehensive income . . . . .	<u>505.6</u>	<u>396.9</u>	<u>386.0</u>
Comprehensive loss attributable to redeemable noncontrolling interest . . . . .	—	4.1	1.3
Comprehensive income excluding redeemable noncontrolling interest . . . . .	<u>505.6</u>	<u>401.0</u>	<u>387.3</u>
Change in redemption value of redeemable noncontrolling interest . . . . .	—	(0.5)	(1.3)
Comprehensive income allocated to participating securities . . . . .	<u>(1.2)</u>	<u>(1.7)</u>	<u>(3.1)</u>
Comprehensive income allocated to common stockholders, net of income tax . . .	<u>\$ 504.4</u>	<u>\$ 398.8</u>	<u>\$ 382.9</u>

See accompanying notes to consolidated financial statements.

**Cboe Global Markets, Inc. and Subsidiaries**  
**Consolidated Statements of Changes in Stockholders' Equity**  
**Years ended December 31, 2020, 2019 and 2018**  
(In millions)

	Preferred Stock	Common Stock	Treasury Stock	Additional paid-in capital	Retained earnings	Accumulated other comprehensive income, net	Total stockholders' equity	Redeemable Noncontrolling Interest
Balance at December 31, 2017	\$ —	\$ 1.2	\$ (558.3)	\$ 2,623.7	\$ 993.3	\$ 50.7	\$ 3,110.6	\$ 9.4
Cash dividends on common stock of \$1.16 per share	—	—	—	—	(130.3)	—	(130.3)	—
Stock-based compensation	—	—	—	35.1	—	—	35.1	—
Repurchases of common stock from employee stock plans	—	—	(20.9)	1.4	—	—	(19.5)	—
Purchase of common stock	—	—	(140.9)	—	—	—	(140.9)	—
Net income excluding noncontrolling interest	—	—	—	—	426.5	—	426.5	—
Other comprehensive loss	—	—	—	—	—	(39.2)	(39.2)	(1.3)
Net loss attributable to redeemable noncontrolling interest	—	—	—	—	—	—	—	(1.3)
Redemption value adjustment of redeemable noncontrolling interest	—	—	—	—	(1.3)	—	(1.3)	1.3
Balance at December 31, 2018	\$ —	\$ 1.2	\$ (720.1)	\$ 2,660.2	\$ 1,288.2	\$ 11.5	\$ 3,241.0	\$ 9.4
Cash dividends on common stock of \$1.34 per share	—	—	—	—	(150.0)	—	(150.0)	—
Stock-based compensation	—	—	—	21.8	—	—	21.8	—
Exercise of common stock options	—	—	—	9.3	—	—	9.3	—
Repurchases of common stock from employee stock plans	—	—	(11.0)	—	—	—	(11.0)	—
Purchase of common stock	—	—	(156.9)	—	—	—	(156.9)	—
Shares issued under employee stock purchase plan	—	—	0.9	—	—	—	0.9	—
Net income excluding noncontrolling interest	—	—	—	—	374.9	—	374.9	—
Other comprehensive income	—	—	—	—	—	26.1	26.1	(4.1)
Net loss attributable to redeemable noncontrolling interest	—	—	—	—	—	—	—	—
Redemption value adjustment of redeemable noncontrolling interest	—	—	—	—	(0.5)	—	(0.5)	0.5
Deconsolidation of former subsidiary with noncontrolling interest	—	—	—	—	—	—	—	(5.8)
Balance at December 31, 2019	\$ —	\$ 1.2	\$ (887.1)	\$ 2,691.3	\$ 1,512.6	\$ 37.6	\$ 3,355.6	\$ —
Transition adjustment for adoption of Current Expected Credit Losses standard at January 1, 2020	—	—	—	—	(0.4)	—	(0.4)	—
Cash dividends on common stock of \$1.56 per share	—	—	—	—	(170.6)	—	(170.6)	—
Stock-based compensation	—	—	—	21.7	—	—	21.7	—
Exercise of common stock options	—	—	—	0.2	—	—	0.2	—
Repurchases of common stock from employee stock plans	—	—	(14.2)	—	—	—	(14.2)	—
Purchase of common stock	—	—	(349.1)	—	—	—	(349.1)	—
Shares issued under employee stock purchase plan	—	—	—	0.1	—	—	0.1	—
Net income excluding noncontrolling interest	—	—	—	—	468.2	—	468.2	—
Other comprehensive income	—	—	—	—	—	37.4	37.4	—
Balance at December 31, 2020	\$ —	\$ 1.2	\$ (1,250.4)	\$ 2,713.3	\$ 1,809.8	\$ 75.0	\$ 3,348.9	\$ —

See accompanying notes to consolidated financial statements.

**Cboe Global Markets, Inc. and Subsidiaries**  
**Consolidated Statements of Cash Flows**  
**Years ended December 31, 2020, 2019 and 2018**  
(In millions)

	2020	2019	2018
Cash flows from operating activities:			
Net income	\$ 468.2	\$ 370.8	\$ 425.2
Adjustments to reconcile net income to net cash provided by operating activities:			
Depreciation and amortization	158.5	176.6	204.0
Amortization of debt issuance cost and debt discount	2.0	2.2	2.5
Change in fair value of contingent consideration	—	2.6	3.9
Realized gain on available-for-sale securities	(0.4)	(1.3)	(1.4)
Provision for accounts receivable credit losses	0.1	1.0	—
Provision for deferred income taxes	(30.9)	(37.2)	(47.7)
Provision for notes receivable credit losses	6.7	23.4	—
Stock-based compensation expense	21.7	21.8	35.1
Loss on disposition of property	—	4.4	1.0
Impairment of property held for sale	8.1	6.1	—
Loss related to deconsolidation of former subsidiary	—	2.0	—
Impairment of goodwill	—	10.5	—
Equity in investments	(1.1)	(2.2)	(1.1)
Impairment of investments	15.1	—	—
Bargain purchase gain	(32.6)	—	—
Changes in assets and liabilities:			
Accounts receivable	(90.0)	50.3	(70.3)
Restricted cash and cash equivalents (margin deposits and clearing funds)	812.1	—	—
Income taxes receivable	5.4	13.5	(53.2)
Other current assets	(5.1)	(16.9)	(15.8)
Other assets	(23.4)	—	—
Accounts payable and accrued liabilities	59.4	(25.7)	46.8
Section 31 fees payable	53.9	17.9	(24.5)
Deferred revenue	4.5	(4.1)	(7.0)
Income taxes payable	(1.1)	0.1	0.4
Unrecognized tax benefits	28.8	21.0	36.1
Other liabilities	(1.1)	(4.0)	0.7
Net cash flows provided by operating activities	<u>1,458.8</u>	<u>632.8</u>	<u>534.7</u>
Cash flows from investing activities:			
Acquisitions, net of cash acquired	(351.5)	—	—
Purchases of available-for-sale financial investments	(222.5)	(108.8)	(166.2)
Proceeds from maturities of available-for-sale financial investments	202.5	98.0	178.7
Return of capital from investments	—	30.0	—
Contributions to investments	(12.1)	—	(1.8)
Proceeds from insurance	0.5	—	—
Purchases of property and equipment	(47.4)	(35.1)	(36.3)
Net cash flows used in investing activities	<u>(430.5)</u>	<u>(15.9)</u>	<u>(25.6)</u>
Cash flows from financing activities:			
Proceeds from long-term debt	493.7	—	300.0
Principal payments of long term debt	(155.0)	(350.0)	(325.0)
Proceeds from credit facility	70.0	—	39.0
Payments of credit facility	(70.0)	—	(39.0)
Debt issuance costs	(4.5)	—	—
Cash dividends on common stock	(170.6)	(150.0)	(130.3)
Repurchases of common stock from employee stock plans	(14.2)	(11.0)	(20.9)
Exercise of common stock options	0.2	9.3	2.1
Payment of contingent consideration from acquisition	(2.2)	(4.3)	(56.6)
Purchase of common stock	(349.1)	(156.9)	(140.9)
Net cash flows used in financing activities	<u>(201.7)</u>	<u>(662.9)</u>	<u>(371.6)</u>
Effect of foreign currency exchange rate changes on cash, cash equivalents, and restricted cash and cash equivalents	1.6	0.2	(5.9)
Increase (decrease) in cash, cash equivalents, and restricted cash and cash equivalents	828.2	(45.8)	131.6
Cash, cash equivalents, and restricted cash and cash equivalents			
Beginning of period	229.3	275.1	143.5
End of period	<u>\$ 1,057.5</u>	<u>\$ 229.3</u>	<u>\$ 275.1</u>
Reconciliation of cash, cash equivalents, and restricted cash and cash equivalents:			
Cash and cash equivalents	245.4	229.3	275.1
Restricted cash and cash equivalents (margin deposits and clearing funds)	812.1	—	—
Total	<u>\$ 1,057.5</u>	<u>\$ 229.3</u>	<u>\$ 275.1</u>
Supplemental disclosure of cash transactions:			
Cash paid for income taxes	\$ 191.5	\$ 134.9	\$ 213.4
Cash paid for interest	29.2	32.7	38.7
Supplemental disclosure of noncash investing activities:			
Note receivable issued in connection with deconsolidated of former subsidiary	—	3.7	—
Investment recognized in connection with deconsolidation of former subsidiary	—	2.9	—
Net assets of former subsidiary deconsolidated	—	14.5	—
Accounts receivable acquired	11.0	—	—
Income taxes receivable acquired	1.7	—	—
Other current assets acquired	5.9	—	—
Goodwill acquired	201.2	—	—
Intangible assets acquired	247.7	—	—
Property and equipment, net acquired	4.4	—	—
Other assets, net acquired	0.9	—	—
Accounts payable and accrued expenses assumed	(16.7)	—	—
Income taxes payable assumed	(1.3)	—	—
Deferred revenue acquired	(1.0)	—	—
Contingent consideration related to acquisition	(32.7)	—	—
Deferred income taxes acquired	(6.7)	—	—

See accompanying notes to consolidated financial statements.

**Cboe Global Markets, Inc. and Subsidiaries**  
**Notes to Consolidated Financial Statements**  
**As of December 31, 2020 and 2019 and for the**  
**Years ended December 31, 2020, 2019 and 2018**

## **1. NATURE OF OPERATIONS**

Cboe Global Markets, Inc. (“Cboe” or “the Company”) is one of the world’s largest exchange holding companies, offering cutting-edge trading and investment solutions to investors around the world. The Company is committed to defining markets to benefit its participants and drive the global marketplace forward through product innovation, leading edge technology and seamless trading solutions.

Cboe offers trading across a diverse range of products in multiple asset classes and geographies, including options, futures, U.S., Canadian and European equities, exchange-traded products (“ETPs”), global foreign exchange (“FX”) and volatility products based on the VIX Index, recognized as the world’s premier gauge of U.S. equity market volatility.

Cboe’s subsidiaries include the largest options exchange and the third largest stock exchange operator in the U.S. In addition, the Company operates one of the largest stock exchanges by value traded in Europe, and owns EuroCCP, a leading pan-European equities clearinghouse, BIDS Trading, a leading block-trading ATS by volume in the U.S., and MATCHNow, a leading equities ATS in Canada. Cboe also is a leading market globally for ETP listings and trading.

The Company is headquartered in Chicago with offices in Kansas City, New York, London, San Francisco, Sarasota Springs, Toronto, Belfast, Amsterdam, Calgary, Singapore, Hong Kong, and Ecuador.

## **2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES**

### **(a) Principles of Accounting**

These consolidated financial statements are prepared in conformity with accounting principles generally accepted in the United States (“GAAP”) as established by FASB.

### **(b) Basis of Presentation**

The accompanying financial statements are presented on a consolidated basis to include the accounts and transactions of Cboe Global Markets, Inc. and its majority owned subsidiaries and all significant intercompany accounts and transactions have been eliminated.

The preparation of consolidated financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities, disclosures of contingent assets and liabilities, and reported amounts of revenues and expenses. On an ongoing basis, management evaluates its estimates based upon historical experience, observance of trends, information available from outside sources and various other assumptions that management believes to be reasonable under the circumstances. Actual results may differ from these estimates under different conditions or assumptions.

For those consolidated subsidiaries in which the Company’s ownership is less than 100% and for which the Company has control over the assets and liabilities and the management of the entity, the outside stockholders’ interest is shown as noncontrolling interest.

### **Segment information**

The Company has five business segments: Options, North American Equities (formerly U.S. Equities), Futures, European Equities, and Global FX, which is reflective of how the Company’s chief operating decision-maker reviews and operates the business. See Note 17 (“Segment Reporting”) for more information.

### **(c) Use of Estimates**

The preparation of consolidated financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities as well as disclosure of the amounts

of contingent assets and liabilities at the date of the consolidated financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ materially from those estimates. Material estimates that are particularly susceptible to significant change in the near term include the valuation of goodwill, indefinite-lived intangible assets, and unrecognized tax benefits.

**(d) Cash and Cash Equivalents**

The Company's cash and cash equivalents are exposed to concentrations of credit risk. The Company maintains cash at various regulated financial institutions and brokerage firms which, at times, may be in excess of the federal depository insurance limit. The Company's management regularly monitors these institutions and believes that the potential for future loss is remote. The Company considers liquid investments with original or acquired maturities of three months or less to be cash equivalents.

**(e) Financial Investments**

Financial investments are classified as trading or available-for-sale.

Trading financial investments represent financial investments held by Cboe Trading that retain the industry-specific accounting classification required for broker-dealers and marketable securities held in a rabbi trust for the Company's non-qualified retirement and benefit plans. The investments held by the broker-dealer subsidiary are recorded at fair value with changes in unrealized gains and losses reflected within interest expense, net in the consolidated statements of income. The investments held in a rabbi trust are recorded at fair value with changes in unrealized gains or losses recorded within other income (expense) and the equal and offsetting charges in the related liability are recorded in compensation and benefits expense in the consolidated statements of income.

Available-for-sale financial investments are comprised of the financial investments not held by Cboe Trading, including highly liquid U.S. Treasury securities. Unrealized gains and losses, net of income taxes, are included as a component of accumulated other comprehensive income in the accompanying consolidated balance sheets.

Interest on financial investments, including amortization of premiums and accretion of discounts, is recognized as income when earned. Realized gains and losses on financial investments are calculated using the specific identification method and are included in interest expense, net in the accompanying consolidated statements of income.

A decline in the fair value of any available-for-sale investment below carrying amount that is deemed to be other-than-temporary results in an impairment to reduce the carrying amount to realizable value. To determine whether an impairment is other-than-temporary, the Company considers all available information relevant to the collectability of the investment, including past events, current conditions, and reasonable and supportable forecasts when developing estimate of cash flows expected to be collected. Evidence considered in this assessment includes the reasons for the impairment, the severity and duration of the impairment, changes in value subsequent to year-end, forecasted performance of the investee, and the general market condition in the geographic area or industry in which the investee operates.

**(f) Accounts Receivable, Net**

Accounts receivable are concentrated with the Company's member firms and market data distributors and are carried at amortized cost. The Company nets transaction fees and liquidity payments for each member firm on a monthly basis and recognizes the total owed from a member firm as accounts receivable, net and the total owed to a member firm as accounts payable and accrued liabilities in the consolidated balance sheets. On a periodic basis, management evaluates the Company's accounts receivable and records an allowance for expected credit losses using an aging schedule. The aging schedule applies loss rates based on historical loss information and, as deemed necessary, is adjusted for differences in the nature of the receivables that exist at the reporting date from the historical period. Due to the short-term nature of the accounts receivable, changes in future economic conditions are not expected to have a significant impact on the expected credit losses.

The accounts receivable are presented net of allowance for credit losses on the consolidated balance sheets and the associated losses are presented in other operating expenses on the consolidated statements of income.



**(g) Property and Equipment, Net**

Property and equipment, net is stated at cost less accumulated depreciation. Depreciation is computed using the straight-line method over the estimated lives of the assets, generally ranging from three to seven years. Expenditures for repairs and maintenance are charged to expense as incurred. Depreciation of leasehold improvements is calculated using the straight-line method over the shorter of the related lease term or the estimated useful life of the assets.

Long-lived assets to be held and used are reviewed to determine whether any events or changes in circumstances indicate that the carrying amounts of the assets may not be recoverable. The Company bases this evaluation on such impairment indicators as the nature of the assets, the future economic benefit of the assets, any historical or future profitability measurements, as well as other external market conditions or factors that may be present. If such impairment indicators are present that would indicate that the carrying amount of any asset may not be recoverable, the Company determines whether an impairment has occurred through the use of an undiscounted cash flow analysis of the asset at the lowest level for which identifiable cash flows exist. In the event of impairment, the Company recognizes a loss for the difference between the carrying amount and the estimated value of the asset as measured using quoted market prices or, in the absence of quoted market prices, a discounted cash flow analysis.

The Company expenses software development costs as incurred during the preliminary project stage, while capitalizing costs incurred during the application development stage, which includes design, coding, installation and testing activities.

**(h) Goodwill and Intangible Assets, Net**

Goodwill represents the excess of purchase price over the value assigned to the net tangible and identifiable intangible assets of a business acquired. Goodwill is allocated to the Company's reporting units based on the assignment of the fair values of each reporting unit of the acquired company. The Company tests goodwill for impairment at the reporting unit level annually, or in interim periods if certain events occur indicating that the carrying value may be impaired. The impairment test is performed during the fourth quarter using October 1<sup>st</sup> carrying values, and if the fair value of the reporting unit is found to be less than the carrying value, an impairment loss is recorded. The Company performed its 2020 annual goodwill impairment test and determined that no impairment existed.

Intangible assets, net, primarily include acquired trademarks and trade names, customer relationships, strategic alliance agreements, licenses and registrations and non-compete agreements. Intangible assets with finite lives are amortized based on the discounted cash flow method applied over the estimated useful lives of the intangible assets and are tested for impairment if certain events occur indicating that the carry value may be impaired.

Intangible assets deemed to have indefinite useful lives are not amortized, but instead are tested for impairment at least annually, usually concurrently with goodwill. Impairment exists if the fair value of the asset is less than the carrying amount, and in that case, an impairment loss is recorded. The Company performed its 2020 annual intangible assets impairment test using October 1, 2020 carrying values and determined that no impairment existed.

**(i) Foreign Currency**

The financial statements of foreign subsidiaries where the functional currency is not the U.S. dollar are translated into U.S. dollars using the exchange rate in effect as of each balance sheet date. Statements of income and cash flow amounts are translated using the average exchange rate during the period. The cumulative effects of translating the balance sheet accounts from the functional currency into the U.S. dollar at the applicable exchange rates are included in accumulated other comprehensive income (loss), net in the balance sheet. Foreign currency gains and losses are recorded as other income, net in the consolidated statements of income. The Company's operations in the United Kingdom, Amsterdam, Canada, Singapore, and Hong Kong are recorded in Pounds sterling, Euros, Canadian dollars, Singapore dollars, and Hong Kong dollars, respectively.

**(j) Income Taxes**

Deferred taxes are recorded on a liability method whereby deferred tax assets are recognized for deductible temporary differences and operating loss and tax credit carryforwards, and deferred tax liabilities are recognized for taxable temporary differences. Temporary differences are the differences between the reported amounts of assets and liabilities and their tax bases. Deferred tax assets are reduced by a valuation allowance when, in the opinion of

management, it is more likely than not that some portion or all of the deferred tax assets will not be realized. Deferred tax assets and liabilities are adjusted for the effects of changes in tax laws and rates on the date of enactment.

The Company recognizes the tax benefit from an uncertain tax position only if it is more likely than not that the tax position will be sustained on examination by the taxing authorities, based upon the technical merits of the position. The tax benefit recognized in the consolidated financial statements from such a position is measured based on the largest benefit that has a greater than 50% likelihood of being realized upon ultimate settlement. Also, interest and penalties expense is recognized on the full amount of deferred benefits for uncertain tax positions. The Company's policy is to include interest and penalties related to unrecognized tax benefits in the income tax provision within the consolidated statements of income.

The Company elected to account for global intangible low-taxed income ("GILTI") in the period in which it is incurred, and therefore, have not provided any deferred tax impacts of GILTI in the consolidated financial statements.

#### ***(k) Revenue Recognition***

For further discussion related to revenue recognition of fees, such as transaction and clearing fees and liquidity payments, access and capacity fees, market data fees, and regulation transaction and Section 31 fees, see Note 4 ("Revenue Recognition").

#### **Concentrations of Revenue and Liquidity Payments**

For the years ended December 31, 2020, 2019, and 2018, no customer accounted for more than 15% of the Company's total revenue.

No customer is contractually or otherwise obligated to continue to use the Company's services. The loss of, or a significant reduction of, participation by these customers may have a material adverse effect on the Company's business, financial position, results of operations and cash flows. The two largest clearing members clear the majority of the market-maker sides of transactions at all of the Company's U.S. options exchanges. If either of these clearing members were to withdraw from the business of market-maker clearing and market-makers were unable to transfer to another clearing member, this could create significant disruption to the U.S. options markets, including Cboe's.

#### ***(l) Earnings Per Share***

The computation of basic earnings per share is calculated by reducing net income for the period by dividends paid or declared and undistributed net income for the period that are allocated to participating securities to arrive at net income allocated to common stockholders. Net income allocated to common stockholders is divided by the weighted average number of common shares outstanding during the period to determine net income per share allocated to common stockholders.

The computation of diluted earnings per share is calculated by dividing net income allocated to common stockholders by the sum of the weighted average number of common shares outstanding plus all additional common shares that would have been outstanding if the potentially dilutive common shares had been issued. The dilutive effect is calculated using the more dilutive of the two-class or treasury stock method.

#### ***(m) Stock-Based Compensation***

The Company grants stock-based compensation to its employees through awards of restricted stock units. In connection with the acquisition of Bats, Bats previously awarded stock options and restricted stock awards. The Company records stock-based compensation expense for all stock-based compensation granted based on the grant-date fair value. The Company recognizes stock-based compensation expense related to stock-based compensation awards with graded vesting that have a service condition on a straight-line basis over the requisite service period of the entire award.

The amount of stock-based compensation expense related to awards of restricted stock and restricted stock units is based on the fair value of Cboe Global Markets, Inc. common stock at the date of grant. The fair value is based on a current market-based transaction of the Company's common stock. If a market-based transaction of the Company's common stock is not available, then the fair value is based on an independent third-party valuation using equal weighting

of two valuation analysis techniques, discounted cash flows and valuation multiples observed from publicly traded companies in a similar industry.

**(n) Business Combinations**

The Company records identifiable assets, liabilities and goodwill acquired in a business combination at fair value at the acquisition date. Additionally, transaction-related costs are expensed in the period incurred.

**(o) Debt Issuance Costs**

All costs incurred to issue debt are capitalized as a contra-liability and amortized over the life of the debt using the interest method.

**(p) Investments**

The Company generally accounts for investments using the measurement alternative when it owns less than 20% of the outstanding voting stock of a company, there is an absence of readily determinable fair value for the respective investment, and the Company has an inability to exercise significant influence over the investment based upon the respective ownership interests held. The Company recognizes dividend income when declared.

In general, the equity method of accounting is used when the Company owns 20% to 50% of the outstanding voting stock of a company and when it is able to exercise significant influence over the operating and financial policies of a company. For equity method investments, the Company records the pro-rata share of earnings or losses each period and records any dividends received as a reduction in the investment balance. The equity method investment is inclusive of other-than-temporary declines in value, recognized by the investee, who considers a variety of factors such as the earnings capacity of the investment and the fair value of the investment compared to its carrying amount. If the estimated fair value of the investment is less than the carrying amount and the decline in value is considered to be other than temporary, the excess of the carrying amount over the estimated fair value is recognized in the financial statements as an impairment.

**(q) Leases**

The Company determines if an arrangement contains a lease at inception. For arrangements where the Company is the lessee, operating leases are included in operating lease right of use ("ROU") assets, accrued liabilities, and non-current operating lease liabilities on the balance sheet as of December 31, 2020. The Company does not have any finance leases as of December 31, 2020.

ROU assets and operating lease liabilities are recognized based on the present value of the future lease payments over the lease term at commencement date. ROU assets also include any initial direct costs incurred and any lease payments made at or before the lease commencement date, less lease incentives received. The Company uses its incremental borrowing rate based on the information available at the lease commencement date in determining the lease liabilities, as the rate implicit in the Company's leases are generally not reasonably determinable. Lease terms may include options to extend or terminate when the Company is reasonably certain that the option will be exercised. Lease expense is recognized on a straight-line basis over the lease term.

The Company also has lease arrangements with lease and non-lease components. The Company elected the practical expedient not to separate non-lease components from lease components for the Company's leases. The Company elected to apply the short-term lease measurement and recognition exemption in which ROU assets and lease liabilities are not recognized for short-term leases. For short-term operating leases, lease expense is recognized on a straight-line basis over the lease term.

Leases with an initial term of 12 months or less are not recorded on the consolidated balance sheet and the Company recognizes lease expense in facilities costs within the consolidated statements of income for these leases on a straight-line basis over the lease term. Certain leases include one or more options to renew, with renewal terms that can extend the lease term from one to five years or more, and some of which include the Company's option to terminate the leases within one year. When the implicit rate in the Company's lease is not reasonably determinable, the Company applies an incremental borrowing rate based on the information available at the lease commencement date in determining the present value of lease payments.

**(r) Margin Deposits and Clearing Funds**

Margin deposits and clearing funds in the form of cash contributions by EuroCCP's clearing participants where title has transferred to EuroCCP are included as current assets with equal and offsetting current liabilities in the consolidated balance sheet. These margin deposits and clearing funds are deposited with De Nederlandsche Bank ("DNB"), can only be used for specified EuroCCP operations, and fluctuate over time due to changes in deposit requirements. Certain non-cash margin deposits and clearing fund deposits, as well as interoperability fund deposits, are not reflected in the accompanying consolidated balance sheet, as EuroCCP does not take economic ownership of these balances. Cash held as margin deposits and clearing fund deposits may be invested at an approved bank in accordance with EuroCCP's investment policy, and any interest or gain received, or loss incurred on invested funds is recorded in other revenue in the consolidated statements of income.

**3. RECENT ACCOUNTING PRONOUNCEMENTS**

***Recent Accounting Pronouncements – Adopted***

In June 2016, the FASB issued ASU 2016-13, Credit Losses. This update replaces the incurred loss impairment methodology in GAAP with a methodology that requires management to estimate an expected lifetime credit loss on financial assets. This includes accounts receivable and notes receivable, which is included in other assets, net on the consolidated balance sheets. The update also amends the impairment model for available-for-sale debt securities. The forward-looking expected lifetime credit loss model generally will result in the earlier recognition of credit losses. For public entities, the update is effective for fiscal years and interim periods within those fiscal years, beginning after December 15, 2019, with early adoption permitted. The Company adopted this ASU on January 1, 2020 using the modified retrospective approach and did not restate comparative periods. Upon the adoption of the standard, the Company recognized an immaterial cumulative-effect adjustment to retained earnings for the estimate of current expected credit loss on financial instruments within the scope of the standard, including accounts receivable, net. Accounts receivable related to clearing operations are fully collateralized, which minimizes credit loss exposure. Based on the Company's high turnover and collectability of accounts receivable, as well as the monthly billing process for the majority of revenue, there was not a significant variance in the recognized loss between the incurred loss impairment methodology under the prior standard and the expected lifetime credit loss model under this ASU. The financial instruments other than accounts receivable, net that are within the scope of the standard were not materially impacted by the standard. The impact to the consolidated balance sheet was immaterial in nature and there was no impact to the consolidated statements of income and cash flows.

In August 2018, the FASB issued ASU 2018-13, Fair Value Measurement (Topic 820) - Disclosure Framework - Changes to the Disclosure Requirements for Fair Value Measurement. This ASU removes certain disclosure requirements related to the fair value hierarchy, modifies existing disclosure requirements related to measurement uncertainty and adds new disclosure requirements. The new disclosure requirements include disclosing the changes in unrealized gains and losses for the period included in other comprehensive income for recurring Level 3 fair value measurements held at the end of the reporting period and the range and weighted average of significant unobservable inputs used to develop Level 3 fair value measurements. For public entities, the update is effective for fiscal years and interim periods within those fiscal years, beginning after December 15, 2019. The Company adopted this ASU on January 1, 2020 using the prospective approach, which did not result in a material impact to the consolidated financial statements and disclosures.

***Recent Accounting Pronouncements – Issued, not yet Adopted***

In December 2019, the FASB issued ASU 2019-12, Income Taxes (Topic 740) – Simplifying the Accounting for Income Taxes. This ASU removes certain income tax exceptions and modifies existing guidance to simplify the accounting for income taxes. For public entities, the update is effective for fiscal years and interim periods within those fiscal years, beginning after December 15, 2020. The Company expects to adopt the update for the financial statements issued for the first quarter of 2021 and does not anticipate a material impact to the consolidated financial statements.

#### 4. REVENUE RECOGNITION

The Company's main types of revenue contracts are:

- *Transaction and clearing fees* - Transaction fees represent fees charged by the Company for meeting the point-in-time performance obligation of executing a trade on its markets. These fees can be variable based on trade volume tiered discounts; however, as all tiered discounts are calculated monthly, the actual discount is recorded on a monthly basis. Transaction fees are recognized across all segments. Clearing fees, which include settlement fees, are charged by the Company for transactions cleared and settled by EuroCCP. Clearing fees can be variable based on trade volume tiered discounts; however, as all tiered discounts are calculated monthly, the actual discount is recorded on a monthly basis. Clearing fees are recognized in the European Equities segment. Transaction and clearing fees, as well as any tiered volume discounts, are calculated and billed monthly in accordance with the Company's published fee schedules.
- *Access and capacity fees* - Access and capacity fees represent fees assessed for the opportunity to trade, including fees for trading-related functionality across all segments, terminal and other equipment rights, maintenance services, trading floor space and telecommunications services. Facilities, systems services and other fees are generally monthly fee-based. These fees are billed monthly in accordance with the Company's published fee schedules and recognized on a monthly basis when the performance obligations are met. All access and capacity fees associated with the trading floor are recognized over time in the Options segment, as the performance obligations are met.
- *Market data fees* - Market data fees represent the fees received by the Company from the U.S. tape plans and fees charged to customers for proprietary market data. Fees from the U.S. tape plans are collected monthly based on published fee schedules and distributed quarterly to the U.S. Exchanges based on a known formula. A contract for proprietary market data is entered into and charged on a monthly basis in accordance with the Company's published fee schedules as the service is provided. Both types of market data are satisfied over time, and revenue is recognized on a monthly basis as the customer receives and consumes the benefit as the Company provides the data to meet its performance obligation. U.S. tape plan market data is recognized in the North American Equities and Options segments. Proprietary market data fees are recognized across all segments.
- *Regulatory fees* - There are two types of regulatory fees that the Company recognizes. The first type represents fees collected by the Company to cover the Section 31 fees charged to the Exchanges by the SEC for meeting the point-in-time performance obligation of executing a trade on its markets. The fees charged to customers are based on the fee set by the SEC per notional value of U.S. Equities exchange transactions and per round turn of Options transactions executed on the Company's U.S. securities markets. These fees are calculated and billed monthly and are recognized in the North American Equities and Options segments. As the Exchanges are responsible for the ultimate payment to the SEC, the Exchanges are considered the principal in these transactions. Regulatory fees also include the options regulatory fee ("ORF") which supports the Company's regulatory oversight function in the Options segment, along with other miscellaneous regulatory fees, and neither can be used for non-regulatory purposes. The ORF and miscellaneous fees are recognized when the performance obligation is fulfilled.
- *Other revenue* - Other revenue primarily includes revenue from various licensing agreements, net interest income from clearing operations, all fees related to the trade reporting facility operated in the European Equities segment, and revenue associated with advertisements through the Company's websites.

All revenue recognized in the income statement is considered to be revenue from contracts with customers. The following table depicts the disaggregation of revenue according to product line and segment (in millions):

	Options	North American Equities	Futures	European Equities	Global FX	Corporate items and eliminations	Total
<b>Year Ended December 31, 2020</b>							
Transaction and clearing fees . . . . .	\$ 1,046.3	\$ 1,147.2	\$ 84.5	\$ 90.9	\$ 49.1	\$ —	\$ 2,418.0
Access and capacity fees . . . . .	107.0	84.2	17.0	20.6	7.9	—	236.7
Market data fees . . . . .	74.2	137.0	6.6	13.4	0.8	—	232.0
Regulatory fees . . . . .	83.4	416.8	—	—	—	—	500.2
Other revenue . . . . .	19.2	4.3	1.1	15.6	—	—	40.2
	<u>1,330.1</u>	<u>1,789.5</u>	<u>109.2</u>	<u>140.5</u>	<u>57.8</u>	<u>—</u>	<u>3,427.1</u>
<b>Timing of revenue recognition</b>							
Services transferred at a point in time . .	\$ 1,148.9	\$ 1,568.3	\$ 85.6	\$ 106.5	\$ 49.1	\$ —	\$ 2,958.4
Services transferred over time . . . . .	181.2	221.2	23.6	34.0	8.7	—	468.7
	<u>1,330.1</u>	<u>1,789.5</u>	<u>109.2</u>	<u>140.5</u>	<u>57.8</u>	<u>—</u>	<u>3,427.1</u>
<b>Year Ended December 31, 2019</b>							
Transaction and clearing fees . . . . .	\$ 742.9	\$ 744.6	\$ 110.2	\$ 73.1	\$ 45.4	\$ —	\$ 1,716.2
Access and capacity fees . . . . .	104.1	78.9	15.6	16.5	6.8	—	221.9
Market data fees . . . . .	55.7	138.1	6.5	12.6	0.6	—	213.5
Regulatory fees . . . . .	64.0	247.0	0.7	—	—	—	311.7
Other revenue . . . . .	16.4	4.5	2.9	8.6	0.2	0.2	32.8
	<u>983.1</u>	<u>1,213.1</u>	<u>135.9</u>	<u>110.8</u>	<u>53.0</u>	<u>0.2</u>	<u>2,496.1</u>
<b>Timing of revenue recognition</b>							
Services transferred at a point in time . .	\$ 823.3	\$ 996.1	\$ 113.8	\$ 81.7	\$ 45.6	\$ 0.2	\$ 2,060.7
Services transferred over time . . . . .	159.8	217.0	22.1	29.1	7.4	—	435.4
	<u>983.1</u>	<u>1,213.1</u>	<u>135.9</u>	<u>110.8</u>	<u>53.0</u>	<u>0.2</u>	<u>2,496.1</u>
<b>Year Ended December 31, 2018</b>							
Transaction and clearing fees . . . . .	\$ 835.5	\$ 876.4	\$ 128.0	\$ 97.4	\$ 49.6	\$ —	\$ 1,986.9
Access and capacity fees . . . . .	99.4	75.6	15.1	14.7	6.2	—	211.0
Market data fees . . . . .	42.9	140.9	6.6	13.1	0.5	—	204.0
Regulatory fees . . . . .	60.0	273.8	0.1	—	—	—	333.9
Other revenue . . . . .	19.7	6.4	—	6.4	0.1	0.4	33.0
	<u>1,057.5</u>	<u>1,373.1</u>	<u>149.8</u>	<u>131.6</u>	<u>56.4</u>	<u>0.4</u>	<u>2,768.8</u>
<b>Timing of revenue recognition</b>							
Services transferred at a point in time . .	\$ 915.2	\$ 1,156.6	\$ 128.1	\$ 103.8	\$ 49.7	\$ 0.4	\$ 2,353.8
Services transferred over time . . . . .	142.3	216.5	21.7	27.8	6.7	—	415.0
	<u>1,057.5</u>	<u>1,373.1</u>	<u>149.8</u>	<u>131.6</u>	<u>56.4</u>	<u>0.4</u>	<u>2,768.8</u>

Contract liabilities as of December 31, 2020 primarily represent prepayments of transaction fees and certain access and capacity and market data fees to the Exchanges. The revenue recognized from contract liabilities and the remaining balance is shown below (in millions):

	Balance at January 1, 2020	Cash Additions	Revenue Recognized	Balance at December 31, 2020
Liquidity provider sliding scale (1) . . . . .	\$ —	\$ 9.6	\$ (9.6)	\$ —
Other, net . . . . .	4.5	32.8	(27.1)	10.2
Total deferred revenue . . . . .	<u>\$ 4.5</u>	<u>\$ 42.4</u>	<u>\$ (36.7)</u>	<u>\$ 10.2</u>

(1) Liquidity providers are eligible to participate in the sliding scale program, which involves prepayment of transaction fees, and to receive reduced fees based on the achievement of certain volume thresholds within a calendar month. These transaction fees are amortized and recorded ratably as the transactions occur over the period.

## 5. ACQUISITIONS

On February 3, 2020, the Company purchased Hanweck Associates, LLC (“Hanweck”) and the assets of FT Providers, LLC (“FT Options”). Hanweck and FT Options are both providers of risk analytics market data and included in the Company’s Options segment. On June 1, 2020, the Company purchased the assets of Trade Alert, LLC (“Trade Alert”), a real-time alerts and order flow analysis service provider included in the Company’s Options segment. On August

4, 2020, the Company completed the acquisition of MATCHNow, one of the largest equities ATSS in Canada, which is included in the Company's North American Equities segment. Of these acquisitions' aggregate purchase price, \$100.7 million was allocated to goodwill, \$59.0 million was allocated to intangible assets, and \$2.2 million was allocated to working capital. In connection with these acquisitions, approximately \$32.7 million in contingent consideration (in the aggregate) related to future financial performance of the acquired business or developmental milestones has been recorded in the Company's consolidated financial statements. These amounts represent the allocation of the purchase price and are subject to revision during the remainder of the measurement period, a period not to exceed twelve months from the acquisition date. See below for further discussion of intangible assets acquired.

On July 1, 2020, the Company completed the acquisition of the remaining 80% interest in EuroCCP, a pan-European equities clearinghouse, which is included in the Company's European Equities segment. Of the acquisition's purchase price of the remaining consideration, \$32.3 million was allocated to intangible assets and \$56.0 million was allocated to working capital upon consolidation. Prior to signing the agreement to acquire the remaining 80% of EuroCCP, the Company agreed on the purchase price with the other shareholders, as they were looking to liquidate their investments in EuroCCP. That agreement gave way to a \$32.6 million bargain purchase gain, which is included in other non-operating income, net in the consolidated statement of income. These amounts represent the allocation of the purchase price and are subject to revision during the remainder of the measurement period, a period not to exceed twelve months from the acquisition date. In connection with the acquisition, EuroCCP put in place a committed revolving credit facility of up to €1.5 billion, see Note 13 ("Debt") for more information. See below for further discussion of intangible assets acquired.

On December 31, 2020, the Company purchased BIDS Holdings ("BIDS"). BIDS Holdings owns BIDS Trading, LP, a registered broker-dealer and the operator of the BIDS ATS, the largest block-trading ATS by volume in the U.S. The alternative trading system operated by BIDS is not a registered national securities exchange or a facility thereof. The acquisition of BIDS provided the Company with a foothold in the off-exchange segment of the U.S. equities market, which allowed the Company's presence in the North American equities segment to expand. Of the acquisitions purchase price, \$100.5 million was allocated to goodwill, \$156.4 million was allocated to intangible assets, and \$22.8 million was allocated to working capital. These amounts represent the allocation of the purchase price and are subject to revision during the remainder of the measurement period, a period not to exceed twelve months from the acquisition date. See below for further discussion of intangible assets acquired. The acquisition was funded by the Company's most recent debt issuance, which the Company secured on December 9, 2020. See Note 13 ("Debt") for a discussion of debt agreements.

The following table presents the details of intangible assets at the dates of acquisition. All acquired intangible assets with finite lives are amortized using the straight-line method.

	Hanweck	Useful Life (Years)	FT Options	Useful Life (Years)	Trade Alert	Useful Life (Years)	EuroCCP	Useful Life (Years)	MATCHNow	Useful Life (Years)	BIDS	Useful Life (Years)
Trading registrations and licenses . . . . .	\$ —		\$ —		\$ —		\$ 28.1	Indefinite	\$ 18.4	Indefinite	\$ —	
Customer relationships . . . . .	4.9	13	2.2	13	0.7	13	—		17.4	15	137.0	17
Technology . . . . .	2.1	4	0.9	4	0.3	4	3.6	6	0.7	7	17.8	11
Trademarks and tradenames . . . . .	7.0	10	3.2	10	1.0	10	0.6	10	0.2	2	1.6	10
Total identifiable intangible assets . . . . .	<u>\$ 14.0</u>		<u>\$ 6.3</u>		<u>\$ 2.0</u>		<u>\$ 32.3</u>		<u>\$ 36.7</u>		<u>\$ 156.4</u>	

Acquisition-related costs relate to acquisitions and other strategic opportunities, including the Merger. The Company expensed \$45.3 million of acquisition-related costs during the year ended December 31, 2020, which included \$22.1 million of professional fees, \$15.1 million of impairment charges related to investments, and other expenses and \$8.1 million of impairment charges related to facilities. These acquisition-related expenses are included in acquisition-related costs in the consolidated statements of income.

The Company expensed \$48.5 million of acquisition-related costs during the year ended December 31, 2019 that included \$19.3 million of compensation-related costs, \$10.5 million of impairment of goodwill charges, \$6.1 million of impairment of facilities charges, \$4.5 million loss on disposal of data processing software, \$3.9 million of professional fees, \$2.2 million of termination fees related to an assigned lease agreement, and \$2.0 million of general and administrative expenses. These acquisition-related expenses are included in acquisition-related costs in the consolidated statements of income.

The Company expensed \$30.0 million of acquisition-related costs during the year ended December 31, 2018 that included \$23.6 million of compensation-related costs, \$2.7 million of stock-based compensation, \$3.0 million of professional fees, and \$0.6 million of general and administrative expenses. These acquisition-related expenses are included in acquisition-related costs in the consolidated statements of income.

## 6. INVESTMENTS

As of December 31, 2020 and 2019, the Company's investments were comprised of the following (in millions):

	<u>As of December 31,</u>	
	<u>2020</u>	<u>2019</u>
Equity method investments:		
Investment in Signal Trading Systems, LLC .....	\$ 2.0	\$ 12.6
Investment in EuroCCP .....	—	10.3
Total equity method investments .....	<u>2.0</u>	<u>22.9</u>
Other equity investments:		
Investment in Eris Exchange Holdings, LLC .....	20.0	20.8
Investment in American Financial Exchange, LLC .....	10.6	8.6
Investment in Cboe Vest Financial Group, Inc. ....	2.9	2.9
Investment in Eris Digital Holdings, LLC .....	0.8	—
Investment in OCC .....	0.3	0.3
Other equity investments .....	6.1	5.7
Total other equity investments .....	<u>40.7</u>	<u>38.3</u>
Total investments .....	<u>\$ 42.7</u>	<u>\$ 61.2</u>

### *Equity Method Investments*

Equity method investments include investments in Signal Trading Systems, LLC, a 50% joint venture with FlexTrade System, Inc. to develop and market a multi-asset front-end order entry system, and until the third quarter of 2020, EuroCCP, a Dutch domiciled clearinghouse. EuroCCP is one of three interoperable central counterparties, or CCPs, used to clear trades conducted on Cboe Europe Limited's and Cboe Europe NL's markets. As of June 30, 2020, Cboe Europe Limited owned 20% of EuroCCP and was able to exercise significant influence over the entity as an equal shareholder with four other investors. The Company acquired the remaining 80% interest in EuroCCP on July 1, 2020, see Note 5 ("Acquisitions") for more information. Subsequent to the acquisition, the Company accounts for EuroCCP as a wholly-owned subsidiary in the consolidated financial statements.

During the year, the Company commenced an initiative to migrate PULSE, the multi-asset front-end order entry system operated by Signal, and its related activity to Silexx, a wholly-owned subsidiary of the Company. PULSE was decommissioned as of December 31, 2020, and the joint venture with FlexTrade is anticipated to be terminated in the first quarter of 2021. Given the more-likely-than-not expectation that Signal was to be disposed of as of December 31, 2020, the Company concluded that the remaining investment in Signal had no future economic value and was written off in the amount of \$11.0 million as of December 31, 2020. The loss related to the write-off was included within acquisition-related costs in the consolidated statements of income.

### *Other Equity Investments*

The carrying amount of other equity method investments totaled \$40.7 million and \$38.3 million as of December 31, 2020 and 2019, respectively, and is included in investments in the consolidated balance sheets. The Company accounts for these investments using the measurement alternative given the absence of readily determinable fair values for the respective investments and due to the Company's inability to exercise significant influence over the investments based upon the respective ownership interests held. As of December 31, 2020, other equity investments primarily reflect a 20% investment in OCC and minority investments in American Financial Exchange, LLC ("AFX"), CurveGlobal, Cboe Vest Financial Group, Inc. ("Vest"), Eris Exchange Holdings, LLC, and Eris Digital Holdings, LLC.

In January 2016, the Company, through its subsidiary Cboe Vest, LLC ("Cboe Vest"), acquired a majority of the outstanding equity of Vest, an asset investment manager focused on Target Outcome Investment strategies. The purchase price consisted of \$18.9 million in cash, reflecting payments of \$14.9 million to former stockholders and \$4.0 million to Vest for newly issued shares, and represented an ownership interest of 60% resulting in the consolidation of Vest operations. The remaining 40% noncontrolling interest was held by the remaining Vest stockholders. The remaining Vest stockholders had a put option that could have been exercised to Vest and Vest had a call option that could have been exercised to the remaining stockholders. The put and call options could have been exercised after five years though they could have been accelerated by certain employment-related actions. The combination of the noncontrolling interest



and a redemption feature resulted in a redeemable noncontrolling interest, which was classified outside of permanent equity on the consolidated balance sheet. The Company's ownership interest decreased in August 2019 which resulted in the deconsolidation of Vest operations and the elimination of the redeemable noncontrolling interest.

In May 2020, Eris Exchange Holdings, LLC completed a restructuring transaction to spin out Eris Digital Holdings, LLC into a stand-alone entity. The restructuring qualifies as an exchange of ownership interest, though it required no additional consideration exchanged to execute the exchange of units. The restructuring did not result in a change in number of units owned by the Company or a substantial change in the Company's ownership interest percentage. No gain or loss is recognized as a result of the restructuring. The Company's investment in Eris Digital Holdings, LLC is included within "Other equity investments" in the above table.

In August 2020, the Company recorded within acquisition-related costs in the consolidated statements of income an impairment charge of \$4.1 million on its investment in AFX based on management's assessment of the fair value of the investment.

## 7. FINANCIAL INVESTMENTS

The Company's financial investments with original or acquired maturities longer than three months, but that mature in less than one year from the balance sheet date and any money market funds that are considered cash and cash equivalents are classified as current assets. The Company's marketable securities are also classified as current assets within financial investments. The Company's financial investments are summarized as follows (in millions):

	December 31, 2020			
	Cost basis	Unrealized gains	Unrealized losses	Fair Value
Available-for-sale securities:				
U.S. Treasury securities .....	\$ 67.9	\$ —	\$ —	\$ 67.9
Trading securities:				
Marketable securities (1) .....	\$ 24.5	\$ —	\$ —	\$ 24.5
Total financial investments .....	<u>\$ 92.4</u>	<u>\$ —</u>	<u>\$ —</u>	<u>\$ 92.4</u>

	December 31, 2019			
	Cost basis	Unrealized gains	Unrealized losses	Fair Value
Available-for-sale securities:				
U.S. Treasury securities .....	\$ 47.6	\$ —	\$ —	\$ 47.6
Trading securities:				
Marketable securities (1) .....	\$ 23.4	\$ —	\$ —	\$ 23.4
Total financial investments .....	<u>\$ 71.0</u>	<u>\$ —</u>	<u>\$ —</u>	<u>\$ 71.0</u>

(1) The marketable securities are primarily mutual funds maintained for non-qualified retirement and benefit plans, also referred to as deferred compensation plan assets. See Note 18 ("Employee Benefit Plan") for more information.

## 8. PROPERTY AND EQUIPMENT, NET

Property and equipment consisted of the following as of December 31, 2020 and 2019 (in millions):

	December 31, 2020	December 31, 2019
Construction in progress .....	\$ 2.0	\$ 1.2
Furniture and equipment .....	227.1	164.4
Total property and equipment .....	229.1	165.6
Less accumulated depreciation .....	(146.5)	(118.6)
Property and equipment, net .....	<u>\$ 82.6</u>	<u>\$ 47.0</u>

Depreciation expense using the straight-line method was \$26.8 million, \$24.5 million and \$25.1 million for the years ended December 31, 2020, 2019 and 2018, respectively.

As a result of the Merger, there is a reduction in employee workspace needed in Chicago, which led to the decision to market for sale the headquarters location. The Company classified the associated land, building, and certain furniture and

equipment of the headquarters location as held for sale, performed an impairment assessment, and ceased depreciation effective May 1, 2019, as the Company anticipated selling the property held for sale in less than twelve months. As of December 31, 2020, the headquarters location remains on the market for sale and management's intent to sell the property is unchanged, and the total value of the property classified as property held for sale on the consolidated balance sheet was \$13.0 million. As a result of an evaluation of the headquarters location's classification as held for sale during the second quarter of 2020, an impairment assessment was performed and an additional impairment charge of \$8.1 million was recorded in acquisition-related costs within the Options segment in the accompanying consolidated statements of income. The impact of ceasing depreciation of the property held for sale did not result in a material impact to the consolidated financial statements.

## 9. CREDIT LOSSES

Current expected credit losses are estimated for accounts receivable and notes receivable. The notes receivable included within other assets, net on the consolidated balance sheets primarily relate to the consolidated audit trail ("CAT"), which involves the creation of an audit trail that strives to enhance regulators' ability to monitor trading activity in the U.S. markets through a phased implementation. While the funding of the CAT is ultimately expected to be provided by both SROs (which includes the Exchanges) and industry members, until fee filings associated with the funding model are approved by the SEC, the funding to date has solely been provided by the SROs. The funding by the SROs has been done in exchange for promissory notes, which are expected to be repaid once such industry member fees are collected. Until those fees are collected, the SROs may continue to incur additional significant costs. The allowance for notes receivable credit losses associated with the CAT is calculated using a probability of default methodology. Due to the potential changes in the CAT funding model, an additional \$6.7 million was recorded to the allowance for notes receivable for the year ended December 31, 2020. Accounts receivable represent amounts due from the Company's member firms. The allowance for accounts receivable credit losses is calculated using an aging schedule. The following represents the changes in allowance for credit losses for the year ended December 31, 2020:

	Balance at January 1, 2020	Current period provision for expected credit losses	Write-offs charged against the allowance	Recoveries collected	Balance at December 31, 2020
Allowance for notes receivable credit losses .....	\$ 23.4	\$ 6.7	\$ —	\$ —	\$ 30.1
Allowance for accounts receivable credit losses .....	1.1	—	(0.4)	(0.1)	0.6
Total allowance for credit losses .....	<u>\$ 24.5</u>	<u>\$ 6.7</u>	<u>\$ (0.4)</u>	<u>\$ (0.1)</u>	<u>\$ 30.7</u>

## 10. OTHER ASSETS, NET

Other assets, net consisted of the following as of December 31, 2020 and 2019 (in millions):

	December 31, 2020	December 31, 2019
Software development work in progress .....	\$ 8.4	\$ 2.6
Data processing software .....	92.6	84.3
Less accumulated depreciation and amortization .....	(63.5)	(57.2)
Data processing software, net .....	37.5	29.7
Other assets (1) .....	38.8	21.9
Data processing software and other assets, net .....	<u>\$ 76.3</u>	<u>\$ 51.6</u>

(1) At December 31, 2020 and December 31, 2019, the majority of the balance included long-term prepaid assets and notes receivable. See Note 9 ("Credit Losses") for more information on the notes receivable included within other assets, net on the consolidated balance sheets. As of December 31, 2020 and December 31, 2019, the notes receivable, net balance was \$32.6 million and \$9.2 million, respectively.

Amortization expense related to data processing software was \$6.9 million, \$13.5 million, and \$18.9 million for the years ended December 31, 2020, 2019, and 2018.

## 11. GOODWILL AND INTANGIBLE ASSETS, NET

The following table presents the details of goodwill by segment (in millions):

	Options	North American Equities	European Equities	Global FX	Corporate and Other	Total
Balance as of December 31, 2018	\$ 239.4	\$ 1,740.4	\$ 425.6	\$ 267.2	\$ 18.8	\$ 2,691.4
Dispositions	—	—	—	—	(8.3)	(8.3)
Impairment	—	—	—	—	(10.5)	(10.5)
Changes in foreign currency exchange rates	—	—	9.5	—	—	9.5
Balance as of December 31, 2019	\$ 239.4	\$ 1,740.4	\$ 435.1	\$ 267.2	\$ —	\$ 2,682.1
Additions	66.4	134.8	—	—	—	201.2
Changes in foreign currency exchange rates	—	2.1	9.7	—	—	11.8
Balance as of December 31, 2020	\$ 305.8	\$ 1,877.3	\$ 444.8	\$ 267.2	\$ —	\$ 2,895.1

Goodwill has been allocated to specific reporting units for purposes of impairment testing - Options, North American Equities, European Equities and Global FX. No goodwill has been allocated to Futures. Goodwill impairment testing is performed annually in the fiscal fourth quarter or more frequently if conditions exist that indicate that the asset may be impaired.

The following table presents the details of the intangible assets (in millions):

	Options	North American Equities	European Equities	Global FX	Corporate and Other	Total
Balance as of December 31, 2018	\$ 181.9	\$ 990.3	\$ 376.9	\$ 166.9	\$ 4.2	\$ 1,720.2
Additions	—	—	—	—	—	—
Dispositions	—	—	—	—	(3.3)	(3.3)
Amortization	(15.3)	(68.9)	(24.8)	(28.7)	(0.9)	(138.6)
Changes in foreign currency exchange rates	—	—	11.6	—	—	11.6
Balance as of December 31, 2019	\$ 166.6	\$ 921.4	\$ 363.7	\$ 138.2	\$ —	\$ 1,589.9
Additions	22.3	193.1	32.3	—	—	247.7
Amortization	(15.5)	(61.0)	(23.4)	(24.9)	—	(124.8)
Changes in foreign currency exchange rates	—	2.0	14.2	—	—	16.2
Balance as of December 31, 2020	\$ 173.4	\$ 1,055.5	\$ 386.8	\$ 113.3	\$ —	\$ 1,729.0

For the years ended December 31, 2020, 2019 and 2018, amortization expense was \$124.8 million, \$138.6 million and \$160.0 million, respectively. The estimated future amortization expense is \$123.7 million for 2021, \$110.7 million for 2022, \$99.4 million for 2023, \$77.8 million for 2024, and \$67.2 million for 2025.

The following tables present the categories of intangible assets at December 31, 2020 and 2019 (in millions):

	December 31, 2020				Weighted Average Amortization Period (in years)
	Options	North American Equities	European Equities	Global FX	
Trading registrations and licenses	\$ 95.5	\$ 592.0	\$ 219.3	\$ —	Indefinite
Customer relationships	46.6	378.3	175.7	140.0	16
Market data customer relationships	53.6	322.0	65.9	64.4	11
Technology	28.1	41.1	28.6	22.5	5
Trademarks and tradenames	12.9	7.8	2.6	1.2	9
Accumulated amortization	(63.3)	(285.7)	(105.3)	(114.8)	
	\$ 173.4	\$ 1,055.5	\$ 386.8	\$ 113.3	

	Options	December 31, 2019			Weighted Average Amortization Period (in years)
		North American Equities	European Equities	Global FX	
Trading registrations and licenses	\$ 95.5	\$ 572.7	\$ 182.2	\$ —	Indefinite
Customer relationships	38.8	222.9	169.7	140.0	17
Market data customer relationships	53.6	322.0	63.6	64.4	12
Technology	24.8	22.5	23.9	22.5	4
Trademarks and tradenames	1.7	6.0	1.9	1.2	6
Accumulated amortization	(47.8)	(224.7)	(77.6)	(89.9)	
	<u>\$ 166.6</u>	<u>\$ 921.4</u>	<u>\$ 363.7</u>	<u>\$ 138.2</u>	

## 12. ACCOUNTS PAYABLE AND ACCRUED LIABILITIES

Accounts payable and accrued liabilities consisted of the following as of December 31, 2020 and 2019 (in millions):

	December 31, 2020	December 31, 2019
Compensation and benefit related liabilities	\$ 49.1	\$ 35.2
Termination benefits	0.5	6.7
Royalties	17.2	18.6
Accrued liabilities	55.5	29.3
Rebates payable	85.1	48.5
Marketing fee payable	14.1	12.6
Accounts payable	28.5	21.0
Total accounts payable and accrued liabilities	<u>\$ 250.0</u>	<u>\$ 171.9</u>

## 13. DEBT

The Company's debt consisted of the following as of December 31, 2020 and 2019 (in millions):

	December 31, 2020	December 31, 2019
Term Loan Agreement due December 2021, floating rate	\$ 68.7	\$ 222.4
\$500 million fixed rate Senior Notes due December 2030, stated rate of 1.625%	489.3	—
\$650 million fixed rate Senior Notes due January 2027, stated rate of 3.650%	645.9	645.2
Revolving Credit Agreement	—	—
EuroCCP Credit Facility	—	—
Total debt	<u>\$ 1,203.9</u>	<u>\$ 867.6</u>

On July 28, 2020, the Company drew down on the Prior Revolving Credit Agreement (as defined below) in the amount of \$70 million. On December 16, 2020, the Company repaid all of the \$70 million of outstanding indebtedness under the Prior Revolving Credit Agreement by using a portion of the proceeds from the issuance of \$500 million in aggregate principal amount of the 1.625% Senior Notes (as defined below).

On December 16, 2020, the Company repaid \$155 million of outstanding indebtedness under the Term Loan Agreement (as defined below) by using a portion of the proceeds from the issuance of \$500 million in aggregate principal amount of the 1.625% Senior Notes (as defined below).

### **Term Loan Agreement**

On March 22, 2018, the Company, as borrower, entered into a new Term Loan Credit Agreement (the "Term Loan Agreement") with Bank of America, N.A. ("Bank of America"), as administrative agent and initial lender, and the several banks and other financial institutions from time to time party thereto as lenders. Bank of America also acted as sole lead arranger and sole bookrunner with respect to the Term Loan Agreement. The Term Loan Agreement provides for a senior unsecured term loan facility in an aggregate principal amount of \$300 million. The proceeds of the loan under the Term

Loan Agreement were used to repay the \$300 million of outstanding indebtedness under the prior term loan agreement entered into on December 15, 2016.

Loans under the Term Loan Agreement bear interest, at the Company's option, at either (i) the London Interbank Offered Rate ("LIBOR") periodically fixed for an interest period (as selected by the Company) of one, two, three or six months plus a margin (based on the Company's public debt ratings) ranging from 1.00 percent per annum to 1.50 percent per annum or (ii) a daily floating rate based on the agent's prime rate (subject to certain minimums based upon the federal funds effective rate or LIBOR) plus a margin (based on the Company's public debt ratings) ranging from zero percent per annum to 0.50 percent per annum. The Company was required to pay an up-front fee of 0.05 percent to the agent for the entry into the Term Loan Agreement.

The Term Loan Agreement, which matures on December 15, 2021, contains customary representations, warranties and affirmative and negative covenants for facilities of its type, including financial covenants, events of default, including cross-defaults from the Company's other indebtedness, and indemnification provisions in favor of the lenders thereunder. The negative covenants include restrictions regarding the incurrence of liens, the incurrence of indebtedness by the Company's subsidiaries and fundamental changes, subject to certain exceptions in each case. The financial covenants require the Company to meet a quarterly financial test with respect to a minimum consolidated interest coverage ratio of not less than 4.00 to 1.00 and a maximum consolidated leverage ratio of not greater than 3.50 to 1.00. At December 31, 2020, the Company was in compliance with these covenants.

On May 29, 2020, the Company amended the Term Loan Agreement to, among other items, (i) permit liens on assets of the EuroCCP settlement and clearing business that secures indebtedness incurred in support of its settlement and clearing activities, and permit the Company's subsidiaries to incur such indebtedness, provided that such amounts are repaid within 35 days; and (ii) provide that the LIBOR, as used in the Term Loan Agreement, may be succeeded by one or more secured overnight financing rates ("SOFR") published by the Federal Reserve Bank of New York or another alternate benchmark rate giving due consideration to any evolving or then-existing convention for similar agreements

### **Senior Notes**

On January 12, 2017, the Company entered into an indenture (the "Indenture"), by and between the Company and Wells Fargo Bank, National Association, as trustee, in connection with the issuance of \$650 million aggregate principal amount of the Company's 3.650% Senior Notes due 2027 ("3.650% Senior Notes"). The form and terms of the 3.650% Senior Notes were established pursuant to an Officer's Certificate, dated as of January 12, 2017, supplementing the Indenture. The Company used a portion of the net proceeds from the 3.650% Senior Notes to fund, in part, the Merger, including the payment of related fees and expenses and the repayment of Bats' existing indebtedness, and the remainder for general corporate purposes. The 3.650% Senior Notes mature on January 12, 2027 and bear interest at the rate of 3.650% per annum, payable semi-annually in arrears on January 12 and July 12 of each year, commencing July 12, 2017.

On December 15, 2020, the Company issued \$500 million aggregate principal amount of 1.625% Senior Notes due 2030 ("1.625% Senior Notes" and, together with the 3.650% Senior Notes, the "Senior Notes"). The form and terms of the 1.625% Senior Notes were established pursuant to an Officer's Certificate, dated as of December 15, 2020, supplementing the Indenture. The Company used the net proceeds from the 1.625% Senior Notes to finance the acquisition of BIDS Trading, repay a portion of amounts outstanding under the term loan facility and all outstanding indebtedness under the revolving credit facility and the remainder for general corporate purposes, which may include the financing of future acquisitions or the repayment of other outstanding indebtedness. The 1.625% Senior Notes mature on December 15, 2030 and bear interest at the rate of 1.625% per annum, payable semi-annually in arrears on June 15 and December 15 of each year, commencing June 15, 2021.

The Senior Notes are unsecured obligations of the Company and rank equally with all of the Company's other existing and future unsecured, senior indebtedness, but are effectively junior to the Company's secured indebtedness, to the extent of the value of the assets securing such indebtedness, and will be structurally subordinated to the secured and unsecured indebtedness of the Company's subsidiaries.

The Company has the option to redeem some or all of the Senior Notes, at any time in whole or from time to time in part, at the redemption prices set forth in the applicable Officer's Certificate. The Company may also be required to offer to repurchase the Senior Notes upon the occurrence of a Change of Control Triggering Event (as such term is defined in

the applicable Officer's Certificate) at a repurchase price equal to 101% of the aggregate principal amount of Senior Notes to be repurchased.

### ***Indenture***

Under the Indenture, the Company may issue debt securities, which includes the Senior Notes and the 1.625% Senior Notes, at any time and from time to time, in one or more series without limitation on the aggregate principal amount. The Indenture governing the 3.650% Senior Notes and the 1.625% Senior Notes contains customary restrictions, including a limitation that restricts the Company's ability and the ability of certain of the Company's subsidiaries to create or incur secured debt. Such Indenture also limits certain sale and leaseback transactions and contains customary events of default. At December 31, 2020, the Company was in compliance with these covenants.

### ***Revolving Credit Agreement***

On December 21, 2020, the Company, as borrower, entered into an Amended and Restated Credit Agreement (the "Revolving Credit Agreement"), which amended and restated the Prior Revolving Credit Agreement, as defined below, with Bank of America, N.A., as administrative agent and as swing line lender, certain lenders named therein (the "Revolving Lenders"), BOFA Securities, Inc., as sole lead arranger and sole bookrunner and certain syndication agents named therein ("Syndication Agents").

The Revolving Credit Agreement provides for a senior unsecured \$250 million three-year revolving credit facility (the "Revolving Credit Facility") that includes a \$25 million swing line sub-facility. The Company may also, subject to the agreement of the applicable lenders, increase the commitments under the Revolving Credit Facility by up to \$100 million, for a total of \$350 million. Subject to specified conditions, the Company may designate one or more of its subsidiaries as additional borrowers under the Revolving Credit Agreement provided that the Company guarantees all borrowings and other obligations of any such subsidiaries under the Revolving Credit Agreement. As of December 31, 2020, no subsidiaries were designated as additional borrowers.

Funds borrowed under the Revolving Credit Agreement may be used to fund working capital and for other general corporate purposes, including the making of any acquisitions the Company may pursue in the ordinary course of its business. As of December 31, 2020, no borrowings were outstanding under the Revolving Credit Agreement. Accordingly, at December 31, 2020, \$250 million of borrowing capacity was available for the purposes permitted by the Revolving Credit Agreement.

Loans under the Revolving Credit Agreement will bear interest, at the Company's option, at either (i) LIBOR plus a margin (based on the Company's public debt ratings) ranging from .875 percent per annum to 1.50 percent per annum or (ii) a daily floating rate based on the agent's prime rate (subject to certain minimums based upon the federal funds effective rate or LIBOR) plus a margin (based on the Company's public debt ratings) ranging from zero percent per annum to 0.50 percent per annum. The Revolving Credit Agreement includes a mechanism to replace LIBOR with an alternate benchmark rate that includes the forward-looking term rate for any interest period that is based on the SOFR published by the Federal Reserve Bank of New York, as may be adjusted pursuant to the terms of the Revolving Credit Agreement.

Subject to certain conditions stated in the Revolving Credit Agreement, the Company and any subsidiaries designated as additional borrowers may borrow, prepay and reborrow amounts under the Revolving Credit Facility at any time during the term of the Revolving Credit Agreement. The Revolving Credit Agreement will terminate and all amounts owing thereunder will be due and payable on December 21, 2023, unless the commitments are terminated earlier, either at the request of the Company or, if an event of default occurs, by the Revolving Lenders (or automatically in the case of certain bankruptcy-related events). The Revolving Credit Agreement contains customary representations, warranties and affirmative and negative covenants for facilities of its type, including financial covenants, events of default and indemnification provisions in favor of the Revolving Lenders. The negative covenants include restrictions regarding the incurrence of liens, the incurrence of indebtedness by the Company's subsidiaries and fundamental changes, subject to certain exceptions in each case. The financial covenants require the Company to meet a quarterly financial test with respect to a minimum consolidated interest coverage ratio of not less than 4.00 to 1.00 and a maximum consolidated leverage ratio of not greater than 3.50 to 1.00; provided that the consolidated leverage ratio may, subject to certain

triggering events set forth in the Revolving Credit Agreement, be increased to 4.00 to 1.00 for four consecutive fiscal quarters. At December 31, 2020, the Company was in compliance with these covenants.

### ***Prior Revolving Credit Agreement***

On December 15, 2016, the Company, as borrower, entered into a syndicated Credit Agreement (the “Prior Revolving Credit Agreement”) with Bank of America, N.A., as administrative agent and as swing line lender, as well as certain lenders named therein (the “Prior Revolving Lenders”).

The Prior Revolving Credit Agreement provided for a senior unsecured \$150 million five-year revolving credit facility (the “Prior Revolving Credit Facility”) that included a \$25 million swing line sub-facility. The Company may have also, subject to the agreement of the applicable lenders, increased the commitments under the Prior Revolving Credit Facility by up to \$100 million, for a total of \$250 million. Subject to specified conditions, the Company designated one or more of its subsidiaries as additional borrowers under the Prior Revolving Credit Agreement provided that the Company guaranteed all borrowings and other obligations of any such subsidiaries.

Funds borrowed under the Prior Revolving Credit Agreement may have been used to fund working capital and for other general corporate purposes.

Loans under the Prior Revolving Credit Agreement bore interest, at the Company’s option, at either (i) LIBOR periodically fixed for an interest period (as selected by the Company) of one, two, three or six months plus a margin (based on the Company’s public debt ratings) ranging from 1.00 percent per annum to 1.75 percent per annum or (ii) a daily floating rate based on the prime rate (subject to certain minimums based upon the federal funds effective rate or LIBOR) plus a margin (based on the Company’s public debt ratings) ranging from zero percent per annum to 0.75 percent per annum.

The commercial terms of the Prior Revolving Credit Agreement are substantially similar to the Revolving Credit Agreement, other than interest rates and the maturity date. On May 29, 2020, the Company amended the Prior Revolving Credit Agreement to, among other items, (i) permit liens on assets of the EuroCCP settlement and clearing business that secures indebtedness incurred in support of its settlement and clearing activities, and permit the Company’s subsidiaries to incur such indebtedness, provided that such amounts are repaid within 35 days; and (ii) provide that the LIBOR, as used in the Prior Revolving Credit Agreement, may be succeeded by one or more SOFR published by the Federal Reserve Bank of New York or another alternate benchmark rate giving due consideration to any evolving or then-existing convention for similar agreements.

### ***EuroCCP Credit Facility***

On July 1, 2020, EuroCCP, as borrower, the Company, as guarantor, entered into a Facility Agreement (the “Facility”) with Bank of America Merrill Lynch International Designated Activity Company, as co-ordinator, facility agent, lender, sole lead arranger and sole bookrunner, Citibank N.A., as security agent, and certain other lenders named therein.

The Facility provides for a €1.5 billion committed syndicated multicurrency revolving and swingline credit facility (i) that is available to be drawn by EuroCCP (as borrower) towards (a) financing unsettled amounts in connection with the settlement of transactions in securities and other items processed through EuroCCP’s clearing system and (b) financing any other liability or liquidity requirement of EuroCCP incurred in the operation of its clearing system and (ii) under which the scheduled interest and fees on borrowings (but not the principal amount of any borrowings) are guaranteed by the Company. Subject to certain conditions, EuroCCP is able to increase the commitments under the Facility by up to €500 million, to a total of €2.0 billion.

Borrowings under the Facility are secured by cash, eligible government bonds and eligible equity assets deposited by EuroCCP into secured accounts. In addition, EuroCCP must ensure that at all times the aggregate of (a) each clearing participant’s contribution to the relevant clearing fund, (b) each clearing participant’s margin amount and (c) any cash equities purchased using the proceeds of the assets described in (a) and (b), less the amount of any such clearing participant contribution, margin amount or cash equities which have been transferred to (or secured in favor of) any provider of settlement or custody services to EuroCCP, is not less than €500 million. As of December 31, 2020, no borrowings were outstanding under the Facility. Accordingly, at December 31, 2020, €1.5 billion of borrowing capacity was available for the purposes permitted by the Facility.

Borrowings under the Facility's revolving loans and non-U.S. dollar swingline loans bear interest at the relevant floating base rate plus a margin of 1.75 percent per annum and (subject to certain conditions) borrowings under the Facility's U.S. dollar swingline loans bear interest as the higher of the relevant agent's prime commercial lending rate for U.S. dollars and 0.5 percent per annum over the federal funds effective rate. A commitment fee of 0.30 percent per annum is payable on the unused and uncalled amount of the Facility during the availability period.

Subject to certain conditions stated in the Facility, EuroCCP may borrow, prepay and reborrow amounts under the Facility at any time during the term of the Facility. The Facility will terminate and all amounts owing thereunder will be due and payable on 364 days from the date of the agreement, unless the commitments are terminated earlier, either at the request of EuroCCP or, if an event of default occurs, by the Lenders (or automatically in the case of certain bankruptcy-related events).

The Facility contains customary representations, warranties and covenants for facilities of its type, including events of default of the Company and EuroCCP and indemnification provisions in favor of the Lenders. In particular, the covenants include restrictions regarding the incurrence of liens by EuroCCP and its subsidiaries, and an event of default will be triggered if EuroCCP ceases its business, subject to certain exceptions in each case. There is also a requirement for the net worth of (a) the Company to be no less than \$1.75 billion on the date of each drawdown and delivery of compliance certificates and (b) EuroCCP to be the higher of €24 million and any such amount required for EuroCCP to meet minimum liquidity regulations under applicable regulation at all times. At December 31, 2020, the Company and EuroCCP were in compliance with these covenants.

### **Loan and Notes Payments and Contractual Interest**

The future expected loan repayments related to the Term Loan Agreement and the Senior Notes as of December 31, 2020 are as follows (in millions):

2021.....	\$ 70.0
2022.....	—
2023.....	—
2024.....	—
Thereafter .....	<u>1,150.0</u>
Principal amounts repayable .....	1,220.0
Debt issuance costs .....	(6.4)
Unamortized discounts on notes .....	<u>(9.7)</u>
Total debt outstanding .....	<u>\$ 1,203.9</u>

Interest expense recognized on the Term Loan Agreement, the Senior Notes, and the Revolving Credit Agreement is included in interest expense, net in the consolidated statements of income. The Company is also obligated to pay commitment fees under the terms of the Facility and Revolving Credit Agreement which are also included in interest expense, net. Interest expense, net recognized in the consolidated statements of income for the years ended December 31, 2020, 2019 and 2018 are as follows (in millions):

	<u>Year Ended December 31, 2020</u>	<u>Year Ended December 31, 2019</u>	<u>Year Ended December 31, 2018</u>
Components of interest expense:			
Contractual interest.....	\$ 35.3	\$ 35.6	\$ 38.0
Amortization of debt discount and issuance costs .....	<u>3.4</u>	<u>2.2</u>	<u>2.5</u>
Interest expense .....	\$ 38.7	\$ 37.8	\$ 40.5
Interest income .....	<u>(1.1)</u>	<u>(1.9)</u>	<u>(2.3)</u>
Interest expense, net.....	<u>\$ 37.6</u>	<u>\$ 35.9</u>	<u>\$ 38.2</u>



## 14. ACCUMULATED OTHER COMPREHENSIVE INCOME, NET

The following represents the changes in accumulated other comprehensive income (loss) by component (in millions):

	Foreign currency translation adjustment	Unrealized Investment Gain/Loss	Post-Retirement Benefits	Total Other Comprehensive Income
Balance at December 31, 2018 . . . . .	\$ 12.1	\$ 0.2	\$ (0.8)	\$ 11.5
Other comprehensive income . . . . .	26.1	—	—	26.1
Balance at December 31, 2019 . . . . .	\$ 38.2	\$ 0.2	\$ (0.8)	\$ 37.6
Other comprehensive income (loss) . . . . .	36.5	(0.3)	1.2	37.4
Balance at December 31, 2020 . . . . .	<u>\$ 74.7</u>	<u>\$ (0.1)</u>	<u>\$ 0.4</u>	<u>\$ 75.0</u>

## 15. CLEARING OPERATIONS

EuroCCP is a European equities central counterparty that provides post-trade services to stock exchanges, MTFs and for over-the-counter (“OTC”) equities trades. EuroCCP clears equities from eighteen European markets and from the United States, as well as Depositary Receipts, ETFs, and exchange traded currencies (“ETCs”). Through a novation process, EuroCCP becomes the buyer for every seller and the seller for every buyer, thereby protecting clearing participants from counterparty risk and allowing the settlement of trades in the event of a clearing participant default.

EuroCCP only assumes the guarantor role if it has an equal and offsetting claim against a clearing participant. During the period from July 1, 2020, the date the Company acquired EuroCCP, through December 31, 2020, there were no events of default for which a liability is required to be recognized in accordance with GAAP.

### ***Clearing Participant Deposits***

EuroCCP generally requires all clearing participants to deposit collateral to help mitigate EuroCCP’s exposure to credit risk in the event that a clearing participant fails to meet a financial or contractual obligation.

#### *Margin Deposits*

Margin deposits, which are predominately in the form of cash and cash equivalents, are deposits made by each clearing participant to EuroCCP to cover some or all of the credit risk of its failure to fulfill its obligations in the trade. EuroCCP maintains and manages all cash deposits related to margin deposits. Substantially all risks and rewards of margin deposit ownership, including net interest income, belong to EuroCCP and are recorded in other revenue on the consolidated statements of income. In the event of a default, EuroCCP can access the defaulting participant’s margin deposits to cover the defaulting participant’s losses. For more information, see “Default and Liquidity Waterfalls” below.

#### *Clearing Funds*

The clearing fund mutualizes the risk of default among all clearing participants. The entire clearing fund is available to cover potential losses in the event that the margin deposits and the clearing fund deposits of a defaulting clearing participant are inadequate to fulfill that clearing participant’s outstanding financial obligations. In the event of a default, EuroCCP is generally required to liquidate the defaulting clearing participant’s open positions. To the extent that the positions remain open, EuroCCP is required to assume the defaulting clearing participant’s obligations related to the open positions. Clearing participants are required to make contributions to the clearing fund that are proportional to their risk exposure in the form of cash or non-cash contributions, which generally consist of highly liquid securities.

#### *Interoperability Fund*

EuroCCP has entered into interoperable arrangements with two other central counterparties (“CCPs”). Under these arrangements, margin is required to and from the other CCPs and is deposited in an interoperability fund. The interoperability fund consists of collateral pledged by EuroCCP to the other interoperable CCPs, to cover margin calls EuroCCP received from other interoperable CCPs. For EuroCCP, the collateral pledged by the clearing participants is maintained in an interoperability fund designated account. EuroCCP does not have any economic interest or ownership in the collateral; therefore, these balances are not included in the consolidated balance sheet.

As of December 31, 2020, total clearing participant contributions were as follows:

	December 31, 2020		
	Cash Contributions	Non-Cash Contributions (1) (in millions)	Total Contributions
Margin deposits .....	\$ 319.5	\$ 401.0	\$ 720.5
Clearing funds .....	492.6	69.7	562.3
Interoperability funds (1) .....	378.5	175.2	553.7
Total .....	<u>\$ 1,190.6</u>	<u>\$ 645.9</u>	<u>\$ 1,836.5</u>

(1) These amounts are not reflected in the consolidated balance sheet, as EuroCCP does not take economic ownership of these balances.

### **Default and Liquidity Waterfalls**

The default waterfall is the priority order in which the capital resources are expected to be utilized in the event of a default where the defaulting clearing participant's collateral would not be sufficient to cover the cost to liquidate its portfolio. If a default occurs and the defaulting clearing participant's collateral, including margin deposits, clearing fund deposits, and pledged assets into the interoperability fund, are depleted, then additional capital is utilized in the following order:

- EuroCCP capital: The EuroCCP default waterfall first utilizes its own dedicated resources ahead of clearing fund contributions of non-defaulting clearing participants, up to 25% of EuroCCP capital requirements discussed in Note 19 ("Regulatory Capital").
- Clearing fund: Second, the EuroCCP default waterfall utilizes traditional CCP risk mutualization, in the event the default is larger than the allocable EuroCCP capital amount.
- Pro Rata Contributions: Third, if the losses caused cannot be covered by the first two layers, the non-defaulting clearing participants shall on demand make additional payments to EuroCCP on a pro rata basis in proportion to the amount of their contributions to cover any such remaining losses, which is limited to an amount equal to the amount of their contribution as established under EuroCCP's rules and regulations.

In addition to the default waterfall, the liquidity waterfall is the priority order in which the liquidity resources are expected to be utilized for EuroCCP's ordinary course business operations and in situations when additional liquidity resources and liquidity measures may be activated in case of a potential liquidity shortfall. Liquidity, intraday or overnight, is mainly required for securities settlement. In ordinary course business circumstances, liquidity resources include the collateral directly deposited with EuroCCP, FX swap arrangements, and reverse repurchase agreements, as well as the use of the Facility.

## **16. FAIR VALUE MEASUREMENT**

Fair value is the price that would be received upon the sale of an asset or paid upon the transfer of a liability in an orderly transaction between market participants at the measurement date and in the principal or most advantageous market for that asset or liability. The fair value should be calculated based on assumptions that market participants would use in pricing the asset or liability, not on assumptions specific to the entity. In addition, the fair value of liabilities should include consideration of non-performance risk, including the Company's own credit risk.

The Company applied FASB ASC 820— *Fair Value Measurement and Disclosure*, which provides guidance for using fair value to measure assets and liabilities by defining fair value and establishing the framework for measuring fair value. ASC 820 applies to financial and nonfinancial instruments that are measured and reported on a fair value basis. The three-level hierarchy of fair value measurements is based on whether the inputs to those measurements are observable or unobservable. Observable inputs reflect market data obtained from independent sources, while unobservable inputs reflect the Company's market assumptions. The fair-value hierarchy requires the use of observable market data when available and consists of the following levels:

- Level 1—Unadjusted inputs based on quoted markets for identical assets or liabilities.
- Level 2—Observable inputs, either direct or indirect, not including Level 1, corroborated by market data or based upon quoted prices in non-active markets.

- Level 3—Unobservable inputs that reflect management’s best assumptions of what market participants would use in valuing the asset or liability.

The Company has included a tabular disclosure for financial assets and liabilities that are measured at fair value on a recurring basis in the consolidated balance sheet as of December 31, 2020 and 2019, respectively.

### Assets and Liabilities Measured at Fair Value on a Recurring Basis

The following tables present the Company’s fair value hierarchy for those assets and liabilities measured at fair value on a recurring basis as of December 31, 2020 and 2019 (in millions):

	December 31, 2020			
	Total	Level 1	Level 2	Level 3
<b>Assets:</b>				
U.S. Treasury securities . . . . .	\$ 67.9	\$ 67.9	\$ —	\$ —
Marketable securities:				
Mutual funds . . . . .	15.9	15.9	—	—
Money market funds . . . . .	8.6	8.6	—	—
Total assets . . . . .	<u>\$ 92.4</u>	<u>\$ 92.4</u>	<u>\$ —</u>	<u>\$ —</u>
<b>Liabilities:</b>				
Contingent consideration liabilities . . . . .	\$ 32.7	\$ —	\$ —	\$ 32.7
Total Liabilities . . . . .	<u>\$ 32.7</u>	<u>\$ —</u>	<u>\$ —</u>	<u>\$ 32.7</u>
	December 31, 2019			
	Total	Level 1	Level 2	Level 3
<b>Assets:</b>				
U.S. Treasury securities . . . . .	\$ 47.6	\$ 47.6	\$ —	\$ —
Marketable securities:				
Mutual funds . . . . .	15.7	15.7	—	—
Money market funds . . . . .	7.7	7.7	—	—
Total assets . . . . .	<u>\$ 71.0</u>	<u>\$ 71.0</u>	<u>\$ —</u>	<u>\$ —</u>
<b>Liabilities:</b>				
Contingent consideration liabilities . . . . .	\$ 2.2	\$ —	\$ —	\$ 2.2
Total Liabilities . . . . .	<u>\$ 2.2</u>	<u>\$ —</u>	<u>\$ —</u>	<u>\$ 2.2</u>

The following is a description of the Company’s valuation methodologies used for instruments measured at fair value on a recurring basis:

### Financial Investments

Financial investments consist of highly liquid U.S. Treasury securities and marketable securities held in a rabbi trust for the Company’s non-qualified retirement and benefit plans, also referred to as deferred compensation plan assets. The deferred compensation plan assets have an equal and offsetting deferred compensation plan liability based on the value of the deferred compensation plan assets. These securities are valued by obtaining feeds from a number of live data sources, including active market makers and inter-dealer brokers and therefore categorized as Level 1. See Note 18 (“Employee Benefit Plan”) for more information.

### Contingent Consideration Liability

In connection with the acquisitions of Hanweck and MATCHNow, as well as the acquisition of assets of FT Options and Trade Alert, the Company entered into contingent consideration arrangements with the former owners. The total fair value of the liabilities at December 31, 2020 was \$32.7 million. That value is based on the Company’s estimate of the likelihood that certain performance targets in the respective acquisition agreements are expected to be accomplished. Because the fair value measurements relating to the contingent consideration liabilities are subject to management judgment, measurement uncertainty is inherent in the valuation of the contingent consideration liabilities as of the reporting date. Based on the recorded balance of the liabilities, any measurement uncertainty related to this Level 3 measurement is immaterial as of December 31, 2020.

## Assets and Liabilities Measured at Fair Value on a Nonrecurring Basis

Certain assets, such as goodwill and intangible assets, are measured at fair value on a non-recurring basis. For goodwill, the process involves using a market approach and income approach (using discounted estimated cash flows) to determine the fair value of each reporting unit on a stand-alone basis. That fair value is compared to the carrying amount of the reporting unit, including its recorded goodwill. In connection with the annual impairment evaluation of goodwill and indefinite life intangibles, impairment is considered to have occurred if the fair value of the reporting unit is lower than the carrying amount of the reporting unit. For the intangible assets, the process also involves using a discounted cash flow method to determine the fair value of each intangible asset. Impairment is considered to have occurred if the fair value of the intangible asset is lower than its carrying amount. These measurements are considered Level 3 and these assets are recognized at fair value if they are deemed to be impaired.

Equity investments without readily determinable fair values that are valued using the measurement alternative are measured at fair value on a non-recurring basis. See Note 6 (“Investments”) for more information.

Property held for sale as of December 31, 2020 was measured at fair value, less selling costs at December 31, 2020. See Note 8 (“Property and Equipment, Net”) for more information on property held for sale.

### Fair Value of Assets and Liabilities

The following table presents the Company’s fair value hierarchy for certain assets and liabilities held by the Company as of December 31, 2020 and 2019 (in millions):

	December 31, 2020			
	Total	Level 1	Level 2	Level 3
<b>Assets:</b>				
U.S. Treasury securities . . . . .	\$ 67.9	\$ 67.9	\$ —	\$ —
Deferred compensation plan assets . . . . .	24.5	24.5	—	—
Total assets . . . . .	<u>\$ 92.4</u>	<u>\$ 92.4</u>	<u>\$ —</u>	<u>\$ —</u>
<b>Liabilities:</b>				
Contingent consideration liabilities . . . . .	\$ 32.7	\$ —	\$ —	\$ 32.7
Deferred compensation plan liabilities . . . . .	24.5	24.5	—	—
Debt . . . . .	1,319.1	—	1,319.1	—
Total liabilities . . . . .	<u>\$ 1,376.3</u>	<u>\$ 24.5</u>	<u>\$ 1,319.1</u>	<u>\$ 32.7</u>
	December 31, 2019			
	Total	Level 1	Level 2	Level 3
<b>Assets:</b>				
U.S. Treasury securities . . . . .	\$ 47.6	\$ 47.6	\$ —	\$ —
Deferred compensation plan assets . . . . .	23.4	23.4	—	—
Total assets . . . . .	<u>\$ 71.0</u>	<u>\$ 71.0</u>	<u>\$ —</u>	<u>\$ —</u>
<b>Liabilities:</b>				
Contingent consideration liabilities . . . . .	\$ 2.2	\$ —	\$ —	\$ 2.2
Deferred compensation plan liabilities . . . . .	23.4	23.4	—	—
Debt . . . . .	867.6	—	867.6	—
Total liabilities . . . . .	<u>\$ 893.2</u>	<u>\$ 23.4</u>	<u>\$ 867.6</u>	<u>\$ 2.2</u>

Certain financial assets and liabilities, including cash and cash equivalents, accounts receivable, income tax receivable, accounts payable and Section 31 fees payable, are not measured at fair value on a recurring basis, but the carrying values approximate fair value due to their liquid or short-term nature.

### Debt

The debt balance consists of fixed rate, Senior Notes and a floating rate, Term Loan Agreement. The fair values of the Senior Notes were classified as Level 2 under the fair value hierarchy and were estimated using prevailing market quotes. The fair value of the Term Loan Agreement approximates the carrying amount and is considered a Level 2 measurement.

At December 31, 2020, the fair values of the Company's debt obligations were as follows:

	<u>Fair Value</u> (in millions)
Term Loan Agreement .....	\$ 70.0
3.650% Senior Notes .....	744.0
1.625% Senior Notes .....	505.1

### **Information on Level 3 Financial Liabilities**

The following table sets forth a summary of changes in the fair value of the Company's Level 3 financial liabilities during the year ended December 31, 2020 and 2019:

<u>Level 3 Financial Liabilities for the Year Ended December 31, 2020</u>					
	<u>Balance at</u> <u>Beginning of</u> <u>Period</u>	<u>Realized (gains)</u> <u>losses during</u> <u>period</u>	<u>Additions</u>	<u>Settlements</u>	<u>Balance at</u> <u>End of Period</u>
Liabilities					
Contingent consideration liabilities .....	\$ 2.2	\$ —	\$ 32.7	\$ (2.2)	\$ 32.7
Total Liabilities .....	<u>\$ 2.2</u>	<u>\$ —</u>	<u>\$ 32.7</u>	<u>\$ (2.2)</u>	<u>\$ 32.7</u>
<u>Level 3 Financial Liabilities for the Year Ended December 31, 2019</u>					
	<u>Balance at</u> <u>Beginning of</u> <u>Period</u>	<u>Realized (gains)</u> <u>losses during</u> <u>period</u>	<u>Additions</u>	<u>Settlements</u>	<u>Balances at</u> <u>End of Period</u>
Liabilities					
Contingent consideration liabilities .....	\$ 3.9	\$ 2.6	\$ —	\$ (4.3)	\$ 2.2
Total Liabilities .....	<u>\$ 3.9</u>	<u>\$ 2.6</u>	<u>\$ —</u>	<u>\$ (4.3)</u>	<u>\$ 2.2</u>

## **17. SEGMENT REPORTING**

The Company reports five business segments: Options, North American Equities, Futures, European Equities, and Global FX, which is reflective of how the Company's chief operating decision-maker reviews and operates the business, as discussed in Note 1 ("Nature of Operations"). Segment performance is primarily evaluated based on operating income (loss). The Company's chief operating decision-maker does not use segment-level assets or income and expenses below operating income (loss) as key performance metrics; therefore, such information is not presented below. The Company has aggregated all of its corporate costs, as well as other business ventures, within the Corporate Items and Eliminations totals based on the decision that those activities should not be used to evaluate the operating performance of the segments; however, operating expenses that relate to activities of a specific segment have been allocated to that segment.

**Options.** The Options segment includes listed options on market indices ("index options"), as well as on the stocks of individual corporations ("equity options") and options on ETPs, such as exchange-traded funds ("ETFs") and exchange-traded notes ("ETNs"), which are "multi-listed" options and listed on a non-exclusive basis. These options trade on Cboe Options, C2 Options, BZX Options, and EDGX Options, all U.S. national security exchanges. Cboe Options is the Company's primary options market and offers trading in listed options through a single system that integrates electronic trading and traditional open outcry trading on the Cboe Options trading floor in Chicago. There was a temporary suspension of open outcry trading between March 13, 2020 and June 14, 2020 in response to the COVID-19 pandemic. C2 Options, BZX Options, and EDGX Options are all-electronic options exchanges, and typically operate with different market models and fee structures than Cboe Options. The Options segment also includes applicable market data revenue generated from the consolidated tape plans, the licensing of proprietary options market data, index licensing, and access and capacity services.

**North American Equities (formerly U.S. Equities).** The North American Equities segment includes listed U.S. equities and ETP transaction services that occur on fully electronic exchanges owned and operated by BZX Equities, BYX Equities, EDGX Equities, and EDGA Equities and Canadian equities and other transaction services that occur on or through the MATCHNow ATS. This segment was previously referred to as the U.S. Equities segment, but has been updated as a result of the acquisition of MATCHNow, which provides Canadian equities and other transaction services. In

addition, in connection with the closing of the acquisition of BIDS Trading, starting January 1, 2021, this segment also includes equities transactions that occur on the BIDS Trading platforms. The North American Equities segment also includes ETP listings on BZX, the Cboe Global Markets, Inc. common stock listing, applicable market data revenue generated from the consolidated tape plans, the licensing of proprietary equities market data, routing services, access and capacity services and advertising activity from ETF.com.

**Futures.** The Futures segment includes transaction service provided by the Company's fully electronic futures exchange, CFE, which includes offerings for trading VIX futures and other futures products, the licensing of proprietary market data, as well as access and capacity services.

**European Equities.** The European Equities segment includes the pan-European listed equities transaction services, ETPs, exchange traded commodities, and international depository receipts that are hosted on MTFs operated by Cboe Europe Equities. It also includes the ETP listings business on RMs and clearing activities of EuroCCP. Cboe Europe Equities operates lit and dark books, a periodic auctions book, and a Large-in-Scale ("LIS") trading negotiation facility. Cboe NL, launched in October 2019, operates similar business functionality to that offered by Cboe Europe, and provides for trading only in European Economic Area symbols. Cboe Europe Equities also includes revenue generated from the licensing of proprietary market data and from access and capacity services.

**Global FX.** The Global FX segment includes institutional FX trading services that occur on the Cboe FX fully electronic trading platform, non-deliverable forward FX transactions ("NDFs") offered for execution on Cboe SEF and Cboe Swiss, as well as revenue generated from the licensing of proprietary market data and from access and capacity services.

Summarized financial data of reportable segments was as follows (in millions):

	Options	North American Equities	Futures	European Equities	Global FX	Corporate items and eliminations	Total
<b>Year ended December 31, 2020</b>							
Revenues .....	\$ 1,330.1	\$ 1,789.5	\$ 109.2	\$ 140.5	\$ 57.8	\$ —	\$ 3,427.1
Operating income (loss) .....	430.4	159.5	53.8	33.5	6.0	(21.0)	662.2
<b>Year ended December 31, 2019</b>							
Revenues .....	\$ 983.1	\$ 1,213.1	\$ 135.9	\$ 110.8	\$ 53.0	\$ 0.2	\$ 2,496.1
Operating income (loss) .....	334.3	132.5	83.1	20.3	(4.9)	(28.1)	537.2
<b>Year ended December 31, 2018</b>							
Revenues .....	\$ 1,057.5	\$ 1,373.1	\$ 149.8	\$ 131.6	\$ 56.4	\$ 0.4	\$ 2,768.8
Operating income (loss) .....	390.9	140.5	85.7	24.1	(11.7)	(30.1)	599.4

## 18. EMPLOYEE BENEFIT PLAN

Employees are eligible to participate in the Cboe Options SMART Plan ("SMART Plan"). The SMART Plan is a defined contribution plan, which is qualified under Internal Revenue Code Section 401(k). In addition, eligible employees may participate in the Supplemental Employee Retirement Plan, Executive Retirement Plan and Deferred Compensation Plan. Effective January 1, 2017, the Executive Retirement Plan is closed to new executive officers and employees. Each plan is a defined contribution plan that is non-qualified under the Internal Revenue Code. The Deferred Compensation Plan assets, held in a rabbi trust, are subject to the claims of general creditors of the Company and totaled \$24.5 million at December 31, 2020. Although the value of the plans are recorded in financial investments on the consolidated balance sheets, there are equal and offsetting liabilities in other non-current liabilities. The investment results of these plans have no impact on net income as the investment results are recorded in equal amounts to both other expense, net and compensation and benefits expense in the consolidated statements of income. The Company contributed \$10.5 million, \$11.3 million, and \$12.4 million to the defined contribution plans for the years ended December 31, 2020, 2019, and 2018, respectively. This expense is included in compensation and benefits in the consolidated statements of income.

For employees of Cboe Europe Limited, the Company contributes to an employee-selected stakeholder contribution plan. The Company's contribution amounted to \$0.8 million, \$0.7 million, and \$0.4 million for the years ended December 31, 2020, 2019, and 2018, respectively. This expense is included in compensation and benefits in the consolidated statements of income.

For employees of EuroCCP, the Company contributes to an employee selected stakeholder contribution plan. The Company's contribution amounted to \$0.8 million for the year ended December 31, 2020. This expense is included in compensation and benefits in the consolidated statements of income.

Following the Company's acquisition of MATCHNow, Cboe elected to establish a Cboe Canadian Retirement Plan which is available to all Canadian Cboe employees, and now includes BIDS employees. The Cboe Canadian Retirement Plan was implemented with an effective date of January 1, 2021. The Cboe Canadian Retirement Plan is a defined contribution plan, delivered by Mercer and Desjardins Financial Security Life Insurance Company. It features a registered retirement savings plan ("RRSP"). BIDS U.S. employees participate in the SMART Plan, effective as of January 1, 2021.

## 19. REGULATORY CAPITAL

As a broker dealer registered with the SEC, Cboe Trading and BIDS Trading are subject to the SEC's Uniform Net Capital Rule ("Rule 15c3-1"), which requires the maintenance of minimum net capital, as defined therein. The SEC's requirement also provides that equity capital may not be withdrawn or a cash dividend paid if certain minimum net capital requirements are not met. Cboe Trading and BIDS compute the net capital requirements under the basic method provided for in Rule 15c3-1.

As of December 31, 2020, Cboe Trading is required to maintain net capital equal to the greater of 6.67% of aggregate indebtedness items, as defined, or \$0.1 million. At December 31, 2020, Cboe Trading had net capital of \$15.0 million, which was \$13.9 million in excess of its required net capital of \$1.1 million.

As of December 31, 2020, BIDS Trading is required to maintain net capital equal to the greater of 6.67% of aggregate indebtedness items, as defined, or \$0.1 million. At December 31, 2020 BIDS had net capital of \$13.6 million, which was \$13.5 million in excess of its required net capital of \$0.1 million.

As entities regulated by the FCA, Cboe Europe is subject to the Financial Resource Requirement ("FRR") and Cboe Chi-X Europe is subject to the Capital Resources Requirement ("CRR"). As a RIE, Cboe Europe computes its FRR in accordance with its Financial Risk Assessment, as agreed by the FCA. This FRR was \$24.0 million at December 31, 2020. At December 31, 2020, Cboe Europe had capital in excess of its required FRR of \$28.8 million.

In accordance with the Markets in Financial Instruments Directive of the FCA requirements, Cboe Chi X Europe computes its CRR as the greater of the base requirement of \$0.1 million as of December 31, 2020, or the summation of the credit risk, market risk and fixed overheads requirements, as defined. As of December 31, 2020, Cboe Chi X Europe had \$0.3 million capital in excess of its required CRR. Cboe Chi-X Europe Limited is currently dormant having ceased offering its routing service in November 2018.

On March 8, 2019, Cboe Europe NL received approval from the Dutch Ministry of Finance to operate a RM, a MTF, and an approved publication arrangement in the Netherlands. As a RM, Cboe Europe NL is subject to minimum capital requirements, as established by the Dutch Ministry of Finance in the license of March 8, 2019. As of December 31, 2020, the minimum capital requirement calculated in accordance with the license was \$5.3 million. At December 31, 2020, Cboe Europe NL had capital in excess of its requirement of \$1.4 million.

On April 1, 2014, EuroCCP was granted authorization under European Market Infrastructure Regulation ("EMIR") by the National Competent Authority, DNB. EuroCCP is required by the EMIR, to maintain a minimum amount of capital to reflect an estimate of the capital required to wind down or restructure the activities of the clearinghouse, cover operational, legal and business risks and to reserve capital to meet credit, counterparty and market risks not covered by the clearing participants' collateral and clearing funds. As of December 31, 2020, EuroCCP's net capital was \$48.2 million, which was \$17.2 million in excess of its EMIR capital requirement of \$31.0 million.

The IIROC sets and monitors regulatory capital requirements for MATCHNow to protect its clients and counterparties. MATCHNow is required to maintain a prescribed minimum level of risk adjusted capital ("RAC") of \$0.2 million in accordance with such requirements as IIROC may from time to time prescribe. As of December 31, 2020, MATCHNow had RAC of \$2.2 million, which was \$2.0 million in excess of its required RAC of \$0.2 million.

As a designated contract market regulated by the CFTC, CFE is required to meet two capital adequacy tests: (i) its financial resources must be equal to at least twelve months of its projected operating costs and (ii) its unencumbered, liquid financial assets, which may include a line of credit, must be equal to at least six months of its projected operating costs. As of December 31, 2020, CFE had annual projected operating expenses of \$52.1 million and had financial resources that exceeded this amount. Additionally, as of December 31, 2020, CFE had projected operating expenses for the upcoming six months of \$26.1 million and had unencumbered, liquid financial assets, including a line of credit from Cboe, that exceeded this amount.

As a swap execution facility regulated by the CFTC, Cboe SEF is required to meet two capital adequacy tests: (i) its financial resources must be equal to at least twelve months of its projected operating costs and (ii) its unencumbered, liquid financial assets must be equal to at least six months of its projected operating costs. As of December 31, 2020, Cboe SEF had annual projected operating expenses of \$0.8 million and had financial resources that exceeded this amount. Additionally, as of December 31, 2020, Cboe SEF had projected operating expenses for the upcoming six months of \$0.4 million and had unencumbered, liquid financial assets that exceeded this amount.

## 20. STOCK-BASED COMPENSATION

Stock-based compensation is based on the fair value of the award on the date of grant, which is recognized over the related service period, net of actual forfeitures. The service period is the period over which the related service is performed, which is generally the same as the vesting period. Vesting may be accelerated for certain officers and employees as a result of attaining certain age and service-based requirements in the Company's long-term incentive plan and award agreements.

The Company recognized stock-based compensation expense of \$21.7 million, \$21.8 million, and \$35.1 million, for the years ended December 31, 2020, 2019, and 2018 respectively. Stock-based compensation expense is included in compensation and benefits and acquisition-related costs in the consolidated statements of income.

The activity in the Company's stock options and restricted stock, consisting of restricted stock awards ("RSAs"), restricted stock units ("RSUs"), and performance-based restricted stock units ("PSUs"), was as follows:

### Stock Options

Summary stock option activity is presented below:

	Number of Shares	Weighted Average Exercise Price
Outstanding, December 31, 2018	369,483	\$ 26.40
Exercised	358,649	26.63
Outstanding, December 31, 2019	10,834	\$ 18.59
Exercised	10,834	18.59
Outstanding and exercisable December 31, 2020	—	\$ —

The total intrinsic value of stock options exercised was \$0.9 million and \$26.0 million for the years ended December 31, 2020 and 2019, respectively.

### RSAs and RSUs

The following table summarizes RSA and RSU activity during the year ended December 31, 2020:

	Number of shares	Weighted average grant date fair value
Nonvested stock at December 31, 2019	436,013	\$ 91.58
Granted	193,912	115.89
Vested	(272,258)	88.32
Forfeited	(15,585)	106.70
Nonvested stock at December 31, 2020	342,082	\$ 108.40

RSAs granted to non-employee members of the board of directors have a one-year vesting period and vesting accelerates upon the occurrence of a change in control of the Company. Unvested portions of the RSAs will be forfeited if the director leaves the Company prior to the applicable vesting date. The RSAs have voting rights and entitle the holder to receive dividends.

RSUs entitle the holder to one share of common stock upon vesting, typically vest over a three year period, and vesting accelerates upon the occurrence of a change in control or a termination of employment following a change in



control or in the event of a participant's earlier death or disability. Vesting will also accelerate upon a qualified retirement. Qualified retirement eligibility occurs once achieving 55 years of age and 10 years of service for grants awarded in and after 2017. Unvested RSUs will be forfeited if the officer, or employee leaves the Company prior to the applicable vesting date, except in limited circumstances. The RSUs have no voting rights but entitle the holder to receive dividend equivalents.

In connection with the Merger, each award of restricted Bats common stock ("Bats restricted shares") granted under any of the Bats Plans that was unvested immediately prior to the effective time of the Merger was assumed by the Company and converted into an award of restricted shares of the Company's common stock, subject to the same terms and conditions (including vesting schedule) that applied to the applicable Bats restricted shares immediately prior to the effective time of the Merger (but taking into account any changes, including any acceleration of vesting of such Bats restricted shares, occurring by reason provided for in the agreement related to the Merger).

In the year ended December 31, 2020, to satisfy employees' tax obligations upon the vesting of restricted stock, the Company purchased 100,466 shares of common stock totaling \$11.8 million as the result of the vesting of 272,258 shares of restricted stock.

### **PSUs**

The following table summarizes restricted stock unit contingent upon achievement of performance conditions, or PSU, activity during the year ended December 31, 2020:

	<u>Number of Shares</u>	<u>Weighted Average Grant Date Fair Value</u>
Nonvested stock at December 31, 2019 .....	132,248	\$ 107.21
Granted .....	72,975	125.62
Vested .....	(48,053)	108.91
Forfeited .....	<u>(34,504)</u>	<u>109.85</u>
Nonvested stock at December 31, 2020 .....	<u>122,666</u>	<u>\$ 115.18</u>

PSUs include awards related to earnings per share during the performance period as well as awards related to total shareholder return during the performance period. The Company used the Monte Carlo valuation model method to estimate the fair value of the total shareholder return PSUs which incorporated the following assumptions: risk-free interest rate (1.36)%, three-year volatility (21.0)% and three-year correlation with S&P 500 Index (0.25). Each of these performance shares has a performance condition under which the number of units ultimately awarded will vary from 0% to 200% of the original grant, with each unit representing the contingent right to receive one share of the Company's common stock. The vesting period for the PSUs contingent on the achievement of performance conditions is three years. For each of the performance awards, the PSUs will be settled in shares of the Company's common stock following vesting of the PSU assuming that the participant has been continuously employed during the vesting period, subject to acceleration in the event of a change in control of the Company, or a termination of employment following a change in control, or in the event of a participant's earlier death or disability. Participants have no voting rights with respect to the PSUs until the issuance of the shares of common stock. Dividends are accrued by the Company and will be paid once the PSUs contingent on the achievement of performance conditions vest.

In the year ended December 31, 2020, to satisfy employees' tax obligations upon the vesting of performance stock, the Company purchased 19,456 shares of common stock totaling \$2.4 million as the result of the vesting of 48,053 shares of performance stock.

As of December 31, 2020, there were \$21.8 million in total unrecognized compensation costs related to restricted stock, restricted stock units, and performance stock units. These costs are expected to be recognized over a weighted average period of 1.7 years.

### **Employee Stock Purchase Plan**

In May 2018, the Company's stockholders approved the Employee Stock Purchase Plan, ("ESPP"), under which a total of 750,000 shares of the Company's common stock will be made available for purchase to employees. The ESPP is a broad-based plan that permits the Company's employees to contribute up to 10% of wages and base salary to purchase shares of our common stock at a discount, subject to applicable annual Internal Revenue Service limitations. Under the

ESPP, a participant may not purchase more than a maximum of 312 shares of the Company's common stock during any single offering period. No participant may accrue options to purchase shares of the Company's common stock at a rate that exceeds \$25,000 in fair market value of the Company's common stock (determined at the time such options are granted) for each calendar year in which such rights are outstanding at any time. The exercise price per share of common stock shall be 90% (for eligible U.S. employees) or 85% (for eligible international employees) of the lesser of the fair market value of the stock on the first day of the applicable offering period or the applicable exercise date.

The Company records compensation expense over the offering period related to the discount that is given to employees, which totaled \$0.3 million and \$0.4 million for the years ended December 31, 2020 and 2019, respectively. As of December 31, 2020, 692,432 shares were reserved for future issuance under the ESPP.

## **21. EQUITY**

### ***Common Stock***

The Company's common stock is listed on Cboe BZX under the trading symbol CBOE. As of December 31, 2020, 325,000,000 shares of the Company's common stock were authorized, \$0.01 par value, 125,998,967 and 107,299,933 shares were issued and outstanding, respectively. The holders of common stock are entitled to one vote per share.

### ***Common Stock in Treasury, at Cost***

The Company accounts for the purchase of treasury stock under the cost method with the shares of stock repurchased reflected as a reduction to Cboe stockholders' equity and included in common stock in treasury, at cost in the consolidated balance sheets. Shares repurchased under the Company's share repurchase program are available to be redistributed. When treasury shares are redistributed, they are recorded at the average cost of the treasury shares acquired. The Company held 18,699,034 of common stock in treasury as of December 31, 2020 and 15,044,997 shares as of December 31, 2019.

### ***Share Repurchase Program***

In 2011, the board of directors approved an initial authorization for the Company to repurchase shares of its outstanding common stock of \$100 million and approved additional authorizations of \$100 million in each of 2012, 2013, 2014, 2015 and 2016, \$150 million in February 2018, \$100 million in August 2018, and \$250 million in October 2019, and \$250 million in June 2020, for a total authorization of \$1.4 billion. The Company expects to fund repurchases primarily through the use of existing cash balances. The program permits the Company to purchase shares, through a variety of methods, including in the open market or through privately negotiated transactions, in accordance with applicable securities laws. It does not obligate the Company to make any repurchases at any specific time or situation.

Under the program, for the year ended December 31, 2020, the Company repurchased 3,534,115 shares of common stock at an average cost per share of \$98.78, totaling \$349.1 million. Since inception of the program through December 31, 2020, the Company has repurchased 17,250,124 shares of common stock at an average cost per share of \$66.66, totaling \$1.1 billion.

As of December 31, 2020, the Company had \$200.1 million of availability remaining under its existing share repurchase authorizations.

The table below shows the repurchased shares of common stock under the Company's share repurchase program during the periods presented as follows:

	<u>Shares Repurchased</u>	<u>Average Repurchase Price Per Share</u>	<u>Amount of Repurchases (in millions)</u>
<b>2020</b>			
Fourth quarter .....	1,013,709	\$ 86.79	\$ 88.0
Third quarter .....	465,366	89.92	41.8
Second quarter .....	992,159	100.54	99.8
First quarter .....	1,062,881	112.46	119.5
Total open market common stock repurchases .....	<u>3,534,115</u>		<u>349.1</u>
<b>2019</b>			
Fourth quarter .....	600,442	\$ 115.76	\$ 69.5
Third quarter .....	453,319	115.49	52.4
Second quarter .....	100	104.75	0.01
First quarter .....	366,793	95.36	35.0
Total open market common stock repurchases .....	<u>1,420,654</u>		<u>156.9</u>
<b>2018</b>			
Fourth quarter .....	—	\$ —	\$ —
Third quarter .....	491,899	99.75	49.1
Second quarter .....	468,913	102.92	48.3
First quarter .....	387,142	112.52	43.6
Total open market common stock repurchases .....	<u>1,347,954</u>		<u>140.9</u>

#### ***Purchase of Common Stock from Employees***

The Company purchased 120,552 and 143,247 shares that were not part of the publicly announced share repurchase authorization from employees for an average price paid per share of \$117.98 and \$97.22 during the years ended December 31, 2020 and 2019, respectively. These shares consisted of shares retained to cover payroll withholding taxes or option costs in connection with the vesting of restricted stock awards, restricted stock units, performance share awards, and stock option exercises.

#### ***Preferred Stock***

The Company has authorized the issuance of 20,000,000 shares of preferred stock, par value \$0.01 per share, issuable from time to time in one or more series. For the years ended December 31, 2020, and 2019, the Company had no shares of preferred stock issued or outstanding.

#### ***Dividends***

During the year ended December 31, 2020, the Company declared and paid cash dividends per share of \$1.56, for an aggregate payout of \$170.6 million. During the year ended December 31, 2019, the Company declared and paid cash dividends per share of \$1.34, for an aggregate payout of \$150.0 million.

Each share of common stock, including RSAs, RSUs, and PSUs, is entitled to receive dividend and dividend equivalents, respectively, if, as and when declared by the board of directors of the Company. The Company's expectation is to continue to pay dividends. The decision to pay a dividend, however, remains within the discretion of the Company's board of directors and may be affected by various factors, including earnings, financial condition, capital requirements, level of indebtedness and other considerations the board of directors deems relevant. Future debt obligations and statutory provisions, among other things, may limit, or in some cases prohibit, the Company's ability to pay dividends.

As a holding company, the Company's ability to declare and continue to pay dividends in the future with respect to its common stock will also be dependent upon the ability of its subsidiaries to pay dividends to it under applicable corporate law.

## 22. INCOME TAXES

Net deferred tax assets and liabilities consist of the following as of December 31, 2020 and 2019 (in millions):

	<u>As of December 31,</u>	
	<u>2020</u>	<u>2019</u>
Deferred tax assets:		
Accrued compensation and benefits .....	\$ 11.4	\$ 14.1
Property, equipment and technology, net .....	2.4	1.9
Operating leases .....	36.2	13.5
Other .....	39.3	30.5
Subtotal .....	<u>89.3</u>	<u>60.0</u>
Valuation allowance .....	(6.8)	(4.2)
Total deferred tax assets .....	<u>82.5</u>	<u>55.8</u>
Deferred tax liabilities:		
Intangibles .....	(351.1)	(357.6)
Property, equipment and technology, net .....	(21.8)	(14.5)
Investments .....	(56.6)	(68.2)
Prepaid expenses or assets .....	(2.8)	(2.2)
Operating leases .....	(27.8)	(13.0)
Total deferred tax liabilities .....	<u>(460.1)</u>	<u>(455.5)</u>
Net deferred tax liabilities .....	<u>\$ (377.6)</u>	<u>\$ (399.7)</u>

The Company provides a valuation allowance against deferred tax assets if, based on management's assessment of historical and projected future operating results and other available evidence, it is more likely than not that some or all of the deferred tax assets will not be realized. A valuation allowance of \$6.8 million was recorded against gross deferred tax assets for certain investments, net operating and capital losses as of December 31, 2020.

As of December 31, 2020, the Company has capital loss carryforwards of \$8.0 million, which, if unused, will expire in 2024.

The Company considers its non-U.S. earnings to be indefinitely reinvested outside of the U.S. to the extent these earnings are not subject to U.S. income tax under an anti-deferral tax regime. As of December 31, 2020, the cumulative amount of undistributed earnings in these subsidiaries is \$32.1 million. Given our intent to reinvest these earnings for an indefinite period of time, we have not accrued a deferred tax liability on these earnings. A determination of an unrecognized deferred tax liability related to these earnings is not practicable.

The provision for income taxes for the years ended December 31, 2020, 2019 and 2018 consists of the following (in millions):

	<u>Year Ended December 31,</u>		
	<u>2020</u>	<u>2019</u>	<u>2018</u>
Current tax expense:			
Federal .....	\$ 143.7	\$ 98.7	\$ 125.1
State .....	70.5	61.2	58.7
Foreign .....	8.9	7.9	9.9
Total current tax expense .....	<u>223.1</u>	<u>167.8</u>	<u>193.7</u>
Deferred income tax expense/(benefit):			
Federal .....	(25.2)	(28.7)	(18.4)
State .....	(9.1)	(3.8)	(23.7)
Foreign .....	3.4	(4.7)	(5.6)
Total deferred income tax benefit .....	<u>(30.9)</u>	<u>(37.2)</u>	<u>(47.7)</u>
Total .....	<u>\$ 192.2</u>	<u>\$ 130.6</u>	<u>\$ 146.0</u>

For the years ended December 31, 2020, 2019, and 2018, income before taxes consists of the following (in millions):

	Year Ended December 31,		
	2020	2019	2018
U.S. operations .....	\$ 601.9	\$ 480.0	\$ 548.3
Foreign operations .....	58.5	21.4	22.9
	<u>\$ 660.4</u>	<u>\$ 501.4</u>	<u>\$ 571.2</u>

A reconciliation of the statutory federal income tax rate to the effective income tax rate for the years ended December 31, 2020, 2019, and 2018 is as follows:

	Year Ended December 31,		
	2020	2019	2018
Statutory U.S. federal income tax rate .....	21.0 %	21.0 %	21.0 %
Impact of federal, state and local tax law & rate changes, net .....	(0.2)%	— %	(3.5)%
State taxes, net of federal benefit .....	4.2 %	5.0 %	5.0 %
Uncertain tax positions .....	2.9 %	2.6 %	6.1 %
Deduction for Foreign-Derived Intangible Income .....	(1.1)%	(1.2)%	— %
Valuation allowance .....	0.8 %	— %	— %
Other, net .....	1.5 %	(1.4)%	(3.0)%
Effective income tax rate .....	<u>29.1 %</u>	<u>26.0 %</u>	<u>25.6 %</u>

A reconciliation of the beginning and ending uncertain tax positions, excluding interest and penalties, is as follows (in thousands):

	2020	2019	2018
Balance as of January 1 .....	\$ 116.7	\$ 102.3	\$ 67.8
Acquired unrecognized tax benefits .....	—	—	—
Gross increases on tax positions in prior period .....	3.3	3.1	35.0
Gross decreases on tax positions in prior period .....	—	(6.3)	(19.0)
Gross increases on tax positions in current period .....	24.3	18.5	19.0
Lapse of statute of limitations .....	(5.7)	(0.9)	(0.5)
Balance as of December 31 .....	<u>\$ 138.6</u>	<u>\$ 116.7</u>	<u>\$ 102.3</u>

As of December 31, 2020, 2019 and 2018, the Company had \$137.4 million, \$114.9 million, and \$99.5 million, respectively, of uncertain tax positions, net of federal benefit, which, if recognized in the future, would affect the effective income tax rate. Reductions to uncertain tax positions from the lapse of the applicable statutes of limitations and potential audit settlements during the next twelve months are estimated to be approximately \$0.2 million.

Estimated interest costs and penalties are classified as part of the provision for income taxes in the Company's consolidated statements of income and were \$6.9 million, \$6.6 million, and \$1.1 million, for the periods ended December 31, 2020, 2019 and 2018, respectively. Accrued interest and penalties were \$26.1 million, \$19.2 million and \$12.6 million as of December 31, 2020, 2019 and 2018, respectively.

The following table summarizes the tax years that are either currently under audit or remain open and subject to examination by the tax authorities in the most significant jurisdictions in which Cboe operates:

U.S. Federal .....	2008-2020
Illinois .....	2016-2020
New York .....	2011-2020
New York City .....	2011-2020
United Kingdom .....	2017-2020

The Company petitioned the Tax Court on January 13, 2017, May 7, 2018 and November 29, 2018 for a redetermination of IRS notices of deficiency for Cboe and certain of its subsidiaries for tax years 2011 through 2015 related to its Section 199 claims. The Company also filed a complaint on October 5, 2018 with the Court of Federal Claims for a refund of Section 199 claims related to tax years 2008 through 2010. The U.S. Tax Court set the trial to start in May 2021. The Company believes the aggregate amount of any additional liabilities that may result from these examinations, if any, will not have a material adverse effect on the financial position, results of operations, or cash flows of the Company. As of December 31, 2020, the Company has not resolved these matters, and proceedings continue in Tax Court and the Court of Federal Claims.

## 23. EARNINGS PER SHARE

The computation of basic net income per common share is calculated by reducing net income for the period by dividends paid or declared and undistributed net income for the period that are allocated to participating securities to arrive at net income allocated to common stockholders. Net income allocated to common stockholders is divided by the weighted average number of common shares outstanding during the period to determine net income per share allocated to common stockholders.

The computation of diluted net income per share is calculated by dividing net income allocated to common stockholders by the sum of the weighted average number of common shares outstanding plus all additional common shares that would have been outstanding if the potentially dilutive common shares had been issued. The dilutive effect is calculated using the more dilutive of the two-class or treasury stock method.

Additionally, the change in the redemption value for the noncontrolling interest reduces net income allocated to common stockholders.

The following table sets forth the computation of basic and diluted earnings per share (in millions, except per share data):

(in millions, except per share amounts)	Year Ended December 31,		
	2020	2019	2018
<b>Basic EPS Numerator:</b>			
Net income	\$ 468.2	\$ 370.8	\$ 425.2
Net loss attributable to noncontrolling interest	—	4.1	1.3
Net income excluding redeemable noncontrolling interest	468.2	374.9	426.5
Change in redemption value of redeemable noncontrolling interest	—	(0.5)	(1.3)
Net income allocated to participating securities	(1.2)	(1.7)	(3.1)
Net income allocated to common stockholders	<u>\$ 467.0</u>	<u>\$ 372.7</u>	<u>\$ 422.1</u>
<b>Basic EPS Denominator:</b>			
Weighted average shares outstanding	109.1	111.4	111.8
Basic earnings per share	\$ 4.28	\$ 3.35	\$ 3.78
<b>Diluted EPS Numerator:</b>			
Net income	\$ 468.2	\$ 370.8	\$ 425.2
Net loss attributable to redeemable noncontrolling interest	—	4.1	1.3
Net income excluding redeemable noncontrolling interest	468.2	374.9	426.5
Change in redemption value of redeemable noncontrolling interest	—	(0.5)	(1.3)
Net income allocated to participating securities	(1.2)	(1.7)	(3.1)
Net income allocated to common stockholders	<u>\$ 467.0</u>	<u>\$ 372.7</u>	<u>\$ 422.1</u>
<b>Diluted EPS Denominator:</b>			
Weighted average shares outstanding	109.1	111.4	111.8
Dilutive common shares issued under stock program	0.2	0.4	0.4
Total dilutive weighted average shares	109.3	111.8	112.2
Diluted earnings per share	\$ 4.27	\$ 3.34	\$ 3.76

For the periods presented, the Company did not have shares of stock-based compensation that would have an anti-dilutive effect on the computation of diluted earnings per share.

## 24. COMMITMENTS, CONTINGENCIES, AND GUARANTEES

### *Legal Proceedings*

As of December 31, 2020, the Company was subject to the various legal proceedings and claims discussed below, as well as certain other legal proceedings and claims that have not been fully resolved and that have arisen in the ordinary course of business.

The Company reviews its legal proceedings and claims, regulatory reviews and inspections and other legal proceedings on an ongoing basis and follows appropriate accounting guidance when making accrual and disclosure

decisions. The Company establishes accruals for those contingencies where the incurrence of a loss is probable and can be reasonably estimated, and the Company discloses the amount accrued and the amount of a reasonably possible loss in excess of the amount accrued, if such disclosure is necessary for the consolidated financial statements to not be misleading. The Company does not record liabilities when the likelihood that the liability has been incurred is probable, but the amount cannot be reasonably estimated, or when the liability is believed to be only reasonably possible or remote. The Company's assessment of whether a loss is remote, reasonably possible, or probable is based on its assessment of the ultimate outcome of the matter following all appeals.

As of December 31, 2020, the Company does not believe that there is a reasonable possibility that any material loss exceeding the amounts already recognized for these legal proceedings and claims, regulatory reviews, inspections or other legal proceedings, if any, has been incurred. While the consequences of certain unresolved proceedings are not presently determinable, the outcome of any proceeding is inherently uncertain and an adverse outcome from certain matters could have a material effect on the financial position, results of operations, or cash flows of the Company in any given reporting period.

#### *City of Providence*

On April 18, 2014, the City of Providence, Rhode Island filed a securities class action lawsuit in the Southern District of New York against Bats and Direct Edge Holdings LLC, as well as 14 other securities exchanges. The action purports to be brought on behalf of all public investors who purchased and/or sold shares of stock in the United States since April 18, 2009 on a registered public stock exchange ("Exchange Defendants") or a U.S.-based alternate trading venue and were injured as a result of the alleged misconduct detailed in the complaint, which includes allegations that the Exchange Defendants committed fraud through a variety of business practices associated with, among other things, what is commonly referred to as high frequency trading. On May 2, 2014 and May 20, 2014, American European Insurance Company and Harel Insurance Co., Ltd. each filed substantially similar class action lawsuits against the Exchange Defendants which were ultimately consolidated with the City of Providence, Rhode Island securities class action lawsuit. On June 18, 2015, the Southern District of New York (the "Lower Court") held oral argument on the pending Motion to Dismiss and thereafter, on August 26, 2015, the Lower Court issued an Opinion and Order granting Exchange Defendants' Motion to Dismiss, dismissing the complaint in full. Plaintiff filed a Notice of Appeal of the dismissal on September 24, 2015 and its appeal brief on January 7, 2016. Respondent's brief was filed on April 7, 2016 and oral argument was held on August 24, 2016. Following oral argument, the Court of Appeals issued an order requesting that the SEC submit an amicus brief on whether the Lower Court had jurisdiction and whether the Exchange Defendants have immunity in the claims alleged. The SEC filed its amicus brief with the Court of Appeals on November 28, 2016 and Plaintiff and the Exchange Defendants filed their respective supplemental response briefs on December 12, 2016. On December 19, 2017, the Court of Appeals reversed the Lower Court's dismissal and remanded the case back to the Lower Court. On March 13, 2018, the Court of Appeals denied the Exchange Defendants' motion for re-hearing. The Exchange Defendants filed their opening brief for their motion to dismiss May 18, 2018, Plaintiffs' response was filed June 15, 2018 and the Exchange Defendants' reply was filed June 29, 2018. On May 28, 2019, the Lower Court issued an opinion and order denying the Exchange Defendants' motion to dismiss. On June 17, 2019, the Exchange Defendants filed a motion seeking interlocutory appeal of the May 28, 2019 dismissal order, which was denied July 16, 2019. Exchange Defendants filed their answers on July 25, 2019. The discovery period in the matter commenced and is scheduled to continue through at least the first half of 2021. Given the preliminary nature of the proceedings, the Company is unable to estimate what, if any, liability may result from this litigation. However, the Company believes that the claims are without merit and intends to litigate the matter vigorously.

#### *VIX Litigation*

On March 20, 2018, a putative class action complaint captioned Tomasulo v. Cboe Exchange, Inc., et al., No. 18-cv-02025 was filed in federal district court for the Northern District of Illinois alleging that the Company intentionally designed its products, operated its platforms, and formulated the method for calculating VIX and the Special Opening Quotation, (i.e., the special VIX value designed by the Company and calculated on the settlement date of VIX derivatives prior to the opening of trading), in a manner that could be collusively manipulated by a group of entities named as John Doe defendants. A number of similar putative class actions, some of which do not name the Company as a party, were filed in federal court in Illinois and New York on behalf of investors in certain volatility-related products. On June 14, 2018, the Judicial Panel on Multidistrict Litigation centralized the putative class actions in the federal district court for the Northern District of Illinois. On September 28, 2018, plaintiffs filed a master, consolidated complaint that is a putative class action alleging various claims against the Company and John Doe defendants in the federal district court for the Northern District of Illinois. The claims asserted against the Company consist of a Securities Exchange Act fraud claim, three Commodity Exchange Act claims and a state law negligence claim. Plaintiffs request a judgment awarding class damages in an unspecified amount, as well as punitive or exemplary damages in an unspecified amount, prejudgment interest, costs

including attorneys' and experts' fees and expenses and such other relief as the court may deem just and proper. On November 19, 2018, the Company filed a motion to dismiss the master consolidated complaint and the plaintiffs filed their response on January 7, 2019. The Company filed its reply on January 28, 2019. On May 29, 2019, the federal district court for the Northern District of Illinois granted the Company's motion to dismiss plaintiffs' entire complaint against the Company. The state law negligence claim was dismissed with prejudice and the other claims were dismissed without prejudice with leave to file an amended complaint, which plaintiffs filed on July 19, 2019. On August 28, 2019, the Company filed its second motion to dismiss the amended consolidated complaint and plaintiffs filed their response on October 8, 2019. On January 27, 2020, the federal district court for the Northern District of Illinois granted the Company's second motion to dismiss and all counts against the Company were dismissed with prejudice. On April 21, 2020, the federal district court for the Northern District of Illinois granted plaintiffs' motion to certify the January 27, 2020 dismissal order for an immediate appeal. On May 19, 2020, plaintiffs filed a notice of appeal with the Court of Appeals for the Seventh Circuit ("7th Circuit"), seeking to appeal the April 21, 2020 order granting the entry of partial final judgment and both orders granting the Company's motions to dismiss entered on May 29, 2019 and January 27, 2020. On June 29, 2020, plaintiffs filed their opening brief with the 7th Circuit, on August 28, 2020 the Company filed its opposition brief with the 7th Circuit, on September 7, 2020, CME Group Inc., Intercontinental Exchange, Inc. and National Futures Association filed an amicus curiae brief in support of the Company on the Bad Faith Standard with the 7th Circuit and on October 16, 2020, plaintiffs filed their reply brief with the 7th Circuit. Oral arguments were held remotely on November 30, 2020 and the parties are currently awaiting a decision by the 7<sup>th</sup> Circuit. The Company currently believes that the claims are without merit and intends to litigate the matter vigorously. The Company is unable to estimate what, if any, liability may result from this litigation.

### *SIFMA*

Securities Industry Financial Markets Association ("SIFMA") has filed a number of denial of access applications with the SEC to set aside proposed rule changes to establish or modify fees for Cboe Options, C2, BZX, BYX, EDGX and EDGA (the "Exchanges") market data products and related services (the "Challenged Fees"). The Challenged Fees were held in abeyance pending a decision, which was issued by the SEC on October 16, 2018, on a separate SIFMA denial of access application regarding fees proposed by Nasdaq and the NYSE for their respective market data products. NASDAQ and NYSE filed petitions for review ("PFRs") with the Court of Appeals for the D.C. Circuit ("D.C. Circuit") seeking to appeal the SEC's opinion ("Bellwether Case"). On June 5, 2020, the D.C. Circuit granted the PFRs and vacated the SEC's finding that SIFMA could challenge generally applicable market data fees as a denial of access under Section 19(d) of the Exchange Act. In a second order entered on October 16, 2018, the SEC issued an order (the "Order") that remanded the stayed Challenged Fees and ordered the Exchanges to: (i) within six months of the Order, provide notice to the SEC of developed or identified fair procedures for assessing the Challenged Fees (the "Procedures") and (ii) within one year of the Order, apply the Procedures to the Challenged Fees and submit to the SEC a record explaining the Exchanges' conclusions. On October 26, 2018, the Exchanges filed a motion to reconsider the Order with the SEC. On November 21, 2018, the Exchanges filed with the SEC a joinder motion to NYSE's prior motion for stay of the Order. On December 3, 2018, SIFMA filed a response to NYSE's motion for stay. Nasdaq withdrew its motion to reconsider the Order with the SEC on December 4, 2018, and on December 5, 2018, filed a Petition for Review with the D.C. Circuit. On December 14, 2018, the SEC denied the motion for stay but tolled the compliance date set forth in the remand order until ruling is made on the motion to reconsider. The Exchanges and NYSE filed on January 4, 2019 a motion to intervene in the Nasdaq Petition for Review to ensure the ability to participate in the case; the motion to intervene was granted on January 25, 2019. On the same day, SIFMA filed a motion with the D.C. Circuit moving to dismiss or hold in abeyance the Petition for Review. The Exchanges and NYSE submitted on February 6, 2019 a statement of issues for consideration in connection with the Petition for Review pending before the D.C. Circuit. On March 29, 2019, the D.C. Circuit issued an order indicating that SIFMA's motion to dismiss will be considered with the underlying merits of the Petition for Review. On May 7, 2019, the SEC denied the Exchanges and NYSE's motion for reconsideration of the Order. The SEC also further tolled the effectiveness of the remand order subject to the resolution of the substantive SIFMA case against Nasdaq and NYSE Arca that is already before the D.C. Circuit. On June 17, 2019, the Exchanges filed a petition for review of the May 7, 2019 SEC order denying reconsideration of the Order with the D.C. Circuit and of the Order. The Exchanges' joint opening brief was filed on October 23, 2019, the SEC's response was filed on November 22, 2019, the Exchanges' joint reply was filed on December 20, 2019 and final briefs were filed on January 10, 2020. Oral arguments were held on February 18, 2020. On June 5, 2020, the D.C. Circuit remanded the Order to the SEC for reconsideration in light of the Bellwether Case opinion, i.e., that generally applicable market data fees may not be challenged as a denial of access under Section 19(d) of the Exchange Act. On August 7, 2020, the SEC entered an Order Vacating Prior Order and Requesting Additional Briefs. By September 3, 2020, all applications that had been previously filed with the SEC for review were the subject of notices for voluntary dismissal. On September 9, 2020, the Exchanges filed a response to the SEC's August 7, 2020 Order. On October 5, 2020, the SEC entered an Order Granting Requests to Withdraw Applications for Review and Dismissing Review Proceedings. The SEC did not file a petition for writ of certiorari to the U.S. Supreme Court as to the Bellwether Case by November 2, 2020. The matter is now concluded.



## Other

As self-regulatory organizations under the jurisdiction of the SEC, Cboe Options, C2, BZX, BYX, EDGX and EDGA are subject to routine reviews and inspections by the SEC. As a designated contract market under the jurisdiction of the CFTC, CFE is subject to routine rule enforcement reviews and examinations by the CFTC. Cboe SEF, LLC is a swap execution facility registered with the CFTC and subject to routine rule enforcement reviews and examinations by the CFTC. Cboe Trading and BIDS Trading are subject to reviews and inspections by FINRA. The Company has from time to time received inquiries and investigative requests from the SEC's Office of Compliance Inspections and Examinations and the CFTC's Division of Market Oversight as well as the SEC Division of Enforcement and CFTC Division of Enforcement seeking information about the Company's compliance with its obligations as a self-regulatory organization under the federal securities laws and Commodity Exchange Act as well as members' compliance with the federal securities laws and Commodity Exchange Act.

In addition, while Cboe Europe, Cboe Chi-X Europe, EuroCCP, Cboe NL, and MATCHNow have not been the subject of any material litigation or regulatory investigation in the past, there is always the possibility of such action in the future. As Cboe Europe and Cboe Chi-X Europe are domiciled in the UK, it is likely that any action would be taken in the UK courts in relation to litigation or by the FCA in relation to any regulatory enforcement action. As EuroCCP is domiciled in the Netherlands, it is likely that any action would be taken in the Dutch courts in relation to litigation or by the DNB or Dutch Authority for Financial Markets in relation to any regulatory enforcement action. For Cboe NL, also domiciled in the Netherlands, it is likely that any actions would be taken in the Dutch courts in relation to litigation or Dutch Authority for Financial Markets in relation to any regulatory enforcement action. As MATCHNow is domiciled in Canada, it is likely that any action would be taken in the Canadian courts in relation to litigation or by the IIROC or Ontario Securities Commission in relation to any regulatory enforcement action.

The Company is also currently a party to various other legal proceedings in addition to those already mentioned. Management does not believe that the likely outcome of any of these other reviews, inspections, investigations or other legal proceedings is expected to have a material impact on the Company's financial position, results of operations, liquidity or capital resources.

See also Note 10 ("Other Assets, Net") for information on promissory notes related to the CAT.

See also Note 22 ("Income Taxes").

### *Contractual Obligations*

See Note 15 ("Clearing Operations") for information on EuroCCP's clearinghouse exposure guarantee.

See Note 25 ("Leases") for information on lease obligations.

## 25. LEASES

The Company currently leases office space, data centers, remote network operations centers, and equipment under non-cancelable operating leases with third parties as of December 31, 2020. During the year ended December 31, 2020, an additional \$68.9 million of right of use assets and \$96.3 million of lease liabilities were added related to new operating leases and modified operating leases.

The following table presents the supplemental balance sheet information related to leases for the years ended December 31, 2020 and 2019 (in millions):

	December 31, 2020	December 31, 2019
Operating lease right of use assets .....	\$ 111.0	\$ 53.4
Total leased assets .....	<u>\$ 111.0</u>	<u>\$ 53.4</u>
Accrued liabilities .....	\$ 12.5	\$ 8.7
Non-current operating lease liabilities .....	132.1	46.7
Total leased liabilities .....	<u>\$ 144.6</u>	<u>\$ 55.4</u>

The following table presents operating lease costs and other information as of and for the year ended December 31, 2020 (in millions, except as stated):

	Year Ended December 31, 2020	Year Ended December 31, 2019
Operating lease costs (1) .....	\$ 20.2	\$ 12.4
Lease term and discount rate information:		
Weighted average remaining lease term (years).....	12.1	9.2
Weighted average discount rate .....	3.4 %	3.5 %
Supplemental cash flow information and non-cash activity:		
Cash paid for amounts included in the measurement of lease liabilities .....	\$ 11.1	\$ 11.2
Lease incentive for leasehold improvements .....	25.2	—
Right-of-use assets obtained in exchange for lease liabilities (2).....	68.9	22.1

(1) Includes short-term lease and variable lease costs, which are immaterial.

(2) Excludes right-of-use assets and lease liabilities recognized upon adoption of \$40.3 million and \$42.8 million, respectively.

The total rent expense related to lease obligations, reflected in technology support services and facilities costs line items on the consolidated statements of income, for the years ended December 31, 2020, 2019, and 2018 were \$20.2 million, \$12.4 million, and \$10.1 million, respectively.

The maturities of the lease liabilities are as follows as of December 31, 2020 (in millions):

	December 31, 2020
2021 .....	\$ 16.4
2022 .....	17.3
2023 .....	15.8
2024 .....	11.1
2025 .....	10.3
After 2025 (1) .....	107.2
Total lease payments .....	\$ 178.1
Less: Interest .....	(33.5)
Present value of lease liabilities .....	<u>\$ 144.6</u>

(1) Total lease payments include \$20.4 million related to options to extend lease terms that are reasonably certain of being exercised.

## 26. QUARTERLY DATA (UNAUDITED)

<u>Year ended December 31, 2020 (in millions, except per share data)</u>	<u>First Quarter</u>	<u>Second Quarter</u>	<u>Third Quarter</u>	<u>Fourth Quarter</u>
Revenues less cost of revenues . . . . .	\$ 358.3	\$ 296.9	\$ 292.0	\$ 307.1
Operating income . . . . .	226.4	161.7	139.3	134.8
Net income . . . . .	157.4	113.6	109.9	87.3
Net income allocated to common stockholders . . . . .	157.0	113.3	109.6	87.1
Basic earnings per share . . . . .	<u>\$ 1.42</u>	<u>\$ 1.04</u>	<u>\$ 1.01</u>	<u>\$ 0.81</u>
Diluted earnings per share . . . . .	<u>\$ 1.42</u>	<u>\$ 1.03</u>	<u>\$ 1.01</u>	<u>\$ 0.81</u>

<u>Year ended December 31, 2019 (in millions, except per share data)</u>	<u>First Quarter</u>	<u>Second Quarter</u>	<u>Third Quarter</u>	<u>Fourth Quarter</u>
Revenues less cost of revenues . . . . .	\$ 279.4	\$ 283.2	\$ 294.0	\$ 280.3
Operating income . . . . .	145.4	125.2	147.4	119.2
Net income . . . . .	94.1	84.5	105.9	86.3
Net income allocated to common stockholders . . . . .	93.5	87.6	105.5	86.1
Basic earnings per share . . . . .	<u>\$ 0.84</u>	<u>\$ 0.79</u>	<u>\$ 0.95</u>	<u>\$ 0.78</u>
Diluted earnings per share . . . . .	<u>\$ 0.84</u>	<u>\$ 0.78</u>	<u>\$ 0.94</u>	<u>\$ 0.77</u>

## 27. SUBSEQUENT EVENTS

On February 5, 2021, the Company announced that its board of directors authorized an additional \$200 million to repurchase shares of its outstanding common stock. This is in addition to any unused amount remaining under prior authorizations.

On February 11, 2021, the Company's board of directors declared a quarterly cash dividend of \$0.42 per share. The dividend is payable on March 15, 2021 to stockholders of record at the close of business on February 26, 2021.

On February 19, 2021, the Company granted 239,853 RSUs and 71,302 PSUs to certain officers and employees at a fair value, based on the closing price of the Company's stock on the grant date. The shares have a three year vesting period based on achievement of certain service, performance and/or market conditions and vesting accelerates upon the occurrence of a termination of employment following a change in control of the Company or in the event of earlier death, disability or qualified retirement, though a portion of the awards vest immediately based upon the combination of age and years of service in accordance with the plan.

**Item 9. Changes in and Disagreements with Accountants on Accounting and Financial Disclosure**

Not applicable.

**Item 9A. Controls and Procedures****(a) Evaluation of Disclosure Controls and Procedures**

The Company's management, with the participation of its Chief Executive Officer and Chief Financial Officer, has evaluated the effectiveness of the Company's disclosure controls and procedures (as defined in Rule 13a-15(e) and Rule 15d-15(e) under the Securities Exchange Act of 1934 (the "Exchange Act")) as of the end of the period covered by this report. Based upon that evaluation, the Company's Chief Executive Officer and Chief Financial Officer have concluded that, as of the end of such period, the Company's disclosure controls and procedures are effective.

**(b) Management's Annual Report on Internal Control over Financial Reporting**

Management is responsible for establishing and maintaining adequate internal control over financial reporting. The Company's internal control system has been designed to provide reasonable assurance to management and the board of directors regarding the preparation and fair presentation of published financial statements.

Management assessed the effectiveness of the Company's internal control over financial reporting as of December 31, 2020. Management based its assessment on criteria for effective internal control over financial reporting described in Internal Control-Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission. Management's assessment included evaluating the design of our internal control over financial reporting and testing the operational effectiveness of our internal control over financial reporting. The results of its assessment were reviewed with the audit committee of the board of directors.

Management's assessment of the effectiveness of the Company's internal control over financial reporting as of December 31, 2020, excluded EuroCCP, acquired with effect from July 1, 2020; MATCHNow, acquired with effect from August 4, 2020; and BIDS Holdings, acquired with effect from December 31, 2020. These acquired businesses had aggregate total assets and total stockholders' equity of \$1.3 billion and \$205.2 million, respectively, and total revenues and revenues less costs of revenues of \$30.4 million and \$24.2 million, respectively, which are included in the Company's consolidated financial statements as of and for the year ended December 31, 2020.

No changes occurred in the Company's internal control over financial reporting during fourth quarter 2020 that have materially affected, or are reasonably likely to materially affect, the Company's internal control over financial reporting. Based on its assessment of the Company's internal control over financial reporting, management believes that, as of December 31, 2020, internal control over financial reporting is effective.

The effectiveness of the Company's internal control over financial reporting as of December 31, 2020 has been audited by KPMG LLP, an independent registered public accounting firm, as stated in their report on page 92.

**Item 9B. Other Information**

Not applicable.

## PART III

### **Item 10. Directors, Executive Officers and Corporate Governance**

Information relating to our directors, including our audit committee and audit committee financial experts and the procedures by which stockholders can recommend director nominees, and our executive officers will be in our definitive Proxy Statement for our 2021 Annual Meeting of Stockholders planned to be held on May 13, 2021, which will be filed within 120 days of the end of our fiscal year ended December 31, 2020 ("2021 Proxy Statement") and is incorporated herein by reference. Information relating to our executive officers is included on pages 26 and 27 of this Annual Report on Form 10-K.

#### **Code of Ethics**

We have adopted a Code of Business Conduct and Ethics that applies to our Chief Executive Officer, Chief Financial Officer and Chief Accounting Officer, as well as all other employees and directors. Our Code of Business Conduct and Ethics is available on our website at <http://ir.cboe.com/governance.cfm>. We will also provide a copy of the Code of Business Conduct and Ethics to stockholders at no charge upon written request.

### **Item 11. Executive Compensation**

Information relating to our executive officer and director compensation and the compensation committee of our board of directors will be in the 2021 Proxy Statement and is incorporated herein by reference.

### **Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters**

Information relating to security ownership of certain beneficial owners of our common stock and information relating to the security ownership of our management will be in the 2021 Proxy Statement and is incorporated herein by reference.

### **Item 13. Certain Relationships and Related Transactions, and Director Independence**

Information regarding certain relationships and related transactions and director independence will be in the 2021 Proxy Statement and is incorporated herein by reference.

### **Item 14. Principal Accountant Fees and Services**

Information regarding principal accountant fees and services will be in the 2021 Proxy Statement and is incorporated herein by reference.

## PART IV

### Item 15. Exhibits, Financial Statement Schedules

#### (a) Documents filed as part of this report

##### (1) Financial Statements

Our consolidated financial statements and the related reports of management and our independent registered public accounting firm which are required to be filed as part of this report are included in this Annual Report on Form 10-K beginning at page 89. These consolidated financial statements are as follows:

- Consolidated Balance Sheets as of December 31, 2020 and 2019
- Consolidated Statements of Income for the years ended December 31, 2020, 2019 and 2018
- Consolidated Statements of Comprehensive Income for the years ended December 31, 2020, 2019 and 2018
- Consolidated Statements of Changes in Stockholders' Equity for the years ended December 31, 2020, 2019 and 2018
- Consolidated Statements of Cash Flows for the years ended December 31, 2020, 2019 and 2018
- Notes to Consolidated Financial Statements

##### (2) Financial Statement Schedules

The Company has not included any financial statement schedules because they are not applicable or the required information is included in the consolidated financial statements or notes thereto.

##### (3) List of Exhibits

See (b) Exhibits below

#### (b) Exhibits

Exhibit No.	Description of Exhibit
2.1	Agreement and Plan of Merger, dated as of September 25, 2016, by and among Cboe Global Markets, Inc. (f/k/a CBOE Holdings, Inc.), CBOE Corporation, CBOE V, LLC and Bats Global Markets, Inc., incorporated by reference to Exhibit 2.1 to the Company's Current Report on Form 8-K (File No. 001-34774) filed on September 28, 2016.**
3.1	Third Amended and Restated Certificate of Incorporation, incorporated by reference to Exhibit 3.1 to the Company's Current Report on Form 8-K (File No. 001-34774) filed on October 17, 2017.
3.2	Sixth Amended and Restated Bylaws, incorporated by reference to Exhibit 3.1 to the Company's Current Report on Form 8-K (File No. 001-34774) filed on October 7, 2020.
4.1	Indenture, dated as of January 12, 2017, by and between the Cboe Global Markets, Inc. (f/k/a CBOE Holdings, Inc.) and Wells Fargo Bank National Association, as trustee, incorporated by reference to Exhibit 4.1 to the Company's Current Report on Form 8-K (File No. 001-34774) filed on January 12, 2017.
4.2	Officer's Certificate, dated as of January 12, 2017, establishing the 3.650% Senior Notes due 2027 of Cboe Global Markets, Inc. (f/k/a CBOE Holdings, Inc.), incorporated by reference to Exhibit 4.2 to the Company's Current Report on Form 8-K (File No. 001-34774) filed on January 12, 2017.
4.3	Form of 3.650% Senior Notes due 2027 (included in Exhibit 4.2 hereto).
4.4	Officer's Certificate, dated as of December 15, 2020, establishing the 1.625% Senior Notes due 2030 of Cboe Global Markets, Inc., incorporated by reference to Exhibit 4.2 to the Company's Current Report on Form 8-K (File No. 001-34774) filed on December 15, 2020.

- 4.5 Form of 1.625% Senior Notes due 2030 (included in Exhibit 4.4 hereto).
- 4.6 Description of Securities Registered Pursuant to Section 12 of the Securities Exchange Act of 1934, incorporated by reference to Exhibit 4.6 to the Company's Annual Report on Form 10-K for the year ended December 31, 2019 (File No. 001-34774) filed on February 22, 2020.
- 10.1 Term Loan Credit Agreement, dated as of March 22, 2018, by and among Cboe Global Markets, Inc., Bank of America, N.A., as administrative agent, and the lender parties thereto, incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K (File No. 001-34774) filed on March 23, 2018.
- 10.2 Amendment No. 1 to Term Loan Credit Agreement, dated as of May 29, 2020, by and among Cboe Global Markets, Inc., Bank of America, N.A., as administrative agent, and the lender parties thereto, incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K (File No. 001-34774) filed on June 3, 2020.
- 10.3 Credit Agreement, dated as of December 15, 2016, by and among Cboe Global Markets, Inc. (f/k/a CBOE Holdings, Inc.), Bank of America, N.A., as Administrative Agent and as Swing Line Lender, certain lenders named therein, Merrill Lynch, Pierce, Fenner & Smith Incorporated, as Sole Lead Arranger and Sole Bookrunner, Morgan Stanley MUFG Loan Partners, LLC, as Syndication Agent, and Citibank, N.A., PNC Bank, National Association and JPMorgan Chase Bank, N.A., as Co-Documentation Agents, incorporated by reference to Exhibit 10.2 to the Company's Current Report on Form 8-K (File No. 001-34774) filed on December 20, 2016.
- 10.4 Amendment No. 1 to Credit Agreement, dated as of May 29, 2020, by and among Cboe Global Markets, Inc. (f/k/a CBOE Holdings, Inc.), Bank of America, N.A., as Administrative Agent and as Swing Line Lender, the lender parties thereto, incorporated by reference to Exhibit 10.2 to the Company's Current Report on Form 8-K (File No. 001-34774) filed on June 3, 2020.
- 10.5 Amended and Restated Credit Agreement, dated as of December 21, 2020, by and among Cboe Global Markets, Inc., with Bank of America, N.A., as administrative agent and as swing line lender, certain lenders named therein, BOFA Securities, Inc., as sole lead arranger and sole bookrunner and certain syndication agents named therein, incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K (File No. 001-34774) filed on December 22, 2020.
- 10.6 Facility Agreement, dated July 1, 2020, by and among European Central Counterparty N.V. as borrower, Cboe Global Markets, Inc. as guarantor, Bank of America Merrill Lynch International Designated Activity Company, as co-ordinator, facility agent, lender, sole lead arranger and sole bookrunner, Citibank N.A., as security agent, and certain lenders named therein, incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K (File No. 001-34774) filed on July 1, 2020.
- 10.7 Restated License Agreement, dated November 1, 1994, by and between Standard & Poor's Financial Services LLC (as successor-in-interest to Standard & Poor's, a division of McGraw-Hill, Inc.) and Cboe Exchange, Inc. (f/k/a Chicago Board Options Exchange, Incorporated) (the "S&P License Agreement"), incorporated by reference to Exhibit 10.1 to Amendment No. 6 to the Company's Registration Statement on Form S-4 (File No. 333-140574) filed on April 12, 2010.+
- 10.8 Amendment No. 1 to the S&P License Agreement, dated January 15, 1995, incorporated by reference to Exhibit 10.2 to Amendment No. 6 to the Company's Registration Statement on Form S-4 (File No. 333-140574) filed on April 12, 2010.+
- 10.9 Amendment No. 2 to the S&P License Agreement, dated April 1, 1998, incorporated by reference to Exhibit 10.3 to Amendment No. 6 to the Company's Registration Statement on Form S-4 (File No. 333-140574) filed on April 12, 2010.+
- 10.10 Amendment No. 3 to the S&P License Agreement, dated July 28, 2000, incorporated by reference to Exhibit 10.4 to Amendment No. 6 to the Company's Registration Statement on Form S-4 (File No. 333-140574) filed on April 12, 2010.+
- 10.11 Amendment No. 4 to the S&P License Agreement, dated October 27, 2000, incorporated by reference to Exhibit 10.5 to Amendment No. 6 to the Company's Registration Statement on Form S-4 (File No. 333-140574) filed on April 12, 2010.+
- 10.12 Amendment No. 5 to the S&P License Agreement, dated March 1, 2003, incorporated by reference to Exhibit 10.6 to Amendment No. 6 to the Company's Registration Statement on Form S-4 (File No. 333-140574) filed on April 12, 2010.+

- 10.13 Amended and Restated Amendment No. 6 to the S&P License Agreement, dated February 24, 2009, incorporated by reference to Exhibit 10.7 to Amendment No. 6 to the Company's Registration Statement on Form S-4 (File No. 333-140574) filed on April 12, 2010.+
- 10.14 Amended and Restated Amendment No. 7 to the S&P License Agreement, dated February 24, 2009, incorporated by reference to Exhibit 10.8 to Amendment No. 6 to the Company's Registration Statement on Form S-4 (File No. 333-140574) filed on April 12, 2010.+
- 10.15 Amendment No. 8 to the S&P License Agreement, dated January 9, 2005, incorporated by reference to Exhibit 10.9 to Amendment No. 6 to the Company's Registration Statement on Form S-4 (File No. 333-140574) filed on April 12, 2010.+
- 10.16 Amendment No. 10 to the S&P License Agreement, dated June 19, 2009, incorporated by reference to Exhibit 10.10 to Amendment No. 6 to the Company's Registration Statement on Form S-4 (File No. 333-140574) filed on April 12, 2010.+
- 10.17 Amendment No. 11 to the S&P License Agreement, dated as of April 29, 2010, incorporated by reference to Exhibit 10 to the Company's Current Report on Form 8-K (File No. 001-34774) filed on May 11, 2010.
- 10.18 Amendment No. 12 to the S&P License Agreement, dated March 9, 2013, incorporated by reference to Exhibit 10.1 to the Company's Quarterly Report on Form 10-Q (File No. 001-34774) filed on May 7, 2013. +
- 10.19 Amendment No. 13 to the S&P License Agreement, dated as of December 21, 2017, incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K (File No. 001-34774) filed on December 22, 2017.+
- 10.20 Amendment No. 14 to the S&P License Agreement, dated December 20, 2018, incorporated by reference to Exhibit 10.17 to the Company's Annual Report on Form 10-K for the year ended December 31, 2018 (File No. 001-34774) filed on February 22, 2019.
- 10.21 Amendment No. 15 to the S&P License Agreement, dated January 25, 2019, incorporated by reference to Exhibit 10.18 to the Company's Annual Report on Form 10-K for the year ended December 31, 2018 (File No. 001-34774) filed on February 22, 2019.
- 10.22 Amendment No. 16 to the S&P License Agreement, made as of April 1, 2020, incorporated by reference to Exhibit 10.4 to the Company's Quarterly Report on Form 10-Q (File No. 001-34774) filed on July 31, 2020.
- 10.23 Amendment No. 17 to the S&P License Agreement, made as of August 1, 2020, incorporated by reference to Exhibit 10.1 to the Company's Quarterly Report on Form 10-Q (File No. 001-34774) filed on October 30, 2020.  
+
- 10.24 Form of Amended and Restated Director Indemnification Agreement, incorporated by reference to Exhibit 10.1 to the Company's Quarterly Report on Form 10-Q for the quarter ended June 30, 2017 (File No. 001-34774) filed on August 4, 2017.
- 10.25 Employment Agreement, by and between Cboe Global Markets, Inc. and Edward Tilly, dated May 16, 2019, incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K (File No. 001-34774) filed on May 17, 2019.\*
- 10.26 Employment Agreement, by and between Cboe Global Markets, Inc. and Edward Tilly, dated February 11, 2020, incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K (File No. 001-34774) filed on February 14, 2020.\*
- 10.27 Mark S. Hemsley resignation letter dated October 30, 2019, incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K (File No. 001-34774) filed on November 1, 2019.\*
- 10.28 Offer Letter Agreement for David Howson, dated December 19, 2019, incorporated by reference to Exhibit 10.28 to the Company's Annual Report on Form 10-K for the year ended December 31, 2019 (File No. 001-34774) filed on February 22, 2020.\*
- 10.29 Form of UK Executive Employment Agreement between Bats Global Markets, Inc. and certain executive officers, incorporated by reference to Exhibit 10.16 to Amendment No. 3 to Bats Global Markets, Inc.'s Registration Statement on Form S-1 (File No. 333-208565) filed on April 4, 2016.\*
- 10.30 Cboe Exchange, Inc. (f/k/a Chicago Board Options Exchange, Incorporated) Executive Retirement Plan, incorporated by reference to Exhibit 10.13 to Amendment No. 4 to the Company's Registration Statement on Form S-4 (File No. 333-140574) filed on August 14, 2009.\*



- 10.31 Amendments to the Cboe Exchange, Inc. (f/k/a Chicago Board Options Exchange, Incorporated) Executive Retirement Plan, incorporated by reference to Exhibit 10.13 to the Company's Annual Report on Form 10-K for the year ended December 31, 2016 (File No. 001-34774) filed on February 22, 2017.\*
- 10.32 Cboe Exchange, Inc. (f/k/a Chicago Board Options Exchange, Incorporated) Supplemental Retirement Plan, incorporated by reference to Exhibit 10.14 to Amendment No. 4 to the Company's Registration Statement on Form S-4 (File No. 333-140574) filed on August 14, 2009.\*
- 10.33 Amendment No. 1 to the Cboe Exchange, Inc. (f/k/a Chicago Board Options Exchange, Incorporated) Supplemental Retirement Plan, incorporated by reference to Exhibit 10.3 to the Company's Quarterly Report on Form 10-Q for the quarter ended September 30, 2010 (File No. 001-34774) filed on November 12, 2010.\*
- 10.34 Amendments to the Cboe Exchange, Inc. (f/k/a Chicago Board Options Exchange, Incorporated) Supplemental Retirement Plan, incorporated by reference to Exhibit 10.18 to the Company's Annual Report on Form 10-K for the year ended December 31, 2016 (File No. 001-34774) filed on February 22, 2017.\*
- 10.35 Cboe Exchange, Inc. (f/k/a Chicago Board Options Exchange, Incorporated) Deferred Compensation Plan for Officers, incorporated by reference to Exhibit 10.15 to Amendment No. 4 to the Company's Registration Statement on Form S-4 (File No. 333-140574) filed on August 14, 2009.\*
- 10.36 Amendments to the Cboe Exchange, Inc. (f/k/a Chicago Board Options Exchange, Incorporated) Deferred Compensation Plan for Officers, incorporated by reference to Exhibit 10.16 to the Company's Annual Report on Form 10-K for the year ended December 31, 2016 (File No. 001-34774) filed on February 22, 2017.\*
- 10.37 Cboe Global Markets, Inc. Executive Severance Plan, incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K (File No. 001-34774) filed on August 2, 2018.\*
- 10.38 Cboe Global Markets, Inc. Amended and Restated Executive Severance Plan, incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K (File No. 001-34774) filed on February 12, 2021.\*
- 10.39 Bats Global Markets, Inc. 2009 Stock Option Plan, incorporated by reference to Exhibit 10.1 to Bats Global Markets, Inc.'s Registration Statement on Form S-1 (File No. 333-208565) filed on December 16, 2015.\*
- 10.40 Bats Global Markets, Inc. Third Amended and Restated 2012 Equity Incentive Plan, incorporated by reference to Exhibit 10.2 to Bats Global Markets, Inc.'s Registration Statement on Form S-1 (File No. 333-208565) filed on December 16, 2015.\*
- 10.41 Form of Stock Option Award Agreement pursuant to the Bats Global Markets, Inc. 2009 Stock Option Plan, incorporated by reference to Exhibit 10.3 to Bats Global Markets, Inc.'s Registration Statement on Form S-1 (File No. 333-208565) filed on December 16, 2015.\*
- 10.42 Form of Stock Option Award Agreement pursuant to the Bats Global Markets, Inc. Third Amended and Restated 2012 Equity Incentive Plan, incorporated by reference to Exhibit 10.4 to Bats Global Markets, Inc.'s Registration Statement on Form S-1 (File No. 333-208565) filed on December 16, 2015.\*
- 10.43 Form of Restricted Stock Award Agreement pursuant to the Bats Global Markets, Inc. Third Amended and Restated 2012 Equity Incentive Plan, incorporated by reference to Exhibit 10.5 to Bats Global Markets, Inc.'s Registration Statement on Form S-1 (File No. 333-208565) filed on December 16, 2015.\*
- 10.44 Bats Global Markets, Inc. 2016 Omnibus Incentive Plan, incorporated by reference to Exhibit 99.3 to Bats Global Markets, Inc.'s Registration Statement on Form S-8 (File No. 333-210841) filed on April 20, 2016.\*
- 10.45 Form of Restricted Stock Award Agreement under Bats Global Markets, Inc. 2016 Omnibus Incentive Plan, incorporated by reference to Exhibit 10.7 to the Company's Quarterly Report on Form 10-Q for the quarter ended March 31, 2017 (File No. 001-34774) filed on May 11, 2017.\*
- 10.46 Cboe Global Markets, Inc. Employee Stock Purchase Plan, incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K (File No. 001-34774) filed on May 18, 2018.\*
- 10.47 Second Amended and Restated Cboe Global Markets, Inc. (f/k/a CBOE Holdings, Inc.) Long-Term Incentive Plan, incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K (File No. 001-34774) filed on May 24, 2016.\*
- 10.48 Form of Restricted Stock Award Agreement (for Non-employee Directors), incorporated by reference to Exhibit 10.17 to the Company's Quarterly Report on Form 10-Q for the quarter ended March 31, 2017 (File No. 001-34774) filed on May 11, 2017.\*

- 10.49 Form of Restricted Stock Award Agreement (for Non-employee CDN Directors), incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K (File No. 001-34774) filed on August 2, 2019.
- 10.50 Form of 2017 Restricted Stock Unit Award Agreement (for Executive Officers), incorporated by reference to Exhibit 10.34 to the Company's Annual Report on Form 10-K for the year ended December 31, 2016 (File No. 001-34774) filed on February 22, 2017.\*
- 10.51 Form of 2017 Restricted Stock Unit Award Agreement (relative total shareholder return), incorporated by reference to Exhibit 10.35 to the Company's Annual Report on Form 10-K for the year ended December 31, 2016 (File No. 001-34774) filed on February 22, 2017.\*
- 10.52 Form of Restricted Stock Unit Award Agreement (3 Year Cliff Vest), incorporated by reference to Exhibit 10.36 to the Company's Annual Report on Form 10-K for the year ended December 31, 2016 (File No. 001-34774) filed on February 22, 2017.\*
- 10.53 Form of 2018 Restricted Stock Unit Award Agreement (for Executive Officers), incorporated by reference to Exhibit 10.58 to the Company's Annual Report on Form 10-K for the year ended December 31, 2017 (File No. 001-34774) filed on February 22, 2018.\*
- 10.54 Form of 2018 Restricted Stock Unit Award Agreement (relative total shareholder return), incorporated by reference to Exhibit 10.59 to the Company's Annual Report on Form 10-K for the year ended December 31, 2017 (File No. 001-34774) filed on February 22, 2018.\*
- 10.55 Form of 2018 Restricted Stock Unit Award Agreement (earnings per share), incorporated by reference to Exhibit 10.60 to the Company's Annual Report on Form 10-K for the year ended December 31, 2017 (File No. 001-34774) filed on February 22, 2018.\*
- 10.56 Form of Restricted Stock Unit Award Agreement (3 Year Cliff Vest), incorporated by reference to Exhibit 10.2 to the Company's Current Report on Form 8-K (File No. 001-34774) filed on May 18, 2018.\*
- 10.57 Form of 2019 Restricted Stock Unit Award Agreement (for Executive Officers), incorporated by reference to Exhibit 10.64 to the Company's Annual Report on Form 10-K for the year ended December 31, 2018 (File No. 001-34774) filed on February 22, 2019.\*
- 10.58 Form of 2019 Restricted Stock Unit Award Agreement (relative total shareholder return), incorporated by reference to Exhibit 10.65 to the Company's Annual Report on Form 10-K for the year ended December 31, 2018 (File No. 001-34774) filed on February 22, 2019.\*
- 10.59 Form of 2019 Restricted Stock Unit Award Agreement (earnings per share), incorporated by reference to Exhibit 10.66 to the Company's Annual Report on Form 10-K for the year ended December 31, 2018 (File No. 001-34774) filed on February 22, 2019.\*
- 10.60 Form of 2019 Restricted Stock Unit Award Agreement (3 Year Cliff Vest), incorporated by reference to Exhibit 10.67 to the Company's Annual Report on Form 10-K for the year ended December 31, 2018 (File No. 001-34774) filed on February 22, 2019.\*
- 10.61 Form of 2020 Edward Tilly Restricted Stock Unit Award Agreement (relative total shareholder return), incorporated by reference to Exhibit 10.2 to the Company's Current Report on Form 8-K (File No. 001-34774) filed on February 14, 2020.\*
- 10.62 Form of 2020 Edward Tilly Restricted Stock Unit Award Agreement (earnings per share), incorporated by reference to Exhibit 10.3 to the Company's Current Report on Form 8-K (File No. 001-34774) filed on February 14, 2020.\*
- 10.63 Form of 2020 Restricted Stock Unit Award Agreement (for Executive Officers), incorporated by reference to Exhibit 10.66 to the Company's Annual Report on Form 10-K for the year ended December 31, 2019 (File No. 001-34774) filed on February 22, 2020.\*
- 10.64 Form of 2020 Restricted Stock Unit Award Agreement (relative total shareholder return), incorporated by reference to Exhibit 10.67 to the Company's Annual Report on Form 10-K for the year ended December 31, 2019 (File No. 001-34774) filed on February 22, 2020.\*
- 10.65 Form of 2020 Restricted Stock Unit Award Agreement (earnings per share), incorporated by reference to Exhibit 10.68 to the Company's Annual Report on Form 10-K for the year ended December 31, 2019 (File No. 001-34774) filed on February 22, 2020.\*

- 10.66 Form of 2020 Restricted Stock Unit Award Agreement (3 Year Cliff Vest), incorporated by reference to Exhibit 10.69 to the Company's Annual Report on Form 10-K for the year ended December 31, 2019 (File No. 001-34774) filed on February 22, 2020.\*
- 10.67 Form of 2021 Edward Tilly Restricted Stock Unit Award Agreement (relative total shareholder return) (filed herewith).\*
- 10.68 Form of 2021 Edward Tilly Restricted Stock Unit Award Agreement (earnings per share) (filed herewith).\*
- 10.69 Form of 2021 Restricted Stock Unit Award Agreement (for Executive Officers) (filed herewith).\*
- 10.70 Form of 2021 Restricted Stock Unit Award Agreement (relative total shareholder return) (filed herewith).\*
- 10.71 Form of 2021 Restricted Stock Unit Award Agreement (earnings per share) (filed herewith).\*
- 21.1 Subsidiaries of Cboe Global Markets, Inc. (filed herewith).
- 23.1 Consent of Independent Registered Public Accounting Firm (filed herewith).
- 23.2 Consent of Independent Registered Public Accounting Firm (filed herewith).
- 24.1 Powers of Attorney (incorporated by reference to the signature page of this Annual Report on Form 10-K).
- 31.1 Certification of Chief Executive Officer pursuant to Rule 13a-14 (filed herewith).
- 31.2 Certification of Chief Financial Officer pursuant to Rule 13a-14 (filed herewith).
- 32.1 Certificate of Chief Executive Officer pursuant to Rule 13a-14(b) and Section 1350 of Chapter 63 of Title 18 of the United States Code (filed herewith).
- 32.2 Certificate of Chief Financial Officer pursuant to Rule 13a-14(b) and Section 1350 of Chapter 63 of Title 18 of the United States Code (filed herewith).
- 101.INS iXBRL Instance Document (filed herewith).
- 101.SCH iXBRL Taxonomy Extension Schema Document (filed herewith).
- 101.CAL iXBRL Taxonomy Extension Calculation Linkbase Document (filed herewith).
- 101.DEF iXBRL Taxonomy Extension Definition Linkbase (filed herewith).
- 101.LAB iXBRL Taxonomy Extension Label Linkbase Document (filed herewith).
- 101.PRE iXBRL Taxonomy Extension Presentation Linkbase Document (filed herewith).
- 104 Cover Page Interactive Data File (embedded as Inline XBRL document).

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\*Indicates Management Compensatory Plan, Contract or Arrangement.

\*\*Schedules have been omitted pursuant to Item 601(b)(2) of Regulation S-K. A copy of any omitted schedule will be furnished supplementally to the Securities and Exchange Commission upon request.

+Certain confidential portions (as indicated therein) of this exhibit have been omitted.

**Item 16. Form 10-K Summary**

None.

## SIGNATURES

Pursuant to the requirements of the Securities Act of 1934, the Registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

Cboe Global Markets, Inc.  
(Registrant)

Date: February 19, 2021

By: /s/ Brian N. Schell  
Name: **Brian N. Schell**  
Title: **Executive Vice President and Chief Financial Officer (Principal Financial Officer)**

## POWERS OF ATTORNEY

KNOW ALL PERSONS BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints Edward T. Tilly, as attorney-in-fact and agent, with full power of substitution and re-substitution, to sign on his or her behalf, individually and in any and all capacities, including the capacities stated below, any and all amendments to this Annual Report on Form 10-K for the year ended December 31, 2020 and to file the same, with all exhibits thereto, and other documents in connection therewith, with the Securities and Exchange Commission, granting to said attorney-in-fact and agent, full power and authority to do and perform each and every act and thing requisite and necessary to be done in and about the premises, as fully to all intents and purposes as he or she might or could do in person, hereby ratifying and confirming all that said attorney-in-fact and agent, or his substitute, may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the registrant and in the capacities on the dates indicated.

<u>SIGNATURE</u>	<u>TITLE</u>	<u>DATE</u>
<u>/s/ EDWARD T. TILLY</u> Edward T. Tilly	Chairman, President, and Chief Executive Officer (Principal Executive Officer)	February 19, 2021
<u>/s/ BRIAN N. SCHELL</u> Brian N. Schell	Executive Vice President, Chief Financial Officer and Treasurer (Principal Financial Officer)	February 19, 2021
<u>/s/ JILL M. GRIEBENOW</u> Jill M. Griebenow	Senior Vice President and Chief Accounting Officer (Principal Accounting Officer)	February 19, 2021
<u>/s/ WILLIAM M. FARROW III</u> William M. Farrow III	Director	February 19, 2021
<u>/s/ EDWARD J. FITZPATRICK</u> Edward J. Fitzpatrick	Director	February 19, 2021
<u>/s/ IVAN K. FONG</u> Ivan K. Fong	Director	February 19, 2021
<u>/s/ JANET P. FROETSCHER</u> Janet P. Froetscher	Director	February 19, 2021
<u>/s/ JILL R. GOODMAN</u> Jill R. Goodman	Director	February 19, 2021

<u>SIGNATURE</u>	<u>TITLE</u>	<u>DATE</u>
<u>/s/ ALEXANDER J. MATTURRI</u> Alexander J. Matturri	Director	February 19, 2021
<u>/s/ JENNIFER J. McPEEK</u> Jennifer J. McPeek	Director	February 19, 2021
<u>/s/ RODERICK A. PALMORE</u> Roderick A. Palmore	Director	February 19, 2021
<u>/s/ JAMES E. PARISI</u> James E. Parisi	Director	February 19, 2021
<u>/s/ JOSEPH P. RATTERMAN</u> Joseph P. Ratterman	Director	February 19, 2021
<u>/s/ MICHAEL L. RICHTER</u> Michael L. Richter	Director	February 19, 2021
<u>/s/ JILL E. SOMMERS</u> Jill E. Sommers	Director	February 19, 2021
<u>/s/ EUGENE S. SUNSHINE</u> Eugene S. Sunshine	Director	February 19, 2021
<u>/s/ FREDRIC J. TOMCZYK</u> Fredric J. Tomczyk	Director	February 19, 2021

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# Investor Information

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## Stock Listing

Cboe Global Markets, Inc.'s common stock is listed on the Cboe BZX Exchange, Inc. under the ticker symbol "CBOE." On December 31, 2020, there were 107,299,933 shares of common stock outstanding.

## Annual Meeting

The 2021 Annual Meeting of Stockholders will be held on Thursday, May 13, 2021, at 9:00 a.m. Central Time, via a live webcast at [www.virtualshareholdermeeting.com/cboe2021](http://www.virtualshareholdermeeting.com/cboe2021).

Holders of common stock of record at the close of business on March 18, 2021 are entitled to vote at the Annual Meeting. A notice of meeting, proxy statement and proxy card or voting instructions were provided to stockholders of record with this Form 10-K.

## Transfer Agent

Registered stockholders can access their account online. Log on to [www.shareholder.broadridge.com/cboe](http://www.shareholder.broadridge.com/cboe) to view share balance, change address, complete certain transactions and get answers to other stock related inquiries. You can also write or call the Cboe transfer agent at:

Broadridge Corporate Issuer Solutions, Inc.  
P.O. Box 1342  
Brentwood, NY 11717  
Telephone: 866-301-8223  
720-399-2148 (Outside the U.S.)  
Website: [www.shareholder.broadridge.com/cboe](http://www.shareholder.broadridge.com/cboe)

## Investor Relations

Direct inquiries to:  
Investor Relations  
Cboe Global Markets, Inc.  
400 South LaSalle Street  
Chicago, IL 60605  
Phone: 312-786-7136  
E-mail: [investorrelations@cboe.com](mailto:investorrelations@cboe.com)

Investor information is available on the Investor Relations section of the Cboe website, <http://ir.cboe.com>, including SEC filings, quarterly earnings releases, webcasts and presentations, press releases, information on corporate governance and a variety of stockholder resources, including historical stock information, dividend payments, an investor FAQ and a list of analysts who cover the company.

## Corporate Social Responsibility Report

This report provides insight into Cboe's approach to ESG with the goal of demonstrating how ESG practices are integrated within our strategy, business processes and culture. You can read the report online at <https://ir.cboe.com/investor-overview#corporate-social-responsibility>, which does not form a part of this annual report.

## Corporate Information

Cboe Global Markets provides cutting-edge trading and investment solutions to market participants around the world. The company is committed to defining markets through product innovation, leading edge technology and seamless trading solutions.

The company offers trading across a diverse range of products in multiple asset classes and geographies, including options, futures, U.S., Canadian and European equities, exchange-traded products (ETPs), global foreign exchange (FX) and volatility products based on the Cboe Volatility Index (VIX Index), recognized as the world's premier gauge of U.S. equity market volatility.

Cboe's subsidiaries include the largest options exchange and the third largest stock exchange operator in the U.S. The company owns BIDS Trading and MATCHNow, operators of leading Alternative Trading Systems (ATS) in the U.S. and Canada, respectively. In addition, the company operates one of the largest stock exchanges by value traded in Europe, and owns EuroCCP, a leading pan-European equities clearing house. Cboe is also a leading market globally for ETP listings and trading.

The company is headquartered in Chicago with a network of domestic and global offices across the Americas, Europe and Asia, including main hubs in New York, London, Kansas City and Amsterdam. For more information, visit [www.cboe.com](http://www.cboe.com).

## Independent Auditors for the 2020 Fiscal Year

KPMG LLP  
Chicago, IL



**Cboe**<sup>®</sup>  
Global Markets