

 **Market Axess<sup>®</sup>**

The logo features a stylized 'X' symbol composed of two intersecting lines, one blue and one grey, positioned to the left of the text 'Market Axess'.

# 2021

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Proxy Statement  
and Notice of  
Annual Meeting  
of Stockholders





Dear Fellow Stockholders and Clients,

MarketAxess achieved its 12<sup>th</sup> consecutive year of record revenue and earnings in 2020, driven by strong gains in trading volume and market share across all of our core credit products. Despite the challenges of the pandemic, we made substantial progress on our growth strategy, positioning MarketAxess to further capitalize on the enormous opportunity that remains in the electronic transformation of the \$100 trillion global fixed income market.

In 2020, annual revenue rose 35% to a record \$689.1 million, and annual operating profit was up 49% to a record \$374.7 million. Last year's results brought the five-year compound annual growth rate (CAGR) for our earnings per share to 25% and the five-year CAGR in revenue to 18%. During those five years, the MKTX share price rose from \$111.59 to \$570.59, a gain of 411%. With the most recent increase in the quarterly dividend to \$0.66 per share, we have tripled our payout over the past five years, demonstrating growth in earnings and free cash flow generation.

Our 2020 results were driven by advances in our three main strategic objectives: 1) increasing our penetration in new and existing markets, 2) expanding Open Trading®, well established as the leading all-to-all marketplace in fixed-income, and 3) continuing to invest in and grow our international business.

Last year's broad-based gains in market share highlighted our increased penetration within core markets and the strength of our competitive position. Our U.S. high grade trading volume as a percentage of FINRA's high-grade TRACE trading volume increased to an estimated 21.6% in 2020, compared to an estimated 19.0% share in 2019.

Our biggest market share gains in 2020 came from our U.S. high-yield business, which saw full year estimated market share grow to 14.6%, up from 10.4% in 2019. This is a large and growing segment of global credit markets, and Open Trading is creating new trading opportunities in high-yield for investors and dealers.

Our international business continued to make strong contributions to our growth in 2020. We ended the year with a total of over 1,800 firms active on our network, of which approximately 900 were international client firms, up approximately 150% from five years ago. Trading volume conducted by international clients now comprises 29% of overall credit trading on the platform, up from 17% in 2015.

Growth in our emerging markets trading business has also accelerated with approximately 60% of volume being conducted by international clients. Total emerging markets volume in 2020 reached a record \$562 billion, up 15% from the prior year. In hard-currency denominated debt, volume conducted via Open Trading is now 42% of overall emerging market volume, up from 34% the prior year. The mix of liquidity in both hard-currency and local-currency denominated emerging markets debt, plus access to a global liquidity network through Open Trading, makes our trading platforms an attractive solution for international participants.

We are increasingly using selective acquisitions to expand our product capabilities and client network. In 2020, we built upon the new opportunity in the Rates space following our acquisition of Liquidity Edge in late 2019. We are now able to offer government bond trading

and credit hedging solutions to our dealer and investor clients. We have expanded our European post trade reporting business and client base through the acquisition of the Regulatory Reporting Hub in late 2020. And finally, in April 2021 we acquired an important piece of the municipal bond trading infrastructure through the acquisition of MuniBrokers. All of these acquisitions contribute to important new growth opportunities for our investors.

We will look back on 2020 as a pivotal year in which Open Trading established itself as an essential source of liquidity in global fixed-income markets. In the initial months of 2020, the emerging pandemic played a significant role in boosting electronic volumes and expanding Open Trading adoption. While working from home, thousands of institutional traders worldwide remained connected to the market by relying on electronic trading and Open Trading protocols to navigate through a period of market stress and dislocation.

While overall credit trading on MarketAxess increased 29% in 2020 to a new record, Open Trading credit trading volume surged 61% and now accounts for a third of our total volume. Open Trading now typically delivers institutions more than 25,000 daily trading opportunities and \$16 billion in notional value in credit products, with more than 1,600 firms engaging in this central global marketplace. As 2020 progressed, adoption rates continued to accelerate even as markets returned to more normal conditions. Driving the adoption pace were both traditional asset managers and dealers, as well as new market participants, such as systematic funds and ETF market makers.

Clients who used Open Trading in 2020 saved an estimated total of \$1.1 billion in transaction costs, which significantly exceeds the Company's total revenue in 2020. Such savings stand out in a period in which investors are highly focused on execution costs and expense ratios.

Throughout the year, we continued to invest in and deliver innovative client solutions and services in support of Open Trading, even as our teams around the world worked remotely. These advances included the launch of Live Markets, our order-book for actively traded and newly issued corporate bonds, as well as Mid-X, our sessions-based matching platform that utilizes our artificial intelligence-powered Composite+ pricing engine.

Momentum in the adoption of automated execution tools across our platform accelerated in 2020. The volume of trades using our Auto-X solution rose 60% in 2020 to \$126 billion. In 2020, the number of algo price responses stood 52% higher than 2019, and the number of algo-related trades were up 37%. Responding to this growing demand for automated execution, we launched Dealer Direct, which allows the dealer community to stream prices to investor clients with enhanced visibility management and strong protection against information leakage.

As we look ahead, we are reminded that the world's fixed income markets are still in the early stages of an electronic transformation. Greenwich Associates, a leading consulting firm, estimates that corporate bond electronic trading now accounts for a third of the volume in investment grade securities, and that's just one segment – albeit an important one – of global credit markets. To put the opportunity in context, the top 5 global banks alone had Fixed Income, Currency and Commodity revenue of \$84 billion in 2020 and we currently estimate that aggregate revenues in the fixed income e-trading space are approximately \$2 billion. We believe that this demonstrates the incredible opportunity that lies ahead of us, particularly as

the demand for more efficient and cost effective ways of trading grows. Our market leadership and robust technology and data capabilities position us well to capitalize on this opportunity.

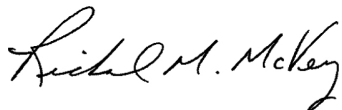
Events of 2020 also inspired an even deeper commitment to our vision of MarketAxess as a company in which individuals of all backgrounds can find opportunity and a work environment of mutual respect. Mindful of the economic pressures caused by the pandemic, we moved to engage more broadly with communities to provide needed support, including significant contributions made to City Harvest in both New York and London. We're also making a commitment to the environment by planting over 130,000 trees in critical regions across the world through our 'Trading for Trees' program linked to Green Bond trading activity on the platform. I urge you to download our 2020 ESG Report in the *Investor Relations — Corporate Governance* section of our website to learn more about these initiatives.

Since our founding 21 years ago, we have taken pride in our strong governance and the outstanding quality of our board of directors. We are particularly proud that a leading ESG ratings firm scores us in the highest scoring range for governance relative to our global peers.

In 2020, Kourtney Gibson, President of Loop Capital Markets, one of the largest privately-held investment banking, brokerage and advisory firms headquartered in the U.S., was elected to our Board, increasing the number of women directors from three to four. Kourtney is a member of The Economic Club of Chicago and the Treasury Market Practices Group sponsored by the Federal Reserve Bank of New York.

Looking ahead, we share in the hope for a return to our normal lives and the pleasures and rewards of spending time in the company of our family, friends and colleagues. In the meantime, I want to express again my deep gratitude to all MarketAxess employees for their dedication to our clients and to each other in a stressful time.

Sincerely

A handwritten signature in black ink that reads "Richard M. McVey". The signature is written in a cursive, flowing style.

Richard M. McVey  
Chairman of the Board and Chief Executive Officer  
April 28, 2021





**MarketAxess Holdings Inc.  
55 Hudson Yards, 15th Floor  
New York, New York 10001**

April 28, 2021

TO THE STOCKHOLDERS OF MARKETAXESS HOLDINGS INC.:

You are invited to attend the 2021 Annual Meeting of Stockholders (the "Annual Meeting") of MarketAxess Holdings Inc. (the "Company") scheduled for Wednesday, June 9, 2021 at 10:00 a.m., Eastern Daylight Time. The Annual Meeting will be a virtual meeting of stockholders. You will be able to participate in the Annual Meeting, vote and submit your questions via live webcast by visiting [www.virtualshareholdermeeting.com/MKTX2021](http://www.virtualshareholdermeeting.com/MKTX2021). The Company's Board of Directors and management look forward to your participation.

Details of the business to be conducted at the Annual Meeting are given in the attached Notice of Annual Meeting and Proxy Statement, which you are urged to read carefully.

We are pleased to take advantage of the Securities and Exchange Commission rules that allow issuers to furnish proxy materials to their stockholders on the Internet. We believe these rules allow us to provide our stockholders with the information they need, while lowering the costs of delivery and reducing the environmental impact of our Annual Meeting. On April 28, 2021, we expect to mail to our stockholders a Notice containing instructions on how to access our Proxy Statement and Annual Report on Form 10-K for the year ended December 31, 2020 and vote online. The Notice contains instructions on how you can receive a paper copy of the Proxy Statement, proxy card and Annual Report if you only received a Notice by mail.

Your vote is important to us. Whether or not you plan to attend the Annual Meeting, your shares should be represented and voted. After reading the enclosed Proxy Statement, please cast your vote via the Internet or telephone or complete, sign, date and return the proxy card in the pre-addressed envelope that we have included for your convenience. If you hold your shares in a stock brokerage account, please check your proxy card or contact your broker or nominee to determine whether you will be able to vote via the Internet or by telephone.

On behalf of the Board of Directors, thank you for your continued support.

Sincerely,

A handwritten signature in black ink that reads 'Richard M. McVey'.

Richard M. McVey  
*Chairman and Chief Executive Officer*

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# NOTICE OF 2021 ANNUAL MEETING OF STOCKHOLDERS

Attend the Annual Meeting at:

[www.virtualshareholdermeeting.com/MKTX2021](http://www.virtualshareholdermeeting.com/MKTX2021)

Your vote is very important, regardless of the number of shares you own. Please read the attached proxy statement carefully and complete and submit your proxy card via the internet or sign and date your paper proxy card as promptly as possible and return it in the enclosed envelope. Alternatively, you may be able to submit your proxy by touch-tone phone as indicated on the proxy card.

## TO THE STOCKHOLDERS OF MARKETAXESS HOLDINGS INC.:

NOTICE IS HEREBY GIVEN that the 2021 Annual Meeting of Stockholders (the "Annual Meeting") of MarketAxess Holdings Inc., a Delaware corporation (the "Company"), will be held via live webcast on Wednesday, June 9, 2021, at 10:00 a.m., Eastern Daylight Time. You can participate in the Annual Meeting, vote and submit your questions during the Annual Meeting by visiting [www.virtualshareholdermeeting.com/MKTX2021](http://www.virtualshareholdermeeting.com/MKTX2021). You must have your 16-digit control number included on your Notice of Internet Availability of Proxy Materials or your proxy card (if you received a printed copy of the proxy materials) to join the Annual Meeting.

At the Annual Meeting we will:

1. vote to elect the 12 nominees named in the attached Proxy Statement as members of the Company's Board of Directors for terms expiring at the 2022 Annual Meeting of Stockholders;
2. vote to ratify the appointment of PricewaterhouseCoopers LLP as the Company's independent registered public accounting firm for the year ending December 31, 2021;
3. hold an advisory vote to approve the compensation of the Company's named executive officers as disclosed in the attached Proxy Statement; and
4. transact such other business as may properly come before the Annual Meeting or any adjournment or postponement thereof.

These items are more fully described in the Company's Proxy Statement accompanying this Notice.

The record date for the determination of the stockholders entitled to notice of, and to vote at, the Annual Meeting, or any adjournment or postponement thereof, was the close of business on April 12, 2021. You have the right to receive this Notice and vote at the Annual Meeting if you were a stockholder of record at the close of business on April 12, 2021. Please remember that your shares cannot be voted unless you cast your vote by one of the following methods: (1) vote via the Internet or call the toll-free number as indicated on the proxy card; (2) sign and return a paper proxy card; or (3) vote during the Annual Meeting at [www.virtualshareholdermeeting.com/MKTX2021](http://www.virtualshareholdermeeting.com/MKTX2021).

By Order of the Board of Directors,



**Scott Pintoff**

General Counsel and Corporate Secretary  
New York, New York  
April 28, 2021



### BY INTERNET

Visit 24/7

[www.proxyvote.com](http://www.proxyvote.com)



### BY PHONE

Call 1-800-690-6903

in the U.S. or Canada to vote your shares



### BY MAIL

Cast your ballot, sign your proxy card and return



### PARTICIPATE IN THE ANNUAL MEETING

Vote during the Annual Meeting at [www.virtualshareholdermeeting.com/MKTX2021](http://www.virtualshareholdermeeting.com/MKTX2021) using your 16-digit control number

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# PROXY SUMMARY

This summary contains highlights about MarketAxess Holdings Inc. (“MarketAxess”, the “Company”, “we” or “our”) and the upcoming 2021 Annual Meeting of Stockholders (the “Annual Meeting”). This summary does not contain all of the information you should consider in advance of the Annual Meeting and we encourage you to read the entire Proxy Statement before voting.

This Proxy Statement, the accompanying Notice of Annual Meeting of Stockholders and proxy card are first being mailed to stockholders on or about April 28, 2021. Whenever we refer in this Proxy Statement to the “Annual Meeting,” we are also referring to any meeting that results from any postponement or adjournment of the June 9, 2021 meeting.

## Annual Meeting information

Date and Time: Wednesday, June 9, 2021, at 10:00 a.m., Eastern Daylight Time  
Virtual Meeting: [www.virtualshareholdermeeting.com/MKTX2021](http://www.virtualshareholdermeeting.com/MKTX2021)  
Record Date: Monday, April 12, 2021

Due to the continuing public health impact of the coronavirus outbreak (COVID-19) (the “Pandemic”) and to support the health and well-being of our stockholders and other participants at the Annual Meeting, the Annual Meeting will be held in virtual format only.

## Voting items

The following table summarizes the items that we are asking our stockholders to vote on at the Annual Meeting, along with the voting recommendations of our Board of Directors (the “Board” or “Board of Directors”).

Item	Board Recommendation	Required Approval	Page Reference
1. Election of Directors	FOR	Majority of votes cast for each nominee	2
2. Ratification of the appointment of PricewaterhouseCoopers LLP as the Company’s independent registered public accounting firm for the year ending December 31, 2021	FOR	Majority of shares present and entitled to vote	23
3. Advisory vote to approve the compensation of the Company’s named executive officers as disclosed in the attached Proxy Statement	FOR	Majority of shares present and entitled to vote	74

## How to vote

Your vote is important. Stockholders of record as of the Record Date are entitled to vote through one of the following options:

By Mail: Cast your ballot, sign your proxy card and return.  
Via the Internet: To vote before the meeting, visit [www.proxyvote.com](http://www.proxyvote.com).  
To vote at the meeting, visit [www.virtualshareholdermeeting.com/MKTX2021](http://www.virtualshareholdermeeting.com/MKTX2021). You will need the control number printed on your notice, proxy card or voting instruction form.  
By Telephone: Call the phone number located on your proxy card.

# PROPOSAL 1 — ELECTION OF DIRECTORS

The first proposal to be voted on at the Annual Meeting is the election of directors. Our Board currently consists of 13 directors, 11 of whom are not our employees. Each of the nominees for director was elected by the Company's stockholders on June 10, 2020, except for Kourtney Gibson, who was appointed to the Board as of July 16, 2020. The directors are nominated for a term that begins at the Annual Meeting and ends at the 2022 Annual Meeting of Stockholders. Each director will hold office until such director's successor has been elected and qualified, or until such director's earlier resignation, retirement or removal. The Board will continue to evaluate its composition as part of its focus on self-assessment and board refreshment.

John Steinhardt, who has been a director since April 2000, has not been re-nominated and will not stand for reelection. Mr. Steinhardt's service as a director on the Board will cease as of the date of the Annual Meeting. Following the Annual Meeting, and assuming the election of each director nominee, our Board will consist of 12 directors, 10 of whom are not our employees. The Company thanks Mr. Steinhardt for his twenty-one years of service.

## Your vote

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If you sign the enclosed proxy card and return it to the Company, your proxy will be voted **FOR** all directors, for terms expiring at the 2022 Annual Meeting of Stockholders, unless you specifically indicate on the proxy card that you are casting a vote against one or more of the nominees or abstaining from such vote.

A majority of the votes cast by stockholders entitled to vote at the Annual Meeting is required for the election of each director. Abstentions and broker non-votes will have no effect on the outcome of the vote.



### BOARD RECOMMENDATION

**The board unanimously recommends that you vote "FOR" the election of each of the following nominees:**

- Richard M. McVey
- Nancy Altobello
- Steven L. Begleiter
- Stephen P. Casper
- Jane Chwick
- Christopher R. Concannon
- William F. Cruger
- Kourtney Gibson
- Justin G. Gmelich
- Richard G. Ketchum
- Emily H. Portney
- Richard L. Prager

Each of these nominees is currently serving as a director on our Board, and each nominee has agreed to continue to serve on the Board if he or she is elected at the Annual Meeting. If any nominee is unable (or for good cause declines) to serve as a director at any time before the Annual Meeting, proxies may be voted for the election of a qualified substitute designated by the current Board, or else the size of the Board will be reduced accordingly. Biographical information about each of the nominees is included below under *Director information*.

## Qualifications for director nominees

Our Board has adopted minimum qualifications for our directors:

- substantial experience working as an executive officer for, or serving on the board of, a public company;
- significant accomplishment in another field of endeavor related to the strategic running of our business; or
- an ability to make a meaningful contribution to the oversight and governance of a company having a scope and size similar to our Company.

A director must have an exemplary reputation and record for honesty in his or her personal dealings and business or professional activity. All directors must demonstrate strong leadership skills and should possess a basic understanding of financial matters; have an ability to review and understand the Company's financial and other reports; and be able to discuss such matters intelligently and effectively. He or she also needs to exhibit qualities of independence in thought and action. A candidate should be committed first and foremost to the interests of the stockholders of the Company. The key experience, qualifications and skills each of our directors brings to the Board that are important in light of our business are included in their individual biographies below.

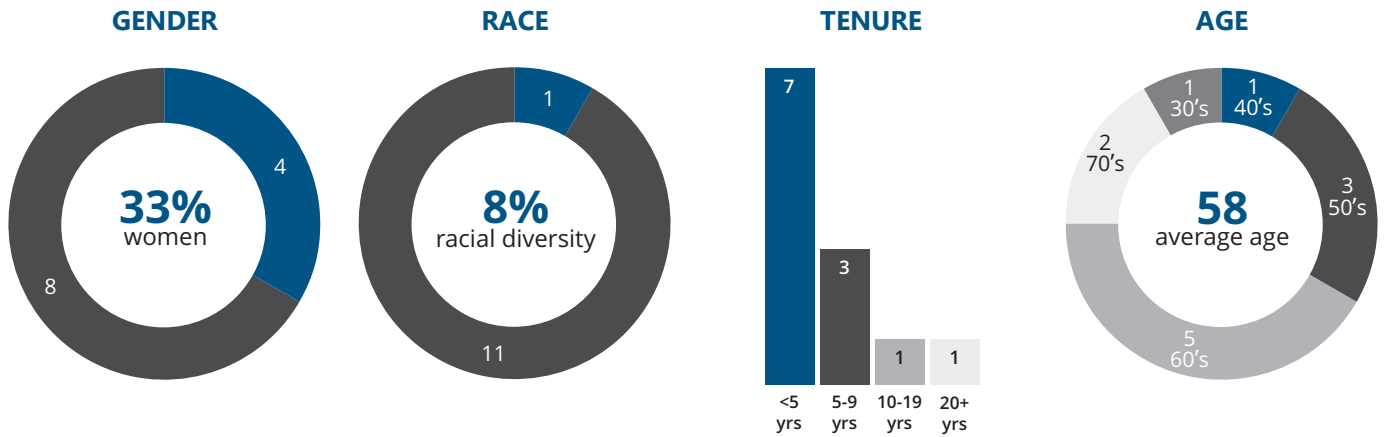
## Board of Directors skills and expertise

The Company's directors are selected on the basis of specific criteria set forth in our Corporate Governance Guidelines. All of our directors possess financial industry experience and a history of strategic leadership. In addition to those qualifications, listed below are the skills and experience that we consider important for our director nominees. More detailed information is provided in each director nominee's biography.

	Corporate Governance	Fixed Income/ Electronic Trading	Regulatory	Technology/ Cybersecurity	Mergers and Acquisitions	Finance / Accounting	Risk Management	Other Public Company Board Experience	Talent Management
Richard M. McVey	•	•	•	•	•		•		•
Nancy Altobello	•		•		•	•	•	•	•
Steven L. Begleiter	•				•	•	•	•	•
Stephen P. Casper	•	•	•		•	•	•		•
Jane Chwick	•	•		•			•	•	•
Christopher R. Concannon	•	•	•	•	•		•	•	
William F. Cruger	•	•			•	•	•	•	
Kourtney Gibson		•	•			•	•		•
Justin G. Gmelich		•	•			•	•		•
Richard G. Ketchum	•	•	•				•	•	
Emily H. Portney	•				•	•	•		•
Richard L. Prager	•	•		•	•		•		•

## Director diversity

The Company recognizes and embraces that having a diverse Board enhances both the Board’s effectiveness in fulfilling its oversight role and the Company’s performance. See “Corporate Governance and Board Matters – Board Diversity Policy” for more information. Listed below are the number of director nominees that self-identify as female or as a racial minority as well as the number of director nominees by tenure and age:





## Director information

At the recommendation of the Nominating and Corporate Governance Committee, the Board has nominated the persons named below to serve as directors of the Company for a term beginning at the Annual Meeting and ending at the 2022 Annual Meeting of Stockholders.

### Richard M. McVey



**Age:** 61  
**Director since:** April 2000  
**Chairman of the Board of Directors**  
**Board Committees:**

- None

#### Qualifications and Career Highlights:

*Richard M. McVey* has been our Chief Executive Officer and Chairman of our Board of Directors since our inception. As an employee of J.P. Morgan & Co., one of our founding broker-dealers, Mr. McVey was instrumental in the founding of MarketAxess in April 2000. Prior to founding MarketAxess, Mr. McVey was Managing Director and Head of North America Fixed-Income Sales at J.P. Morgan, where he managed the institutional distribution of fixed-income securities to investors. Mr. McVey led MarketAxess through the Company's IPO in 2004, and since that time, MarketAxess has been one of the fastest growing financial technology companies in the U.S. public markets, with industry leading total stockholder returns. Mr. McVey was named the Ernst & Young National Entrepreneur of the Year for financial services in 2012, and he has been named to the Institutional Investor Tech 40 list 15 times. Mr. McVey was a member of the U.S. Securities and Exchange Commission's ("SEC") Fixed Income Market Structure Advisory Committee, for which he chaired the Technology and Electronic Trading Sub-Committee from November 2017 to March 2021. Mr. McVey serves on the Board of Directors of Miami (Ohio) University Foundation, as well as the Board of Trustees of Colby College. He previously served on the Board of Directors of Blue Mountain Credit Alternatives L.P., an asset management fund focused on the credit markets and equity derivatives markets. Mr. McVey received a B.A. in finance from Miami (Ohio) University and an M.B.A. from Indiana University.

Mr. McVey's role as one of our founders and his service as our Chief Executive Officer for over 20 years give him deep knowledge and understanding of all aspects of the business and operations of MarketAxess. Mr. McVey's extensive experience in the financial services industry, including significant leadership roles at J.P. Morgan, has provided the Company with comprehensive knowledge of the financial markets that we serve and the institutions and dealers that are our clients.

### Nancy Altobello



**Age:** 63  
**Director since:** April 2019  
**Board Committees:**

- Audit (Chair)
- Compensation and Talent

#### Qualifications and Career Highlights:

*Nancy Altobello* was most recently Global Vice Chair, Talent of Ernst & Young ("EY"), a professional services firm, where she was responsible for EY's talent and people strategy worldwide from July 2014 until her retirement in June 2018. Previously, Ms. Altobello held a number of senior positions at EY, including Americas Vice Chair, Talent from 2008 to 2014, Managing Partner, Northeast Region Audit and Advisory Practices from 2003 to 2008 and Managing Partner, North American Audit Practice from 1999 to 2003. Throughout this time, Ms. Altobello also served as an audit partner for a number of leading global organizations. She currently serves on the Board of Directors of Cornerstone OnDemand and on the Board of Trustees of Fidelity Charitable. She previously served on the Board of Directors of MTS Systems Corporation until its acquisition and CA Technologies until its acquisition. Ms. Altobello received a B.S. in accounting from Fairfield University, earned a Corporate Director Certificate from Harvard Business School and is a licensed Certified Public Accountant in New York and Connecticut.

Ms. Altobello was selected to serve on the Board due to her financial, audit and Sarbanes Oxley compliance expertise, her knowledge of talent and people strategy, and her global business experience.

**Steven L. Begleiter**



**Age:** 59  
**Director since:** April 2012  
**Board Committees:**

- Compensation and Talent (Chair)
- Finance

**Qualifications and Career Highlights:**

*Steven L. Begleiter* has been employed with Flexpoint Ford, LLC, a private equity group focused on investments in financial services and healthcare, since October 2008, where he currently serves as Managing Director. Prior to joining Flexpoint Ford, Mr. Begleiter spent 24 years at Bear Stearns & Co., serving first as an investment banker in the Financial Institutions Group and then as Senior Managing Director and member of its Management and Compensation Committee from 2002 to September 2008. Mr. Begleiter also served as head of Bear Stearns’ Corporate Strategy Group. Mr. Begleiter currently serves on the Board of Directors of Great Ajax Corp. and certain portfolio companies of Flexpoint Ford, LLC. He previously served on the Board of Directors of WisdomTree Investments, Inc. Mr. Begleiter received a B.A. with Honors in economics from Haverford College.

Mr. Begleiter brings many years of leadership experience in the financial services and private equity industries to the Board. Mr. Begleiter also has extensive industry knowledge and expertise relating to mergers and acquisitions and capital formation.

**Stephen P. Casper**



**Age:** 71  
**Director since:** April 2004  
**Lead Independent Director**  
**Board Committees:**

- Nominating and Governance

**Qualifications and Career Highlights:**

*Stephen P. Casper* is retired. Most recently, Mr. Casper was the President of TRG Management L.P., the investment manager of the TRG Global Opportunity Master Fund, Ltd., from April 2010 to August 2012. From September 2008 to April 2010, Mr. Casper was a partner of Vastardis Capital Services, which provides fund administration and securities processing outsourcing services to hedge funds, funds of funds and private equity funds and their investment management sponsors. Prior to this, Mr. Casper was Chairman and Chief Executive Officer of Charter Atlantic Corporation, the holding company of Fischer Francis Trees & Watts, Inc. (“FFTW”), a specialist manager of U.S., global and international fixed-income portfolios for institutional clients, and Malbec Partners, a manager of single-strategy hedge funds. From April 2004 to January 2008, Mr. Casper was the President and CEO of FFTW. Mr. Casper joined FFTW as Chief Financial Officer in 1990 and was appointed Chief Operating Officer in May 2001. From 1984 until 1990, Mr. Casper was Treasurer of the Rockefeller Family Office. Mr. Casper has been a member of the Board of Directors of multiple fixed income hedge funds managed by KLS Diversified Asset Management since July 2012. Mr. Casper is Vice-Chairman of the Board of Directors of GMO LLC, a global investment management firm providing clients with asset management solutions and services, since May 2014 and a member of the Investment Committee of the Brooklyn Museum. Mr. Casper is a Certified Public Accountant and received a B.B.A. in accounting from Baruch College, from which he graduated magna cum laude, Beta Gamma Sigma, and an M.S. in finance and accounting from The Wharton School at the University of Pennsylvania.

Mr. Casper’s experience in the fixed-income markets and financial services industry and his experience in financial reporting and accounting roles bring extensive public accounting, financial reporting, risk management and leadership skills to the Board.

**Jane Chwick****Age:** 58**Director since:** October 2013**Board Committees:**

- Nominating and Governance
- Risk (Chair)

**Qualifications and Career Highlights:**

*Jane Chwick* was most recently the Co-Founder and Co-CEO of Trewtec, Inc., a technology advisory firm designed to help board members and CEOs evaluate the technology function in their companies, from September 2014 until the firm ceased operations in August 2017. Prior to this role, she was a Partner and Co-Chief Operating Officer of the Technology Division of Goldman Sachs Group, Inc. where she was responsible for financial and business planning, technical strategy and ongoing management of an 8,000-person organization until her retirement in April 2013. During her 30-year career at Goldman Sachs, Ms. Chwick held a number of senior positions, including Global Head of Technology of the Securities Division and Global Head of Derivatives Technology. Ms. Chwick served on many governance committees at Goldman Sachs, including the firm's Finance Committee, the firm-wide New Activity Committee and the Technology Risk Committee, and served as co-chair of the Technology Division Operating Committee. During her tenure, she drove the design, build and integration of technology across all of Goldman Sachs' derivatives businesses, including fixed income, commodities, currencies and equities. Ms. Chwick is a member of the Board of Directors of Voya Financial, Inc., People's United Financial, Inc., Essent Group and Thoughtworks, and also serves on the Executive Board of Trustees of the Queens College Foundation. Ms. Chwick received a B.A. in mathematics from Queens College and an M.B.A. from St. John's University with a concentration in MIS and quantitative analysis.

Ms. Chwick's extensive technology leadership experience gained in a global financial services firm, combined with her depth of market knowledge and industry insight, bring valuable skills and strategic perspective to the Board.

**Christopher R. Concannon****Age:** 53**Director since:** January 2019**Board Committees:**

- None

**Qualifications and Career Highlights:**

*Christopher R. Concannon* has been our President and Chief Operating Officer since January 2019. Mr. Concannon previously served as President and Chief Operating Officer of Cboe Global Markets, Inc., one of the world's largest exchange holding companies, a position he was appointed to upon Cboe's acquisition of Bats Global Markets, Inc. in 2017. At Cboe, he was responsible for the company's transaction businesses, including global derivatives, U.S. and European equities, and global foreign exchange – as well as overseeing Cboe's technology, operations, risk, and marketing divisions. Until Bats' acquisition by Cboe, Mr. Concannon served as President of Bats from December 2014, director from February 2015, and Chief Executive Officer from March 2015. Mr. Concannon has more than 20 years of experience as an executive at Nasdaq, Virtu Financial, Instinet and as an attorney at Morgan Lewis and Bockius and the Securities and Exchange Commission. Mr. Concannon has received a B.A. from Catholic University, an M.B.A. from St. John's University, and a J.D. from Catholic University's Columbus School of Law.

Mr. Concannon brings to the Board extensive experience leading companies in the global exchange industry. Mr. Concannon also has deep and critical knowledge regarding automated trading, the delivery of innovative technology solutions, market structure and clearing operations.

**William F. Cruger**



**Age:** 62  
**Director since:** November 2013  
**Board Committees:**

- Audit
- Finance
- Nominating and Governance (Chair)

**Qualifications and Career Highlights:**

*William F. Cruger* was most recently Vice Chairman of Investment Banking at JPMorgan Chase & Co. where he was responsible for key client relationships on a global basis until his retirement in August 2013. Previously, Mr. Cruger held a number of senior positions at J.P. Morgan, including Managing Director in the Financial Institutions group from 1996 to 2011. During this time, he oversaw the rationalization of the firm’s private equity investments in trading platforms and related ventures at LabMorgan from 2000 to 2001. Prior to this, Mr. Cruger ran the firm’s investment banking practices in Japan from 1991 to 1996, Latin America from 1989 to 1991 and Emerging Asia from 1984 to 1988. He currently serves on the Board of Directors of People’s United Financial, Inc. and Virtu Financial, Inc., and has previously served on the Boards of Directors of Archipelago, Credittrade and Capital IQ. Mr. Cruger received a B.A. from Clark University and an M.B.A. from Columbia University.

Mr. Cruger’s diverse experience in investment banking at a global financial services firm, his extensive knowledge of financial institutions and financial markets, his leadership roles as a director of other financial services firms, and his international business experience bring critical skills and strategic insight to the Board.

**Kourtney Gibson**



**Age:** 39  
**Director since:** July 2020  
**Board Committees:**

- Audit

**Qualifications and Career Highlights:**

*Kourtney Gibson* has been the President of Loop Capital Markets, an investment bank, brokerage and advisory firm, since June 2016. Prior to this role, Ms. Gibson served in various roles at Loop Capital Markets, including as Head of the Fixed Income Division from January 2015 to June 2016 and Head of the Equity Division from June 2005 to December 2015. Ms. Gibson currently serves on the Board of lululemon athletica inc. and is a member of The Economic Club of Chicago and the Treasury Market Practices Group sponsored by the Federal Reserve Bank of New York. Ms. Gibson also currently serves on the Board of Trustees at the University of Miami and Viterbo University, the Board of the Dibia Dream Foundation and as Chairman of the Board of the Chicago Scholars Foundation. Ms. Gibson received an M.B.A. from the Kellogg School of Management at Northwestern University and a B.B.A. from the University of Miami.

Ms. Gibson brings to the Board her wealth of experience relating to the evolving market structure of both the fixed income and equity markets, as well her broad-based experience with institutional investor clients.

**Justin G. Gmelich**

**Age:** 52  
**Director since:** October 2019  
**Board Committees:**

- Audit

**Qualifications and Career Highlights:**

*Justin G. Gmelich* has been a Partner and Global Head of Markets with King Street Capital Management, a global investment management company, since January 2020, where he is also a member of the Management Committee, the Global Investment Committee and the Real Estate Investment Committee. Prior to this, Mr. Gmelich was the Global Chief Operating Officer for Fixed Income, Commodities, and Currencies ("FICC") at Goldman Sachs from November 2017 to March 2019. Before being named COO of FICC, Mr. Gmelich was Global Head of Credit at Goldman Sachs since March 2012. Additionally, while at Goldman Sachs, he was a member of the Firm's Management Committee, Firmwide Risk Committee, Securities Division Executive Committee, Securities Division Volcker Committee and the Global Recruiting Council. Earlier in his career, Mr. Gmelich worked as an associate trader at Chase and was a vice president at Salomon Brothers. Mr. Gmelich serves as the Chair of the Villanova University Board of Trustees, where he also chairs the Investment Committee, and serves on the Boards of Teddy's Fund and Trinity Hall. Mr. Gmelich received a B.S. in Finance from Villanova University, an M.S. in Accounting/Taxation from the University of Southern California and an M.B.A. in Finance from Columbia University.

Mr. Gmelich brings to the Board a deep knowledge of fixed income market structure and valuable experience in electronic trading. Mr. Gmelich also provides key insight into the perspectives of our dealer customer base.

**Richard G. Ketchum**

**Age:** 70  
**Director since:** April 2017  
**Board Committees:**

- Risk

**Qualifications and Career Highlights:**

*Richard G. Ketchum* is retired. Mr. Ketchum was Chief Executive Officer of the Financial Industry Regulatory Authority, Inc. ("FINRA") from March 2009 to July 2016 and served as Chairman of FINRA's Board of Governors from March 2009 to August 2016. Prior to joining FINRA, Mr. Ketchum held a range of senior regulatory positions in the financial industry over twenty years, including as Chief Executive Officer of NYSE Regulation, Inc., President of the NASDAQ OMX Group Inc., a predecessor of Nasdaq, Inc., President and Chief Operating Officer of the National Association of Securities Dealers Inc., a predecessor of FINRA, and Director of the Division of Market Regulation at the SEC. Mr. Ketchum was also the General Counsel of the Corporate and Investment Bank of Citigroup Inc. Mr. Ketchum is on the Board of Directors of GSS, a subsidiary of BNY Mellon. He previously served as Non-Executive Chairman of the Board of Directors of Sculptor Capital Management, Inc. Mr. Ketchum received a B.A. from Tufts University and a J.D. from New York University School of Law.

Mr. Ketchum brings to the Board substantial regulatory experience in the securities industry and deep knowledge of the legal and compliance issues facing companies in the financial services industry.



**Emily H. Portney**



**Age:** 49  
**Director since:** October 2017  
**Board Committees:**

- Risk

**Qualifications and Career Highlights:**

*Emily H. Portney* has been Chief Financial Officer of BNY Mellon since July 2020. In this role, she is responsible for global financial strategy and finance functions, including controllership, business CFO teams, treasury, capital management, tax, corporate development, investor relations, procurement and real estate. Prior to this role, Ms. Portney was Head of Asset Servicing, Americas for BNY Mellon from October 2018 to July 2020. In that role, she oversaw the business unit that provides investment administration, and operational and technology solutions to alternative investment managers, asset managers, asset owners, insurance companies, banks and broker-dealers. Ms. Portney was Chief Financial Officer of Barclays International from September 2016 to September 2018, where she helped to establish the non-ring-fenced bank, and led a global organization spanning the Corporate and Investment Bank, the Private Bank, and the Cards and Payments businesses. From April 2016 to August 2016, she served as North America Chief Financial Officer for Visa, Inc. Prior to that, from June 1993 to January 2016, Ms. Portney worked at JPMorgan Chase & Co., serving in various senior roles including Global Head of Clearing, Collateral Management, and Execution; Chief Financial Officer of Equities and Prime Services; and Chief Operating Officer of Futures and Options. Ms. Portney previously served on the Board of Directors of The Depository Trust & Clearing Corporation (DTCC). Ms. Portney received a B.A. from Duke University and an M.B.A. from Columbia University.

Ms. Portney brings leadership experience from a number of financial institutions. Ms. Portney also has in-depth experience relating to clearing operations and strategies and the requirements of operating a firm in a highly regulated industry.

**Richard L. Prager**



**Age:** 61  
**Director since:** July 2019  
**Board Committees:**

- Compensation and Talent
- Risk

**Qualifications and Career Highlights:**

*Richard L. Prager* has been a Senior Advisor at Tresata, a data analytics firm, since July 2019. From May 2016 to July 2019, Mr. Prager was a Senior Managing Director of BlackRock and served on the firm’s Global Executive Committee. In that role, he led the firm’s global trading, cash management and securities lending teams and played a leadership role in managing BlackRock’s global investment platform for both active portfolios and the iShares ETF business. Mr. Prager joined BlackRock in 2008 during the financial crisis as a Managing Director in their Financial Market Advisory business where BlackRock assisted the U.S. Government and many financial firms navigating the crisis. After BlackRock acquired BGI in 2009, Mr. Prager moved internally to the investment platform where he initially headed fixed income trading and soon thereafter, oversaw all asset class trading. In 2012 he assumed responsibility of the firm’s cash management and securities lending businesses in addition to global trading. Before joining BlackRock in 2008, Mr. Prager worked in various senior roles for Bank of America from 2000 to 2008 including Global Head of Rates, Currencies and Commodities. He has also held senior roles at GenRe from 1999 to 2000, ING from 1993 to 1999 and Westpac from 1984 to 1993. Mr. Prager received a B.S. from Duke University.

Mr. Prager possesses valuable expertise in the financial markets and has been an industry leader in the areas of electronic trading and trading technology. Mr. Prager also brings significant experience in the areas of global asset management, risk management and settlements.

# CORPORATE GOVERNANCE AND BOARD MATTERS

## Director independence and tenure

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The Board of Directors has determined that each of our current directors, other than Messrs. McVey, our Chief Executive Officer, and Concannon, our President and Chief Operating Officer, currently meet the independence requirements contained in the NASDAQ listing standards and applicable securities rules and regulations. None of our non-employee directors has a relationship with the Company or its subsidiaries that would interfere with the exercise of independent judgment in carrying out the responsibilities of a director.

We do not have director age or term limits, as we believe our efforts to regularly refresh the Board with new directors, as well as natural turnover, have achieved the appropriate balance between maintaining longer-term directors with deep institutional knowledge and new directors who bring new perspectives and diversity to our Board. Our Board reviews director tenure every year in connection with its director independence determinations. We plan to continue to refresh our Board of Directors to ensure that it is composed of high functioning, qualified and diverse members.

## Board diversity policy

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The Company recognizes and embraces that having a diverse Board enhances both the Board's effectiveness in fulfilling its oversight role and the Company's performance. The Company's Board Diversity Statement cites diversity at the Board level as an essential element in the attainment of its strategic objectives and in achieving sustainable and balanced development. In designing the Board's composition, diversity is considered from a number of aspects, including but not limited to gender, age, race, ethnicity, nationality, cultural and educational background, professional experience, skills, knowledge and length of service. In any formal search for Board candidates, the Nominating and Corporate Governance Committee includes, and requests that any search firm that it engages include, qualified candidates with a diversity of race/ethnicity and gender in the initial pool from which the Committee selects director candidates. The ultimate decision on all Board nominations is based on merit and the contributions that the selected candidates will bring to the Board, having due regard for the benefits of diversity. See *Proposal 1—Election of Directors—Director Diversity* for more information.

## How nominees to our Board are selected

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Candidates for election to our Board of Directors are nominated by our Nominating and Corporate Governance Committee and ratified by our full Board of Directors for election by the stockholders. The Nominating and Corporate Governance Committee operates under a charter, which is available in the *Investor Relations — Corporate Governance* section of our corporate website at [www.marketaxess.com](http://www.marketaxess.com).

The Nominating and Corporate Governance Committee will give due consideration to candidates recommended by stockholders. Stockholders may recommend candidates for the Nominating and Corporate Governance Committee's consideration by submitting such recommendations directly to the Nominating and Corporate Governance Committee as described below under *Communicating with our Board members*. In making recommendations, stockholders should be mindful of the discussion of minimum qualifications set forth above under *Qualifications for director nominees* though meeting such minimum qualification standards does not imply that the Nominating and Corporate Governance Committee will necessarily nominate the person recommended by a stockholder. The Nominating and Corporate Governance Committee may also engage outside search firms to assist in identifying or evaluating potential nominees.

## Board leadership structure

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Our Chief Executive Officer (“CEO”) also serves as the Chairman of the Board (the “Chairman”), and we have a Lead Independent Director who is responsible, among other things, for consulting with the Chairman regarding the agenda and meeting schedules for each Board meeting, coordinating the activities of the non-employee directors, including presiding over the executive sessions of non-employee directors, and serving as a liaison between the Chairman and the non-employee directors. We believe that this structure is appropriate for the Company because it allows one person to speak for and lead the Company and the Board, while also providing for effective oversight by an independent Board through a Lead Independent Director. Our CEO, as the individual with primary responsibility for managing the Company’s strategic direction and day-to-day operations, is in the best position to provide Board leadership that is aligned with our stockholders’ interests, as well as the Company’s needs. Our overall corporate governance policies and practices, combined with the strength of our independent directors, serve to minimize any potential conflicts that may result from combining the roles of CEO and Chairman.

Mr. Casper has been appointed by our independent directors to serve as our Lead Independent Director. Our Corporate Governance Guidelines provide that the Chairman of the Nominating and Corporate Governance Committee shall act as the Lead Independent Director, unless otherwise determined by a majority vote of the independent directors of the Board.

The Board has established other structural safeguards that serve to preserve the Board’s independent oversight of management. The Board is comprised almost entirely of independent directors who are highly qualified and experienced, and who exercise a strong, independent oversight function. The Board’s Audit Committee, Compensation and Talent Committee, Nominating and Corporate Governance Committee, Risk Committee and Finance Committee are comprised entirely of, and are chaired by, independent directors. Independent oversight of our CEO’s performance is provided through a number of Board and committee processes and procedures, including regular executive sessions of non-employee directors and annual evaluations of our CEO’s performance against pre-determined goals. The Board believes that these safeguards preserve the Board’s independent oversight of management and provide a balance between the authority of those who oversee the Company and those who manage it on a day-to-day basis.

## Board committees

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### **Audit Committee**

The Audit Committee of the Board of Directors oversees the accounting and financial reporting process of the Company and the audits of the financial statements of the Company. The Audit Committee is also responsible for preparing the audit committee report required to be included in this proxy statement, and the Audit Committee is directly responsible for the appointment, retention, compensation and oversight of the Company’s outside auditor. The Audit Committee currently consists of Ms. Altobello (Chair), Mr. Cruger, Ms. Gibson and Mr. Gmelich.

The Board of Directors has determined that each member of the Audit Committee is an independent director in accordance with NASDAQ listing standards and Rule 10A-3 of the Securities Exchange Act of 1934, as amended. The Board has determined that each member of the Audit Committee is able to read and understand fundamental financial statements, including the Company’s balance sheet, income statement and cash flow statement, as required by NASDAQ rules. In addition, the Board has determined that each member of the Audit Committee satisfies the NASDAQ rule requiring that at least one member of our Board’s Audit Committee have past employment experience in finance or accounting, requisite professional certification in accounting, or any other comparable experience or background that results in the member’s financial sophistication, including being or having been a chief executive officer, chief financial officer or other senior officer with financial oversight responsibilities. The Board has also determined that each member of the Audit Committee is an “audit committee financial expert” as defined by the SEC. For information regarding the experience and qualifications of our Audit Committee members, see the information in this Proxy Statement under the section heading *Proposal 1 — Election of Directors — Director information*.



### **Compensation and Talent Committee**

The Compensation and Talent Committee of the Board of Directors (the "Compensation Committee") is responsible for reviewing and approving, and, as applicable, recommending to the full Board for approval, the compensation of the CEO and all other officers of the Company, as well as the Company's compensation philosophy, strategy, program design and administrative practices. The compensation programs reviewed and approved by the Compensation Committee consist of all forms of compensation, including salaries, cash incentives, and stock-based awards and benefits. The Compensation Committee is also responsible for oversight of the Company's talent management processes, including talent acquisition, leadership development and succession planning for key roles, reviewing the Company's diversity, equity and inclusion programs, and reviewing the Company's corporate culture. The Compensation Committee currently consists of Mr. Begleiter (Chair), Ms. Altobello, Mr. Prager and Mr. Steinhardt. The Board of Directors has determined that each member of the Compensation Committee is an "independent director" in accordance with NASDAQ listing standards and a "non-employee director" under the applicable SEC rules and regulations.

### **Nominating and Corporate Governance Committee**

The Nominating and Corporate Governance Committee of the Board of Directors identifies individuals qualified to become Board members and recommends for selection by the Board the director nominees to stand for election at each annual meeting of the Company's stockholders. In connection therewith, the Nominating and Corporate Governance Committee reviews certain policies regarding the nomination of directors and recommends any changes in such policies to the Board for its approval; identifies individuals qualified to become directors; evaluates and recommends for the Board's selection nominees to fill positions on the Board; and recommends changes in the Company's corporate governance policies, including the Corporate Governance Guidelines, to the Board for its approval. The Nominating and Corporate Governance Committee oversees the annual review of the performance of the Board of Directors, each director and each committee. The Nominating and Corporate Governance Committee also oversees the Company's environmental, social and governance strategy and initiatives. See *Environmental, Social and Governance Strategy and Initiatives*. The Nominating and Corporate Governance Committee currently consists of Mr. Cruger (Chair), Mr. Casper and Ms. Chwick. The Board of Directors has determined that each member of the Nominating and Corporate Governance Committee is an independent director in accordance with NASDAQ listing standards.

### **Risk Committee**

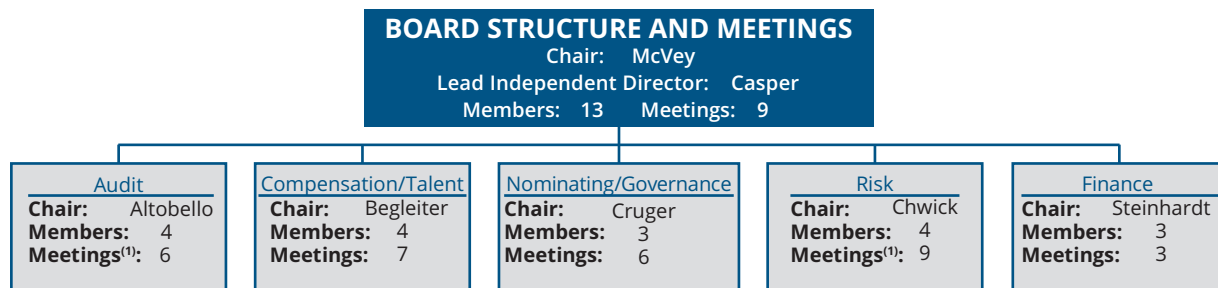
The Risk Committee assists the Board with its oversight of the Company's risk management activities, with particular responsibility for overseeing designated areas of risk that are not the primary responsibility of another committee of the Board or retained for the Board's direct oversight. Items delegated to the Risk Committee by the Board include technology and cyber-security risk, credit risk, clearing risk and regulatory risk. The Risk Committee currently consists of Ms. Chwick (Chair), Mr. Ketchum, Ms. Portney and Mr. Prager.

### **Finance Committee**

The Finance Committee assists the Board with its oversight of the Company's global treasury activities, mergers, acquisitions, divestitures, and strategic investments, capital structure and capital allocation strategy, financing and liquidity requirements, dividends, stock repurchase authorizations, investor relations activities and insurance and self-insurance programs. The Finance Committee currently consists of Messrs. Steinhardt (Chair), Begleiter and Cruger. Prior to April 2021, the Finance Committee was known as the Investment Committee and assisted the Board in monitoring whether the Company had adopted and adheres to a rational and prudent investment and capital management policy; whether management's investment and capital management actions were consistent with attainment of the Company's investment policy, financial objectives and business goals; the Company's compliance with legal and regulatory requirements pertaining to investment and capital management; the competence, performance and compensation of the Company's external money managers; and such other matters as the Board or Investment Committee deemed appropriate.

## Meetings and attendance

The following table sets forth the chairs and membership structure of the Board and each standing Board committee as of April 28, 2021, and the number of Board and Board committee meetings held during 2020.



(1) The Audit and Risk Committees held one joint Audit and Risk Committee meeting in 2020.

The non-management directors met in executive session without management directors or employees at each of the meetings of the Board during 2020. We expect each director to attend each meeting of the full Board and of the committees on which he or she serves and to attend the annual meeting of stockholders. All directors attended at least 75% of the meetings of the full Board and the meetings of the committees on which they served, and all directors attended our 2020 annual meeting of stockholders (not counting Ms. Gibson, who was not a director at the time of our 2020 annual meeting).

## Board involvement in risk oversight

The Company's management is responsible for defining the various risks facing the Company, formulating risk management policies and procedures, and managing the Company's risk exposures on a day-to-day basis. The Board's responsibility is to monitor the Company's risk management processes by informing itself of the Company's material risks and evaluating whether management has reasonable controls in place to address the material risks. The Board is not responsible, however, for defining or managing the Company's various risks.

The Board of Directors monitors management's responsibility for risk oversight through regular reports from management to the Risk and Audit Committees and the full Board. Furthermore, the Risk and Audit Committees report on the matters discussed at the committee level to the full Board. The Risk and Audit Committees and the full Board focus on the material risks facing the Company, including strategic, operational, market, technology and cyber-security, credit, liquidity, legal and regulatory risks, to assess whether management has reasonable controls in place to address these risks. In addition, the Compensation Committee is charged with reviewing and discussing with management whether the Company's compensation arrangements are consistent with effective controls and sound risk management. Risk management is a factor that the Board and the Nominating and Corporate Governance Committee consider when determining who to nominate for election as a director of the Company and which directors serve on the Risk and Audit Committees. In addition, the Nominating and Corporate Governance Committee is charged with overseeing risk related to the Company's environmental, social and governance strategy and initiatives. The Board believes this division of responsibilities provides an effective and efficient approach for addressing risk management.

The Company's Global Management Team assists management's efforts to assess and manage risk. The Global Management Team is chaired by the CEO and is comprised of the Company's senior managers with global oversight. The Global Management Team assesses the Company's business strategies and plans and ensures that appropriate policies and procedures are in place for identifying, evaluating, monitoring, managing and measuring significant risks. The Chief Risk Officer regularly prepares updates and reports for the Global Management Team, Risk Committee, Audit Committee and the Board of Directors.

We have assembled a cross-functional team, which includes several of our executive officers, for continuously monitoring the impact of the Pandemic on our employee base and business operations. Throughout the Pandemic, the Board has overseen this risk management initiative, working closely with management to maintain information flow and timely review of issues arising from the Pandemic. For information on the effect of the Pandemic on our business, see *Management's Discussion and Analysis—Critical Factors Affecting our Industry and our Company—Economic, Political and Market Factors* in the Company's Annual Report on Form 10-K.

## Board evaluations, succession planning and talent management

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Each year, the members of the Board of Directors conduct a confidential written assessment of the Board's performance that is reviewed and summarized by the Company's Lead Independent Director and the Chair of the Nominating and Corporate Governance Committee. As part of the evaluation process, the Board reviews its overall composition, including director tenure, board leadership structure, diversity and individual skill sets, to ensure it serves the best interests of stockholders and positions the Company for future success. Each Board committee also conducts an annual written self-assessment of its performance during the prior year. The results of the assessments are then summarized and communicated back to the appropriate committee chairpersons and our Lead Independent Director. After the evaluations, the Board and management work to improve upon any issues or focus points disclosed during the evaluation process. As part of the evaluation process, each committee reviews its charter annually.

The Board is committed to positioning MarketAxess for further growth through ongoing talent management, succession planning and the deepening of our leadership bench. Management facilitates a formal talent management and leadership development review on an annual basis for the Board. The review is focused on both immediate, short-term coverage plans for all executives in the event of an unforeseen situation, as well as longer-term, strategic succession planning. A critical element of the review is an evaluation of the Company's formal leadership development and talent acquisition initiatives in order to ensure that our leadership team has the skills, capabilities and experience to effectively lead our existing, and future, global business. The review also focuses on the retention of key managers. The annual talent management and leadership development review is supplemented by an additional year-end review by the Board of the individual performance and year-end compensation proposals for the executive management team and other key staff.

The Board values diversity among the management team and strives to increase the diversity of the executive management team, as well as the management teams reporting to them. The Board considers formal and informal initiatives to promote diversity as part of their annual talent management review. In addition, in any external searches for executive management team candidates in which the Company considers candidates that are not employees of the Company, the Company will request that any search firm that it engages include qualified candidates with a diversity of race/ethnicity and gender in the initial pool from which the Company selects such executive management team candidates.

The Board has formal exposure to the executive team at Board meetings, as well as at Board committee meetings and other discussions. There are other opportunities for more informal interaction with employees across the organization throughout the year through various events and collaborative experiences.

## Code of Conduct, Code of Ethics and other governance documents

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The Board has adopted a Code of Conduct that applies to all officers, directors and employees, and a Code of Ethics for the CEO and Senior Financial Officers, which includes Mr. DeLise, our Chief Financial Officer. Both the Code of Conduct and the Code of Ethics for the CEO and Senior Financial Officers can be accessed in the *Investor Relations — Corporate Governance* section of our website at [www.marketaxess.com](http://www.marketaxess.com). We intend to satisfy any disclosure obligations regarding waivers of or amendments to our Code of Conduct and Code of Ethics for the CEO and Senior Financial Officers by posting such information on our website at [www.marketaxess.com](http://www.marketaxess.com).

You may also obtain a copy of these documents without charge by writing to MarketAxess Holdings Inc., 55 Hudson Yards, 15th Floor, New York, New York 10001, Attention: Investor Relations.

Copies of the charters of our Board's Audit Committee, Compensation Committee, Finance Committee, Risk Committee and Nominating and Corporate Governance Committee, as well as a copy of the Company's Corporate Governance Guidelines, can be accessed in the *Investor Relations — Corporate Governance* section of our website.

## Communicating with our Board members

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Although our Board of Directors has not adopted a formal process for stockholder communications with the Board, we make every effort to ensure that the views of stockholders are heard by the Board or by individual directors, as applicable, and we believe that this has been an effective process to date. Stockholders may communicate with the Board by sending a letter to the MarketAxess Holdings Inc. Board of Directors, c/o General Counsel, 55 Hudson Yards, 15th Floor, New York, New York 10001. The General Counsel will review the correspondence and forward it to our CEO and Chairman of the Board and the Lead Independent Director, or to any individual director or directors to whom the communication is directed, as appropriate. Notwithstanding the above, the General Counsel has the authority to discard or disregard any communication that is unduly hostile, threatening, illegal or otherwise inappropriate or to take any other appropriate actions with respect to such communications.

In addition, any person, whether or not an employee, who has a concern regarding the conduct of the Company or our employees, including with respect to our accounting, internal accounting controls or auditing issues, may, in a confidential or anonymous manner, communicate that concern in writing by addressing a letter to the Chairman of the Audit Committee, c/o Corporate Secretary, at our corporate headquarters address, which is 55 Hudson Yards, 15<sup>th</sup> Floor, New York, New York 10001, or electronically, at our corporate website, [www.marketaxess.com](http://www.marketaxess.com) under the heading *Investor Relations — Corporate Governance*, by clicking the *Confidential Ethics Web Form* link.

## Director compensation

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Our Compensation Committee has retained the services of Grahall LLC ("Grahall") as its independent compensation consultant for purposes of advising on non-employee director compensation. Grahall reports directly to the Compensation Committee and conducts an annual review of director compensation levels and a bi-annual review of director pay structure and practices, and in each event, shares the results of those reviews with the Compensation Committee. The Compensation Committee then submits any proposed changes in pay level or program structure of our non-employee director compensation to the full Board for its consideration, and if appropriate, approval.

Grahall reviews and recommends compensation structure and adjustments based on the board compensation of the following:

- Proxy peer group (see *Compensation Discussion and Analysis – How We Determine Pay Levels – Peer Group*);
- ISS peer group (updated by ISS annually); and
- Industry data sources, including the National Association of Corporate Directors.

All directors, other than Mr. McVey and Mr. Concannon, are regarded as non-employee directors. Mr. McVey and Mr. Concannon receive no additional compensation for service as a director.

In 2020, the Board member equity retainer was increased from \$115,000 to \$120,000 per year, as recommended by Grahall. This change was effective June 10, 2020. The change was made to better align director compensation with the above-referenced market data provided by Grahall. The director pay recommendations resulted in pay levels between the projected medians of our proxy peers and ISS's peer group.

A summary of the structure of our director pay program that is in effect as of June 2020 is as follows:

Director Compensation Pay Structure - Effective June 2020				
	Cash Board Retainer (\$)	Cash Chair Retainer (\$)	Cash Committee Retainer (\$)	Restricted Stock (\$)
Annual Retainer – All	85,000	—	—	120,000
Audit Committee	—	25,000	12,500	—
Compensation / Talent Committee	—	20,000	7,500	—
Governance / Nominating Committee	—	15,000	7,500	—
Finance Committee (1)	—	10,000	2,500	—
Risk Committee	—	20,000	7,500	—
Lead Independent Director (2)	—	22,500	—	22,500

(1) Prior to April 2021, and for the entirety of the 2020 fiscal year, the Finance Committee was known as the Investment Committee.

(2) The Lead Independent Director can elect to receive his retainer in cash or in a combination of cash and equity.

In June 2020, we granted 238 shares of restricted stock to each non-employee director except for Ms. Gibson, who was granted a prorated amount of 209 shares on August 1, 2020 after joining the Board in July 2020. Mr. Casper, as Lead Director, received 45 additional shares equating to half of his applicable retainer. All shares are scheduled to vest on May 31, 2021. The number of shares of restricted stock granted was determined on the grant date by dividing the equity grant value of \$120,000 by the average of the closing price of our Common Stock for the ten trading days up to and including the grant date. We expect to continue to compensate our non-employee directors with a combination of cash and equity awards. All equity awards to non-employee directors are made under the Company's 2020 Equity Incentive Plan.

## CORPORATE GOVERNANCE AND BOARD MATTERS

Below is a summary of the amount and form of actual compensation received by each non-employee director in 2020:

Director Compensation for Fiscal 2020				
Name	Fees Earned or Paid in Cash (1)	Stock Awards (\$)(2)(4)	All Other Compensation (\$)(3)	Total(\$)
Stephen P. Casper, Lead Independent Director	116,250	136,423	422	253,095
Nancy Altobello	117,077	114,730	408	232,215
Steven L. Begleiter	106,794	114,730	360	221,884
Jane Chwick	112,500	114,730	360	227,590
William F. Cruger	115,000	114,730	360	230,090
Kourtney Gibson	44,819	107,990	—	152,809
Justin Gmelich	97,500	114,730	356	212,586
Richard Ketchum	92,500	114,730	360	207,590
Emily Portney	103,299	114,730	360	218,389
Richard Prager	100,000	114,730	320	215,050
John Steinhardt	103,206	114,730	360	218,296

- (1) The amounts represent Board, Committee, Committee Chair and Lead Independent Director retainers earned in 2020. For Ms. Gibson, the amount represents Board and Committee retainers earned for the portion of the year that she served on the Board.
- (2) The amounts represent the aggregate grant date fair value of stock awards granted by the Company in 2020, computed in accordance with FASB ASC Topic 718. For further information on how we account for stock-based compensation, see Note 11 to the consolidated financial statements included in the Company's Annual Report on Form 10-K for the year ended December 31, 2020. Ms. Gibson received a prorated number of shares (209 shares) based on her length of service in 2020.
- (3) Represents accrued dividends paid on restricted stock.
- (4) The table below sets forth information regarding the aggregate number of stock awards outstanding at the end of fiscal year 2020 for each non-employee director, including unvested stock awards granted in fiscal year 2020 and, in relation to Messrs. Begleiter and Cruger and Ms. Chwick, RSUs for which the director previously elected to defer receipt. There are no stock option awards granted in fiscal year 2020 that were outstanding at fiscal year end.

Equity Awards Outstanding	
	Aggregate Number of Stock Awards Outstanding at Fiscal Year End (#)
Stephen P. Casper, Lead Independent Director	283
Nancy Altobello	238
Steven L. Begleiter	756
Jane Chwick	724
William F. Cruger	1,210
Kourtney Gibson	209
Justin Gmelich	238
Richard Ketchum	238
Emily Portney	238
Richard Prager	238
John Steinhardt	238

### Share Ownership & Holding Guidelines

To keep the interests of non-employee directors and stockholders aligned, the Board of Directors has adopted stock ownership guidelines for our non-employee directors. Non-employee directors are required to hold not less than the number of shares of Common Stock equal in value to five times the annual base cash retainer payable to a director, or \$425,000. As of April 2021, the holding requirement was equal to 834 shares, calculated using a price of \$509.46 per share, which was the average of the daily closing price of our Common Stock for the twelve-month period ended on March 31, 2021. The holding requirement must be achieved within five years after the director has become a Board member and maintained throughout the non-employee director's service with the Company. All shares of Common Stock beneficially owned by the director, including shares purchased and held personally, vested and unvested restricted shares, vested and unvested restricted stock units, settled performance shares, and shares deferred under a non-qualified deferred compensation arrangement, count toward the minimum ownership requirement. Vested and unvested stock options and unearned performance shares are excluded.

In addition to the ownership guidelines, all non-employee directors must hold all shares granted for service for a minimum of five years from the date of grant. Directors are also required, for a period of six months following his or her departure from the Board, to comply with the Company's Insider Trading Policy that, among other things, prohibits trading in the Company's securities during specified blackout periods.

All of our non-employee directors have either achieved the designated level of ownership or are in the five-year period following their appointment or election to the Board during which they are expected to achieve compliance:

Directors' Stock Ownership			
Name	Elected	Multiple of Cash Retainer	
		Requirement	Current Holdings
Stephen P. Casper, Lead Independent Director	April 2004	5x	320x
Nancy Altobello	April 2019	5x	4x
Steven L. Begleiter	April 2012	5x	52x
Jane Chwick	October 2013	5x	35x
William F. Cruger	November 2013	5x	35x
Kourtney Gibson	July 2020	5x	1x
Justin G. Gmelich	October 2019	5x	3x
Richard Ketchum	April 2017	5x	11x
Emily Portney	October 2017	5x	9x
Richard Prager	July 2019	5x	9x
John Steinhardt	April 2000	5x	128x

Our equity plan provides for the accrual of dividends (or dividend equivalents) on unvested shares. However, dividends are not paid and are subject to forfeiture until all restrictions on the shares have lapsed.

We do not provide any retirement benefits or other perquisites to our non-employee directors.

### Certain relationships and related party transactions

#### Review and approval of related party transactions

Our related parties include our directors, director nominees, executive officers, holders of more than five percent of the outstanding shares of our Common Stock and the foregoing persons' immediate family members. We review relationships and transactions in which the Company and our related parties are or will be participants to determine



## CORPORATE GOVERNANCE AND BOARD MATTERS

whether such related persons have a direct or indirect material interest. As required under SEC rules, transactions that are determined to be directly or indirectly material to a related party are disclosed in this Proxy Statement. In addition, the Audit Committee reviews and, if appropriate, approves and ratifies any related party transaction that is required to be disclosed.

Though not considered related party transactions that are required to be disclosed under SEC rules, each of the 5% stockholders that are listed under *Security Ownership of Certain Beneficial Owners and Management* or their affiliated entities is a party to a user agreement or dealer agreement that governs their access to, and activity on, our electronic trading platforms. These agreements were each entered into in the ordinary course of business and, subject to our usual trade terms, provide for the fees and expenses to be paid by such entities for the use of the platform.



# ENVIRONMENTAL, SOCIAL AND GOVERNANCE STRATEGY AND INITIATIVES

MarketAxess is committed to integrating sustainability into our everyday actions to help create long-term value for our stockholders and the communities in which we operate. We aim to operate the company responsibly while managing risks and using our resources wisely. The Company's environmental, social and governance ("ESG") strategy and initiatives are overseen by the Board's Nominating and Corporate Governance Committee. We have also established an ESG Working Group comprised of employees from across the Company, including members of senior management. As further described in the Company's 2020 ESG Report, MarketAxess demonstrated its ESG commitment in 2020 by practicing sustainability, advocating volunteerism and philanthropy and actively partnering with our employees, clients and others on environmental, social and governance initiatives. Our 2020 ESG Report can be accessed in the *Investor Relations — Corporate Governance* section of our website.

We believe that our growing role in making the global credit markets work better brings with it the obligation to be a responsible corporate citizen. MarketAxess' vision of corporate citizenship has four pillars:



- **An enduring commitment to high standards of governance.** We believe the touchstones of responsible leadership are integrity and fairness. In 2020, we continued to strengthen our Board of Directors with new members who value the interests of all our stakeholders – clients, employees, investors and business partners. We benefit greatly from having board members who bring proven leadership to our ESG efforts.
- **Helping communities become more resilient.** We expanded our support in 2020 to organizations that are on the frontline of addressing the impact of the Pandemic, particularly the immediate challenge of food insecurity. To address community resilience over the long term, we established the MarketAxess Charitable Foundation, whose mission is to work with organizations that support underserved communities, with an emphasis on youth education, diversity, equity and inclusion.
- **Building a strong, diverse workforce.** We believe a strong culture built on accountability and mutual respect has been a significant factor in our success, and will continue to be even more so in the future. This year's ESG Report details the initiatives we have taken to sustain our culture and ensure its continued vitality as we grow. Diversity, equity and inclusion must remain a priority if we are to continue to be prosperous over the long term, and our management team is working hard to strengthen this important part of our ESG program.
- **Adopting sound sustainability practices across our business operations.** We are in the process of improving our ability to measure our Company's impact in areas such as climate, waste, and water use. As an initial part of that effort, we are reporting for 2020 against metrics outlined by the Sustainability Accounting Standards Board (SASB) for the first time for the following sectors: Security & Commodity Exchanges, Professional & Commercial Services and Software and IT.

## How MarketAxess defines sustainability

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We define sustainability as a business' commitment to advancing economic prosperity while improving the world in which we operate. Our commitment to sustainability and corporate responsibility is in line with our goal of applying our ingenuity, innovative technology and electronic network to make global credit markets work better for the people who depend on them. In pursuing this commitment, we embrace our responsibility as a corporate citizen to ensure that our global activities positively impact our communities and our environment.

## Trading for Trees

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Green bonds are fixed income instruments designed to fund projects that have positive environmental and/or climate benefits. In 2020, \$27 billion in corporate and municipal green bond trading volume was executed globally on MarketAxess, an increase of 42% from 2019. In the U.S., where public data is available, MarketAxess ranks as the largest corporate and municipal green bond marketplace with an estimated market share of 20.3% in TRACE-reported corporate and municipal green bond volume.

The second year of our "Trading for Trees" initiative with our partner, One Tree Planted, a 501(c)(3) non-profit that focuses on global reforestation, proved successful. Our clients' green bond trading on the MarketAxess platform resulted in over 130,000 trees being planted across five continents and eight countries, including India, Papua New Guinea, Canada and New Zealand. In 2020, One Tree Planted created 1,498 jobs and planted over 2 million fruit trees to support almost 30,000 families in critical regions around the world.

# PROPOSAL 2 — RATIFICATION OF SELECTION OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

The Audit Committee of our Board has appointed PricewaterhouseCoopers LLP (“PwC”) as our independent registered public accounting firm to audit our consolidated financial statements for the year ending December 31, 2021 and to audit the Company’s internal control over financial reporting as of December 31, 2021, and the Board is asking stockholders to ratify that selection. PwC has audited our consolidated financial statements each year since our formation in 2000. The Audit Committee periodically considers whether there should be a rotation of independent registered public accounting firms and the Audit Committee currently believes that the continued retention of PwC is in the best interests of the Company and our stockholders. Although current law, rules and regulations, as well as the charter of the Audit Committee, require our independent registered public accounting firm to be engaged, retained and supervised by the Audit Committee, the Board considers the selection of our independent registered public accounting firm to be an important matter of stockholder concern and considers a proposal for stockholders to ratify such selection to be an important opportunity for stockholders to provide direct feedback to the Board on an important issue of corporate governance. In the event that stockholders fail to ratify the appointment, the Audit Committee will reconsider whether or not to retain PwC, but may ultimately determine to retain PwC as our independent registered public accounting firm. Even if the appointment is ratified, the Audit Committee, in its sole discretion, may direct the appointment of a different independent registered public accounting firm at any time during the year if the Audit Committee determines that such a change would be in the best interests of the Company and its stockholders.

In 2011, the Company, in the ordinary course of its business, entered into a bulk data agreement with PwC for the purpose of supporting valuation conclusions reached by PwC in the normal course of PwC’s audit and other work for its clients, which has been amended from time to time. Pursuant to the agreement, the Company provides bond pricing data to PwC on terms consistent with the terms of similar data sales agreements entered into by the Company. The aggregate annual revenue to the Company from the data agreement is \$295,000. On an annual basis, the Audit Committee evaluates the effect of such agreement on the independence of PwC and has concurred with the opinion of the Company’s management and PwC that the arrangement constitutes an “arm’s-length” transaction that would not affect PwC’s independence.

Representatives of PwC will be present at our Annual Meeting, will have the opportunity to make a statement if they desire to do so, and will be available to respond to appropriate questions from stockholders.

## Your vote

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Unless proxy cards are otherwise marked, the persons named as proxies will vote FOR the ratification of PwC as the Company’s independent registered public accounting firm for the year ending December 31, 2021. Approval of this proposal requires the affirmative vote of the holders of a majority of the shares present in person or represented by proxy and entitled to vote on the proposal.



### BOARD RECOMMENDATION

**The board unanimously recommends that you vote “FOR” ratification of PwC as the Company’s independent registered public accounting firm for the year ending December 31, 2021.**

## Audit and other fees

The aggregate fees billed by our independent registered public accounting firm for professional services rendered in connection with the audit of our annual financial statements set forth in our Annual Report on Form 10-K for the years ended December 31, 2020 and 2019 and the audit of our broker-dealer subsidiaries' annual financial statements, as well as fees paid to PwC for tax compliance and planning, if any, and other services, are set forth below.

Except as set forth in the following sentence, the Audit Committee, or a designated member thereof, pre-approves 100% of all audit, audit-related, tax and other services rendered by PwC to the Company or its subsidiaries. The Audit Committee has authorized the CEO and the Chief Financial Officer to purchase permitted non-audit services rendered by PwC to the Company or its subsidiaries up to, and including, a limit of \$10,000 per service and an annual aggregate limit of \$20,000 for all such services.

Immediately following the completion of each fiscal year, the Company's independent registered public accounting firm submits to the Audit Committee (and the Audit Committee requests from the independent registered public accounting firm), as soon as possible, the written disclosures and the letter required by the applicable requirements of the Public Company Accounting Oversight Board ("PCAOB") regarding the independent registered public accounting firm's communications with the Audit Committee concerning independence.

Immediately following the completion of each fiscal year, the independent registered public accounting firm also submits to the Audit Committee (and the Audit Committee requests from the independent registered public accounting firm), a formal written statement of the fees billed by the independent registered public accounting firm to the Company in each of the last two fiscal years for each of the following categories of services rendered by the independent registered public accounting firm: (i) the audit of the Company's annual financial statements and the reviews of the financial statements included in the Company's Quarterly Reports on Form 10-Q or services that are normally provided by the independent registered public accounting firm in connection with statutory and regulatory filings or engagements; (ii) assurance and related services not included in clause (i) that are reasonably related to the performance of the audit or review of the Company's financial statements, in the aggregate and by each service; (iii) tax compliance, tax advice and tax planning services, in the aggregate and by each service; and (iv) all other products and services rendered by the independent registered public accounting firm, in the aggregate and by each service.

Set forth below is information regarding fees paid by the Company to PwC during the fiscal years ended December 31, 2020 and 2019.

Fee Category	2020	2019
Audit Fees(1)	\$ 2,765,478	\$ 2,261,404
All Other Fees(2)	4,460	4,838
Total	\$ 2,769,938	\$ 2,266,242

(1) The aggregate fees incurred include amounts for the audit of the Company's consolidated financial statements (including fees for the audit of our internal controls over financial reporting) and the audit of our broker-dealer subsidiaries' annual financial statements.

(2) Other Fees are comprised of annual subscription fees for accounting related research and service fees related to XBRL conversion services.

# REPORT OF THE AUDIT COMMITTEE OF THE BOARD OF DIRECTORS

The Audit Committee currently consists of Ms. Altobello (Chair), Mr. Cruger, Ms. Gibson and Mr. Gmelich. Each member of the Audit Committee is independent, as independence is defined for purposes of Audit Committee membership by the listing standards of NASDAQ and the applicable rules and regulations of the SEC.

The Audit Committee appoints our independent registered public accounting firm, reviews the plan for and the results of the independent audit, approves the fees of our independent registered public accounting firm, reviews with management and the independent registered public accounting firm our quarterly and annual financial statements and our internal accounting, financial and disclosure controls, reviews and approves transactions between the Company and its officers, directors and affiliates, and performs other duties and responsibilities as set forth in a charter approved by the Board of Directors.

During fiscal year 2020, the Audit Committee met six times. The Company's senior financial management and independent registered public accounting firm were in attendance at such meetings. Following each quarterly meeting during 2020, the Audit Committee conducted a private session with the independent registered public accounting firm, without the presence of management. The Audit Committee also had one joint meeting with the Risk Committee during 2020.

The management of the Company is responsible for the preparation and integrity of the financial reporting information and related systems of internal controls. The Audit Committee, in carrying out its role, relies on the Company's senior management, including particularly its senior financial management, to prepare financial statements with integrity and objectivity and in accordance with generally accepted accounting principles, and relies upon the Company's independent registered public accounting firm to review or audit, as applicable, such financial statements in accordance with the standards of the Public Company Accounting Oversight Board (United States) ("PCAOB").

We have reviewed and discussed with senior management the Company's audited financial statements for the year ended December 31, 2020 which are included in the Company's 2020 Annual Report on Form 10-K. Management has confirmed to us that such financial statements (i) have been prepared with integrity and objectivity and are the responsibility of management and (ii) have been prepared in conformity with generally accepted accounting principles.

In discharging our oversight responsibility as to the audit process, we have discussed with PwC, the Company's independent registered public accounting firm, the matters required to be discussed by the applicable requirements of the PCAOB and the SEC.

We have received the written disclosures and the letter from PwC concerning their communications with us concerning independence, as required by applicable requirements of the PCAOB, and we have discussed with PwC their independence.

Based upon the foregoing review and discussions with our independent registered public accounting firm and senior management of the Company, we recommended to our Board that the financial statements prepared by the Company's management and audited by its independent registered public accounting firm be included in the Company's Annual Report on Form 10-K for the year ended December 31, 2020, that was filed with the SEC.

Submitted by the Audit Committee of the  
Board of Directors:

Nancy Altobello — Chair  
William F. Cruger  
Kourtney Gibson  
Justin G. Gmelich

# SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT

The following table sets forth certain information regarding the beneficial ownership of the Company's Common Stock as of April 12, 2021 by (i) each person or group of persons known by us to beneficially own more than five percent of our Common Stock, (ii) each of our named executive officers, (iii) each of our directors and nominees for director and (iv) all of our directors and executive officers as a group.

The following table gives effect to the shares of Common Stock issuable within 60 days of April 12, 2021 upon the exercise of all options and other rights beneficially owned by the indicated stockholders on that date. Beneficial ownership is determined in accordance with Rule 13d-3 promulgated under Section 13 of the Securities Exchange Act of 1934, as amended, and includes voting and investment power with respect to shares. The percentage of beneficial ownership is based on 37,607,108 shares of Common Stock outstanding at the close of business on April 12, 2021. Except as otherwise noted below, each person or entity named in the following table has sole voting and investment power with respect to all shares of our Common Stock that he, she or it beneficially owns.

Unless otherwise indicated, the address of each beneficial owner listed below is c/o MarketAxess Holdings Inc., 55 Hudson Yards, 15th Floor, New York, New York 10001.

	Number of Shares Beneficially Owned	Percentage of Stock Owned
<b>5% Stockholders</b>		
The Vanguard Group (1)	4,165,820	11.08%
BlackRock, Inc. (2)	3,435,510	9.14%
<b>Named Executive Officers and Directors</b>		
Richard M. McVey (3)	545,992	1.45%
Nancy Altobello (4)	606	*
Steven Begleiter (5)	8,223	*
Stephen P. Casper (6)	53,408	*
Jane Chwick (7)	5,877	*
Christopher Concannon (8)	27,454	*
William F. Cruger (9)	4,892	*
Kourtney Gibson (10)	209	*
Justin Gmelich (11)	446	*
Richard G. Ketchum (12)	1,760	*
Emily H. Portney (13)	1,497	*
Richard Prager (14)	1,526	*
John Steinhardt (15)	21,313	*
Antonio L. DeLise (16)	17,041	*
Kevin McPherson (17)	91,265	*
Scott Pintoff (18)	4,979	*
Christophe Roupie (19)	8,331	*
Nicholas Themelis (20)	28,362	*
All Executive Officers and Directors as a Group (18 persons) (21)	823,181	2.19%

\* Less than 1%.

- (1) Information regarding the number of shares beneficially owned by The Vanguard Group was obtained from a Schedule 13G filed by The Vanguard Group with the SEC on February 10, 2021. The principal business address of The Vanguard Group is 100 Vanguard Blvd., Malvern, PA 19355.
- (2) Information regarding the number of shares beneficially owned by BlackRock, Inc. was obtained from a Schedule 13G filed by BlackRock, Inc. with the SEC on January 29, 2021. The principal business address of BlackRock, Inc. is 55 East 52nd Street, New York, NY 10055.

## SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT

- (3) Consists of (i) 431,930 shares of Common Stock owned individually; (ii) 2,000 shares of Common Stock owned by immediate family members; (iii) 41,314 shares of unvested restricted stock; and (iv) 70,748 shares of Common Stock issuable pursuant to stock options granted to Mr. McVey that are or become exercisable within 60 days. Does not include (i) 160,877 shares of Common Stock issuable pursuant to stock options that are not exercisable within 60 days; (ii) 5,735 unvested restricted stock units; (iii) 285,452 deferred restricted stock units or (iv) 7,930 performance shares.
- (4) Consists of (i) 368 shares of Common Stock owned individually; and (ii) 238 unvested restricted stock units that vest within 60 days.
- (5) Consists of (i) 7,985 shares of Common Stock owned individually; and (ii) 238 unvested restricted stock units that vest within 60 days. Does not include 518 deferred restricted stock units.
- (6) Consists of (i) 8,317 shares of Common Stock owned individually; (ii) 44,808 shares held indirectly in a trust for which Mr. Casper's spouse is the trustee; and (iii) 283 unvested restricted stock units that vest within 60 days.
- (7) Consists of (i) 5,153 shares of Common Stock owned individually; (ii) 238 unvested restricted stock units that vest within 60 days; and (iii) 486 deferred restricted stock units that will deliver within 60 days.
- (8) Consists of (i) 8,540 shares of Common Stock owned individually; and (ii) 18,914 shares of unvested restricted stock. Does not include (i) 81,226 shares of Common Stock issuable pursuant to stock options that are not exercisable within 60 days; (ii) 15,522 unvested restricted stock units or (iii) 5,343 performance shares.
- (9) Consists of (i) 4,654 shares of Common Stock owned individually; and (ii) 238 unvested restricted stock units that vest within 60 days. Does not include 972 deferred restricted stock units.
- (10) Consists of 209 unvested restricted stock units that vest within 60 days.
- (11) Consists of (i) 208 shares of Common Stock owned individually; and (ii) 238 unvested restricted stock units that vest within 60 days.
- (12) Consists of (i) 1,522 shares of Common Stock owned individually; and (ii) 238 unvested restricted stock units that vest within 60 days.
- (13) Consists of (i) 1,259 shares of Common Stock owned individually; and (ii) 238 unvested restricted stock units that vest within 60 days.
- (14) Consists of (i) 1,288 shares of Common Stock beneficially owned by Mr. Prager by trust; and (ii) 238 unvested restricted stock units that vest within 60 days.
- (15) Consists of (i) 21,075 shares of Common Stock owned individually; and (ii) 238 unvested restricted stock units that vest within 60 days.
- (16) Consists of (i) 7,053 shares of Common Stock; (ii) 381 shares of unvested restricted stock; and (iii) 9,607 shares of Common Stock issuable pursuant to stock options that are or become exercisable within 60 days. Does not include (i) 2,025 unvested restricted stock units; (ii) 18,172 deferred restricted stock units or (iii) 1,851 performance shares.
- (17) Consists of (i) 68,534 shares of Common Stock; (ii) 343 shares of unvested restricted stock; and (iii) 22,388 shares of Common Stock issuable pursuant to stock options that are or become exercisable within 60 days. Does not include (i) 2,211 unvested restricted stock units or (ii) 2,103 performance shares.
- (18) Consists of (i) 4,661 shares of Common Stock; and (ii) 318 shares of unvested restricted stock. Does not include (i) 1,494 unvested restricted stock units or (ii) 1,346 performance shares.
- (19) Consists of (i) 4,601 shares of Common Stock; and (ii) 3,730 shares of unvested restricted stock. Does not include 885 performance shares.
- (20) Consists of (i) 14,513 shares of Common Stock owned in joint tenancy with his spouse; (ii) 416 shares of unvested restricted stock; and (iii) 13,433 shares of Common Stock issuable pursuant to stock options that are or become exercisable within 60 days. Does not include (i) 2,658 unvested restricted stock units or (ii) 2,515 performance shares.
- (21) Consists of (i) 638,469 shares of Common Stock; (ii) 65,416 shares of unvested restricted stock; (iii) 3,120 shares of restricted stock units that vest or deliver within 60 days; and (iv) 116,176 shares of Common Stock issuable pursuant to stock options that are or become exercisable within 60 days. Does not include (i) 242,103 shares of Common Stock issuable pursuant to stock options that are not exercisable within 60 days; (ii) 29,645 restricted stock units that are unvested or (iii) 21,973 performance shares.



# EXECUTIVE OFFICERS

Set forth below is information concerning our executive officers as of the date hereof.

Name	Age	Position
Richard M. McVey	61	Chief Executive Officer and Chairman of the Board of Directors
Christopher R. Concannon	53	President and Chief Operating Officer
Antonio L. DeLise	60	Chief Financial Officer
Kevin McPherson	50	Global Head of Sales
Scott Pintoff	50	General Counsel and Corporate Secretary
Christophe Roupie	55	Head of EMEA and APAC
Nicholas Themelis	57	Chief Information Officer

*Richard M. McVey* has been Chief Executive Officer and Chairman of our Board of Directors since our inception. See *Proposal 1 — Election of Directors — Director information* for a discussion of Mr. McVey's business experience.

*Christopher R. Concannon* has been President and Chief Operating Officer, and a member of the Board of Directors, since January 2019. See *Proposal 1 — Election of Directors — Director information* for a discussion of Mr. Concannon's business experience.

*Antonio L. DeLise* has been Chief Financial Officer since March 2010. From July 2006 until March 2010, Mr. DeLise was the Company's Head of Finance and Accounting, where he was responsible for financial regulatory compliance and oversight of all controllership and accounting functions. Prior to joining us, Mr. DeLise was Chief Financial Officer of PubliCard, Inc., a designer of smart card solutions for educational and corporate sites, from April 1995 to July 2006. Mr. DeLise also served as Chief Executive Officer of PubliCard from August 2002 to July 2006, President of PubliCard from February 2002 to July 2006, and a director of PubliCard from July 2001 to July 2006. Prior to PubliCard, Mr. DeLise was employed as a senior manager with the firm of Arthur Andersen LLP from July 1983 through March 1995. Mr. DeLise received a B.S. in accounting from Fairfield University, from which he graduated magna cum laude.

*Kevin McPherson* has been Global Head of Sales since June 2014. From January 2008 to June 2014, Mr. McPherson was the Company's U.S. Sales Manager. From March 1999 to December 2007, Mr. McPherson was a Sales Representative for the Company, running the Company's West Coast sales and distribution effort. From June 1996 to March 1999, Mr. McPherson worked within the Emerging Markets Fixed Income Group of Scudder Stevens & Clark, where he traded emerging market fixed income securities and supported portfolio administration. Mr. McPherson began his career at State Street Bank & Trust, where he worked from June 1994 to June 1996 as an accountant and auditor for fixed income and equities portfolios. Mr. McPherson received a B.A. in business administration from the University of Maine.

*Scott Pintoff* has been General Counsel and Corporate Secretary since February 2014. Prior to joining us, Mr. Pintoff was General Counsel and Corporate Secretary at GFI Group, a position he held since 2003. At GFI, Mr. Pintoff was responsible for all legal, regulatory and compliance matters, including their IPO, all acquisitions and implementation of the Dodd-Frank Act. Mr. Pintoff joined GFI Group in 2000 as Associate General Counsel. Prior to GFI, Mr. Pintoff was at Dewey Ballantine LLP from 1996 to 2000 within the mergers and acquisitions group. Mr. Pintoff received a B.A. (Honors) from Wesleyan University and a J.D. from the New York University School of Law.



*Christophe Roupie* has been Head of EMEA and APAC since May 2020. From March 2017 through May 2020, Mr. Roupie was the Company's Head of Europe and Asia. Prior to joining us, from October 2015 until October 2016, Mr. Roupie was the CEO of HiRock AG, a family office in Switzerland. From May 2005 to October 2015, Mr. Roupie was Global Head of Trading and Securities Financing at AXA Investment Managers. While at AXA Investment Managers, he managed trading teams in Paris, London, Hong Kong and Greenwich, Connecticut across equities, fixed income, FX, derivatives, repo and stock lending. Prior to this, Mr. Roupie was the Global Head of Fixed Income Trading at IXIS AM (now Natixis Asset Management) from October 2000 to March 2005.

*Nicholas Themelis* has been Chief Information Officer since March 2005. From June 2004 through February 2005, Mr. Themelis was the Company's Head of Technology and Product Delivery. From March 2004 to June 2004, Mr. Themelis was the Company's Head of Product Delivery. Prior to joining us, Mr. Themelis was a Principal at Promontory Group, an investment and advisory firm focused on the financial services sector, from November 2003 to March 2004. From March 2001 to August 2003, Mr. Themelis was a Managing Director, Chief Information Officer for North America and Global Head of Fixed-Income Technology at Barclays Capital. From March 2000 to March 2001, Mr. Themelis was the Chief Technology Officer and a member of the Board of Directors of AuthentiDate Holdings Corp., a start-up focused on developing leading-edge content and encryption technology. Prior to his tenure at AuthentiDate, Mr. Themelis spent nine years with Lehman Brothers, ultimately as Senior Vice President and Global Head of the E-Commerce Technology Group.

# A LETTER FROM OUR COMPENSATION AND TALENT COMMITTEE

## Dear Fellow Stockholders,

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As members of MarketAxess' Compensation and Talent Committee (the "Compensation Committee"), we endeavor to create an executive compensation program that is performance-based, directly correlated with business and financial results, and designed to attract, reward and retain high caliber executives.

2020 was a challenging year for the global economy as a result of the Pandemic. During this time, despite the volatility caused by the Pandemic, MarketAxess maintained strong financial performance and delivered on our operating expectations. The Compensation Committee took into account the Company's performance, in addition to the direct feedback we heard from our stockholders, as we implemented the 2020 compensation program and structured the compensation program for 2021. In consideration of the Company's strong financial and operating performance, we did not make any changes or adjustments to our executive compensation program as a result of the Pandemic.

In 2020, following a thorough review of the compensation program and significant stockholder engagement, the Committee implemented a number of substantive enhancements that both responded to stockholder feedback and continued to support our core compensation principles. These changes were designed to enhance the performance-based nature of the program, while retaining the key elements of the program that have been highly successful for both our executives and our stockholders for many years. Stockholder feedback since these changes were implemented, through the 2020 say-on-pay proposal, which received 93.7% support, and subsequent stockholder engagement in late 2020 and early 2021, has generally been positive.

The Compensation Committee seeks to include the input of our stockholders in the regular evaluation of our programs and welcomes continued stockholder feedback regarding our executive compensation practices. We remain determined to understand your perspectives and committed to considering constructive changes in response to your feedback.

Our Committee is and will remain committed to the ongoing evaluation and improvement of our executive compensation program. We look forward to continuing the dialogue and encourage you to reach out with any questions or concerns related to our program before making your voting decision. Thank you for your investment in MarketAxess.

Submitted by the Compensation and Talent  
Committee of the Board of Directors:

Steven L. Begleiter – Chair  
Nancy Altobello  
Richard L. Prager  
John Steinhardt

# COMPENSATION DISCUSSION AND ANALYSIS

This Compensation Discussion and Analysis (“CD&A”) describes the Company’s executive compensation program and provides an overview of the Company’s pay for performance methodology and compensation decisions for our CEO, CFO and our three other mostly highly compensated executive officers (collectively, our Named Executive Officers (“NEOs”). For fiscal year 2020, our NEOs and their respective titles were as follows:

Name	Title
Richard M. McVey	Chairman of the Board, Chief Executive Officer (“CEO”)
Christopher R. Concannon	President and Chief Operating Officer (“President”)
Antonio L. DeLise	Chief Financial Officer (“CFO”)
Kevin McPherson	Global Head of Sales (“Head of Sales”)
Nicholas Themelis	Chief Information Officer (“CIO”)

We did not make any changes or adjustments to our executive compensation program as a result of the Pandemic. Any consideration given to the impact of the Pandemic by the Compensation Committee in their evaluation of a NEO’s performance during 2020 is described below in *“How We Determine Pay Levels—Individual Performance”*.

## Responding to stockholders; evolving pay practices

### **Say-on-Pay Support**

Our annual say-on-pay vote (“Say-on-Pay”) is one of our opportunities to receive feedback from stockholders regarding our executive compensation program. At the 2020 Annual Meeting of Stockholders (the “2020 Meeting”), approximately 93.7% of the votes cast approved the Say-on-Pay proposal, an increase from 73% in 2019. Management and the Board had conducted extensive outreach with our stockholders before and following our 2019 Annual Meeting of Stockholders to better understand investors’ perspectives on our compensation program. As a result of investor feedback, the Compensation Committee approved several changes to our compensation program for 2020 in an effort to enhance the performance-based nature of the program, while retaining the key elements of the program that have been highly successful for both our executives and our stockholders for many years.

### **2020 Stockholder Engagement**

Since the 2020 Meeting, we reached out to stockholders who collectively represented over 60% of our outstanding common stock and had conversations with eight stockholders who requested engagement representing more than 21% percent of our outstanding common stock. During our outreach, we discussed a range of relevant topics with stockholders, including the changes to our executive compensation programs that were put into place in 2020, for which we received consistently positive feedback. Most of the meetings also covered a variety of ESG matters. Stockholder feedback was relayed directly to the Board of Directors.

During our meetings with stockholders, we heard strong support for the performance of the Company, our CEO and senior management team, as well as appreciation of our outreach efforts. Stockholders also generally reacted positively to our decision to directly tie 50% of each NEO’s target annual cash incentive award to the Company’s operating income goals and 50% to the NEO’s delivery against individual goals and key strategic initiatives for the Company. In general, stockholders preferred that we disclose more details, and provide more transparency around the use of individual performance metrics for each NEO, including how such metrics are determined and how they relate to the Company’s strategic goals. We also received positive feedback on the implementation of a three-year measuring period for performance equity awards beginning with the performance shares awarded in 2020.

With regard to non-compensation matters, the stockholders with whom we spoke welcomed the continued refreshment of the Board, the publication of our first Sustainability Report and the success of our Trading-for-Trees initiative. As our ESG program evolves, certain stockholders also requested that the Company implement a formal ESG disclosure framework and provide more disclosure relating to the diversity of our Board.

### **Actions in 2020**

We took the following actions and implemented the following changes to our executive compensation program for performance year 2020:

- **NEO's Annual Cash Incentive Compensation Program** – Beginning in 2020, 50% of the NEO's targeted annual cash incentive is tied to the Company's Adjusted Operating Income performance for the fiscal year based on the 2020 budget, while 50% is tied to the executive's delivery against individual goals and key strategic initiatives for the Company.
- **Annual Equity Award Performance Share Metrics** – Beginning in 2020, the performance shares granted in January, representing 50% of our NEOs' annual equity award in relation to prior year performance, are awarded with a three-year performance period based on a combination of operating margin and market share metrics. Performance targets for years two and three will be based off of previous years' actual results.
- **Continued Committee Refreshment** – In January 2020, the Chair of the Compensation Committee was rotated to Mr. Begleiter, and Ms. Altobello joined the Compensation Committee. In addition, as a result of updating its responsibilities and charter to include talent management and succession planning, the Committee also formally changed its name to the Compensation and Talent Committee (although referred to as the Compensation Committee in this CD&A). In addition, the Compensation Committee updated its charter.

## Business and financial performance

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### **MarketAxess 2020 Performance**

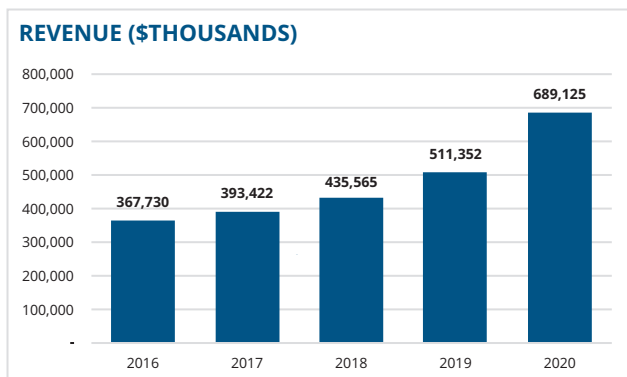
Performance year 2020 marked our 12<sup>th</sup> consecutive year of record financial results driven by estimated market share gains across all of our global credit products and a healthy increase in U.S. credit market volumes. The 2020 results reflect record volume and revenue in U.S. high-grade, U.S. high-yield, emerging market corporate and sovereign bonds, European credit, U.S. municipal bonds and U.S. treasuries. In 2020, we continued to invest in new protocols, technology and platform functionality, new product areas and expanding our geographic reach. To support our investment agenda, our global staff count increased to 606 at year end 2020, a 15% increase year-over-year. The headcount growth was largely concentrated in technology, customer facing and business support areas. We also completed the acquisition of Regulatory Reporting Hub in November 2020, which further expands and enhances our transaction and trade reporting services across a broader European client base, particularly in Germany, France and the Nordics.

### **How COVID-19 Impacted Performance**

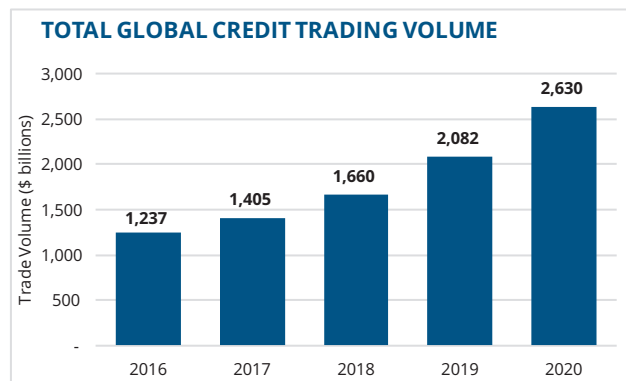
As a result of the Pandemic, we experienced significant changes in our daily operations in 2020. In mid-March 2020, we successfully implemented a global work from home mandate for all our employees and we were able to continue to provide our trading platforms and other services to our clients without interruption. In particular, we believe that Open Trading liquidity has been increasingly essential to the functioning of credit markets during the Pandemic, and MarketAxess has played a valuable role keeping our clients connected to the market as traders moved from their centralized trading floors to home offices. During the first several months of the Pandemic, we helped over 10,000 individual users connect to our trading platforms from their homes. Although we have reprioritized certain technology projects due to the changing needs of our clients in the current market environment, we have largely continued with our hiring plans, capital expenditures and the expansion of our trading platforms and services into new jurisdictions.

Our performance in key metrics include:

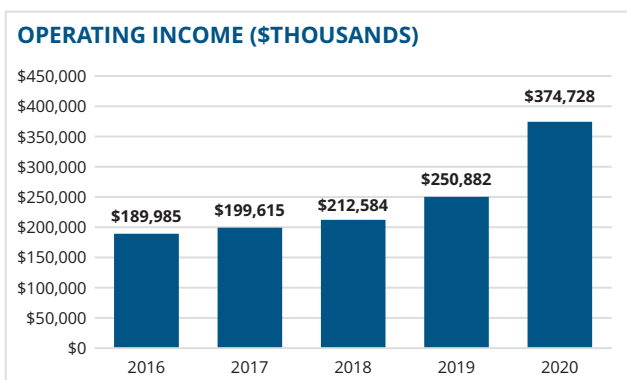
**Revenue:** This was our 12<sup>th</sup> consecutive year of record revenue with our core four products producing record revenues. Total revenues exceeded \$689 million, up 35% from 2019. Commission revenues were over \$634 million, up 37% from 2019.



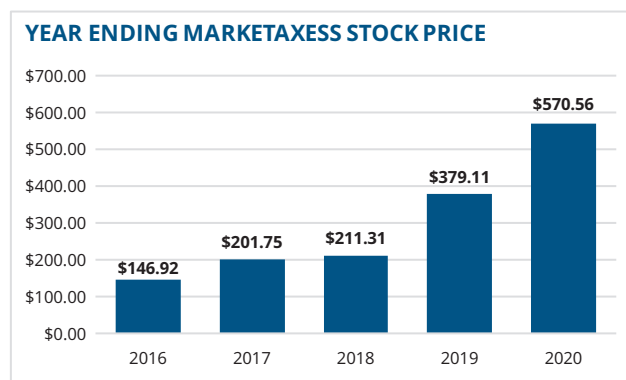
**Volume Growth:** We delivered credit trading volumes of \$2.6 trillion, up 26% from 2019. This included record volumes in all four of our core products. We delivered record estimated U.S. high-grade and U.S. high-yield market share of 21.6% and 17.1%, respectively. We have 1,823 active global institutional clients, up almost 6% from 2019. Our 899 active international institutional clients increased 8% from 2019, representing almost 29% of our trading volume in 2019.



**Earnings Growth:** This was our 12<sup>th</sup> consecutive year of record operating income. Operating income of almost \$375 million was up 49% from 2019. Diluted earnings per share of \$7.85 was up over 45% as compared to 2019.



**Stock Price and Capital Returns:** In addition to a 50% increase in stock price, we increased our annual dividend from \$2.04 to \$2.40 per share, or 18%, and returned over \$107 million of capital to stockholders through our stock buyback and dividend programs.



**Relative Performance**

For 2020, we evaluated our year-over-year financial growth as compared to our Peer Group (as defined below under *How We Determine Pay Levels – Peer Group*). For the period ending December 31, 2020, our operating income growth outperformed all of our 18 peers in the Peer Group. We ranked third out of 18 in year-over-year revenue growth, fifth in EPS growth, fourth in year-over-year stock price growth and third in three- and five-year stock price growth.

Our share price growth as compared to the following indices for the one-, three-, and five-year periods ended December 31, 2020 was as follows:

	Share Price Growth							
	MKTX	Russell 1000		NASDAQ Comp.		S&P 500		
	Stock Return	Stock Return	MKTX Outperformance	Stock Return	MKTX Outperformance	Stock Return	MKTX Outperformance	
<b>1-year</b>	50.5%	18.9%	31.6%	43.6%	6.9%	16.3%	34.2%	
<b>3-year</b>	182.8%	43.1%	139.7%	86.7%	96.1%	40.5%	142.3%	
<b>5-year</b>	411.3%	87.4%	323.9%	157.4%	253.9%	83.8%	327.5%	
<b>10-year</b>	2641.8%	204.3%	2437.4%	385.8%	2255.9%	198.7%	2443.1%	

In 2020, we continued to deliver long-term value for our stockholders as evidenced by ranking 188<sup>th</sup> in five-year total stockholder return (“TSR”) (approximately 89<sup>th</sup> percentile) and 12<sup>nd</sup> in ten-year TSR (approximately 99<sup>th</sup> percentile) of all 2,236 U.S. public companies with over \$1 billion in market capitalization (as reported by FactSet).

**How 2020 Performance Affected Executive Compensation**

A significant portion of each NEO’s compensation is dependent on our financial performance. The Company generated \$423.6 million of Adjusted Operating Income in 2020, which was above our 2020 internal target Adjusted Operating Income goal of \$334.3 million. Accordingly, the accrual under our cash incentive plan was higher than budgeted, resulting in higher cash incentive compensation for our NEOs. Further details about how the Adjusted Operating Income affected the NEO’s cash incentive can be found in *Annual Cash Incentive Awards* below.

The Compensation Committee considered the Company’s relative outperformance in determining the size of the equity awards granted in January 2021 for 2020 performance.

The chart below shows the change in base salary, total cash (which includes base salary and incentive cash) and total direct compensation (“TDC”) (which includes cash payments, annual equity awards made in relation to prior year performance (e.g., January 2021 awards for 2020 performance) and the annualized value of multi-year equity awards) for each NEO (see *Annual Cash Incentive Awards* and *Total Direct Compensation* below). The figures in the chart below differ from those shown in the Summary Compensation Table in *Executive Compensation*, as the Summary Compensation Table (“SCT”) reflects the full grant date value of any multi-year performance equity award received by the NEOs in the year actually granted (as required by the SEC). Additionally, the SCT includes equity awards granted in January 2020 for 2019 performance, which are included in the 2019 data in the below chart.

	Base Salary			Total Cash Compensation			Total Direct Compensation		
	2020	2019	Change	2020	2019	Change	2020	2019	Change
	(\$ in thousands)								
Richard M. McVey, CEO (1)	500	500	0%	2,750	500	450%	8,500	7,750	10%
Christopher R. Concannon, President	500	500	0%	2,000	2,000	0%	5,500	5,250	5%
Antonio L. DeLise, CFO	300	300	0%	1,200	1,175	2%	2,400	2,085	15%
Kevin McPherson, Head of Sales	300	300	0%	1,500	1,400	7%	2,850	2,500	14%
Nicholas Themelis, CIO	300	300	0%	1,500	1,500	0%	3,200	2,800	14%

(1) In 2019, the CEO received a commensurately higher equity award in lieu of a cash incentive.

## How we make compensation decisions

### *Executive Compensation Principles and Strategy*

Our executive compensation program is designed to promote the following core principles that are aligned with our Company's business strategy:

- **Alignment:** we align and reward Company and individual performance and decision-making with long-term stockholder value creation;
- **Retention:** attract, reward and retain high caliber executives;
- **Motivation:** motivate high performance from our NEOs by offering greater incentives for superior performance and reduced awards for underperformance;
- **Prudence:** discourage imprudent risk taking by avoiding undue emphasis on any one metric or short-term goals; and
- **Fairness:** be transparent and fair to both our NEOs and our stockholders.

We believe these principles have served us well for many years, and we are continuing to refine them in response to input from our stockholders.

Our compensation principles place a majority of our executive officers' compensation at risk and emphasize incentives tied to individual and Company performance, as well as continued service. As a result, the only fixed compensation paid is base salary, which represented 6% of our CEO's total compensation and no more than 12% of the other NEO's total compensation in 2020. We also seek to promote long-term commitments from our NEOs because we believe that continuity of the Company's leadership team benefits both the Company and our stockholders. As such, we utilize long-term (three- to five-year) equity incentives in conjunction with short-term incentives (performance-based annual cash awards). Ultimately, the value realized by our NEOs from our equity incentive awards will depend on our financial performance, changes in our Common Stock price, and satisfaction of an award's vesting schedule. Taken together, we believe these factors help create a comprehensive scheme that both reinforces our long-term performance-based orientation and is aligned with the interests of our stockholders.

To assess the financial impact of our compensation programs and ensure alignment with the interests of our stockholders, we focus on managing our aggregate compensation and benefits expense expressed as a percentage of our total annual revenues ("C&B Ratio"). We believe that monitoring this measure improves our overall profitability. The NEOs' annual incentive payments are a component of aggregate compensation expense. Additionally, the C&B Ratio provides a normalized efficiency measure by which we can compare our compensation structure to those maintained by our peers and other financial and technology industry companies. Since 2012, our C&B Ratio has been below 30%, which we believe is an appropriate target given our current revenues, employee base and strategic plans.



**Best Practices in Compensation Governance**

Our pay practices align with our compensation principles and facilitate our implementation of those principles. They also demonstrate our commitment to sound compensation and governance policies.

Compensation Policies and Practices	
What We Do	What We Avoid
<ul style="list-style-type: none"> <li>✓ Emphasis on performance-based compensation</li> <li>✓ Use of clawbacks</li> <li>✓ Stock ownership guidelines</li> <li>✓ Use of long-term equity awards that align with stockholder interests</li> <li>✓ Automatic reduction of severance payments subject to §280G excise tax</li> <li>✓ Engage with investors</li> <li>✓ Dividends and dividend equivalents on restricted stock and RSUs are paid only when the awards vest</li> <li>✓ Engage independent compensation consultants</li> </ul>	<ul style="list-style-type: none"> <li>✗ No guaranteed bonuses except for new hires</li> <li>✗ No pension / SERP plans</li> <li>✗ No single-trigger change in control benefits</li> <li>✗ No §280G excise tax “Gross-Up” Benefits</li> <li>✗ No recycling of shares</li> <li>✗ No dividends on performance shares until earned</li> <li>✗ No "repricing" underwater options without stockholder approval</li> <li>✗ No hedging or pledging of MarketAxess stock</li> <li>✗ Limited perquisites and personal benefits</li> </ul>

**Role of the Compensation Committee**

The Compensation Committee administers the compensation program for our NEOs. The Compensation Committee reviews all components of remuneration (both cash and equity) and decides which elements of compensation, if any, should be adjusted or paid based on corporate and individual performance results and competitive benchmark data. The Compensation Committee also determines performance award payouts for the prior fiscal year based on actual results against performance goals.

In performing its duties, the Compensation Committee:

- annually reviews competitive compensation data, recent compensation trends and any other relevant market data obtained by its compensation consultants and considers the impact on our compensation architecture, policies and strategies;
- reviews all compensation, including equity holdings (both vested and unvested amounts) earned by each NEO, including each NEO’s past wealth realization and future equity incentive opportunities as well as a sensitivity analysis to help assess the Company’s ability to retain and motivate each NEO;
- consults with the compensation consultants and full Board regarding market and performance data when considering decisions concerning the structure and amount of our CEO’s compensation;
- considers the recommendations of our CEO relating to the performance of our NEOs (other than himself) and the recommendations of its compensation consultants relating to market data and compensation trends when considering decisions concerning the structure and amount of compensation of our NEOs.

The Compensation Committee’s function is fully described in its charter, which is available on our corporate website at [www.marketaxess.com](http://www.marketaxess.com) under *Investor Relations – Corporate Governance*. In performing its duties, the Compensation Committee receives assistance from management and our independent compensation consultants. The Compensation Committee’s decisions relating to compensation for our NEOs are reviewed by our full Board of Directors.

**Role of Independent Compensation Consultants**

Pursuant to its charter, the Compensation Committee may retain and terminate any consultant or other advisor, as well as approve the advisor’s fees and other engagement terms. For fiscal year 2020, the Compensation Committee retained FW Cook (“FW Cook”) as its independent compensation consultant for purposes of advising on executive



compensation. Representatives from FW Cook attended Compensation Committee meetings, participated in executive sessions and communicated directly with the Compensation Committee. During 2020, FW Cook provided the following services to the Compensation Committee:

- **Executive Compensation Design** – Provided the Compensation Committee with executive compensation design suggestions and alternatives;
- **Pay Analysis** – Reviewed and benchmarked competitive market pay levels and conducted retention analyses with respect to 2020 compensation for our NEOs;
- **Peer Group Construction** – Reviewed and recommended changes to the Company's peer group composition (as discussed below in *Peer Group*);
- **Equity Plan** – Advised on the structure and terms of the MarketAxess Holdings Inc. 2020 Equity Incentive Plan (the "Equity Incentive Plan") that was approved by the Company's stockholders at the 2020 Meeting, as well as the Company's usage of authorized shares (*i.e.*, "burn rate"); and
- **General Advice/Compliance** – Provided general compensation-related recommendations to the Compensation Committee and performed other services, including providing advice regarding regulatory and advisory compliance issues, and other governance issues.

Grahall Partners LLC advised the Compensation Committee with regard to the compensation for our Board of Directors and our non-executive employee population.

Each compensation consultant reported directly, and is directly accountable, to the Compensation Committee. The Compensation Committee assessed the independence of Grahall and FW Cook pursuant to SEC rules and determined that their work did not raise any conflicts of interest. The Compensation Committee will continue to monitor the independence of its compensation consultants on an annual basis.

### **Role of Senior Management**

Senior management, including the CEO, President, and Head of Human Resources, set the agendas and prepare the materials for Compensation Committee meetings and attend those meetings, other than during executive session. Other senior managers, such as the CFO and General Counsel, may also assist in the preparation or presentation of relevant material. The CEO recommends annual compensation for the NEOs, other than himself, to the Compensation Committee for consideration, but the Compensation Committee is responsible for the final recommendations. No member of management is present in the Compensation Committee meetings when matters related to their individual compensation are under discussion.

### **Compensation Risk Assessment**

The Compensation Committee is responsible for reviewing and assessing potential risk arising from the Company's compensation policies and practices. The Compensation Committee regularly reviews the Company's compensation policies and practices to ascertain any potential material risks that may be created by the Company's compensation programs. FW Cook provided the Compensation Committee an assessment of the effectiveness of all major components of the Company's compensation programs, including the mix between annual and long-term compensation; short and long-term incentive program design; incentive plan performance criteria and corresponding objectives; the Company's severance and change-in-control policies; its claw-back policy; and its stock ownership guidelines. The Compensation Committee's review includes the compensation practices for our entire employee base to ensure that our pay practices, compensation programs and business strategies do not motivate imprudent risk-taking by any employee.

The Compensation Committee considered these items in determining the appropriate compensation programs for the Company. The Company utilizes many design features that mitigate the likelihood of encouraging excessive risk-taking behavior. Among these design features are:

- Significant use of equity compensation with long-term vesting (three to five years);

## COMPENSATION DISCUSSION AND ANALYSIS

- Use of holding periods or cliff vesting for long-term equity awards;
- Strong compensation recoupment policy;
- Stock ownership and retention guidelines that meet market standards;
- The Compensation Committee’s ability to exercise downward discretion in determining payouts, including after consideration of regulatory, compliance and legal issues; and
- Training on our Code of Conduct and other policies that educate our employees on appropriate behaviors and the consequences of taking inappropriate actions.

Based on the foregoing, the Compensation Committee and management agree that our compensation policies and practices do not encourage excessive risk-taking or create risks that are reasonably likely to have a material adverse effect on the Company. We believe that our compensation programs do not provide incentives that encourage risk-taking beyond the Company’s ability to effectively identify and manage significant risks and is compatible with the internal controls and the risk management practices of the Company.

### How we determine pay levels

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#### **Peer Group**

The Compensation Committee assesses the Company’s financial performance and executive compensation competitiveness against a group of peer companies that it selects based on input from FW Cook. A key objective of our executive compensation program is to ensure that the total compensation package and structure that we provide to our NEOs is competitive with the companies with whom we compete for executive talent. The 2020 peer group consisted of companies that are similar to the Company in terms of competitive positioning, financial size, operating characteristics, market sector or industry classification. FW Cook engages with the Compensation Committee to review the peer group annually and periodically make changes.

In 2020, FW Cook completed an annual review of the composition of our peer group. Factors considered in determining the peer group (“Peer Group”) included:

- financial size – market cap and revenues, generally based on a methodology similar to the method used by Institutional Shareholder Services (“ISS”) of +/- 2.5 times the Company’s most recent annual revenues and +/- 5 times the Company’s most recent market capitalization;
- whether companies compete with us for clients, executives or other employee talent;
- market sector, asset class or product offering;
- peers of peers, as well as peers designated by ISS in its annual review; and
- reviewing the broader market for additional firms in financial services, IT services and software industries, based on relative revenue, market capitalization and operating income similarity.

For the 2020, our Peer Group was comprised of the following firms:

2020 Peer Group		
ACI Worldwide, Inc.	Cohen & Steers, Inc.	MSCI Inc.
Alliance Bernstein Holding L.P.	Investnet, Inc.	Nasdaq Inc.
Aspen Technologies, Inc.	Factset Research Systems, Inc.	SEI Investments Company
BGC Partners, Inc.	Fair Isaac Corporation	Tradeweb Markets Inc.
Black Knight, Inc.	Guidewire Software, Inc.	Virtu Financial, Inc.
Cboe Global Markets, Inc.	Morningstar, Inc.	Verisk Analytics, Inc.

In 2020, we added Aspen Technologies, Inc., Nasdaq Inc., SEI Investments Company and Verisk Analytics to our Peer Group. We removed GAMCO Investors, Hercules Technology Growth Capital, Main Street Capital, Virtus Investment Partners, and Wisdom Tree Investments.

### ***Benchmarking – Importance and Process***

In addition to the peer group, FW Cook also used leading industry compensation surveys for the financial services and financial technology sectors for benchmarking purposes. The surveys provide a broader view of compensation levels and trends, which is useful in combination with the Peer Group data. The Compensation Committee considered this data, in conjunction with the Company's performance and each NEO's individual performance, contribution and expertise in determining how each NEO is paid vis-à-vis the recommended pay range role. The Compensation Committee is presented summary statistics and does not review the list of individual companies that participate in the surveys.

It is important to note that the Company's upper quartile TSR over multiple years has resulted in our market capitalization being significantly higher than most of the companies in the Peer Group and surveys. From a benchmarking perspective, we note that market long-term incentive grant levels (and total compensation) will therefore be inherently lower than a performance-adjusted market rate for MarketAxess. While it would be helpful to introduce more peer companies with a comparable market capitalization, there are a limited number of such companies in our industry. Therefore, the differences in market capitalization should be kept in mind when selecting peer companies and interpreting the results of the benchmarking.

### ***Individual Performance***

The Compensation Committee assesses the individual performance of the Company's NEOs in connection with the determination of each NEO's annual cash incentive award, annual equity award and TDC. In addition to the specific objectives for each NEO that support our strategic initiatives that are set at the beginning of the performance year, we measure the performance of all of our NEOs against the following criteria that we believe are paramount to our success in a highly competitive market:

- ***Innovation:*** we are leading the 'electronification' of the corporate bond market, which is resulting in significant market structure changes. This market evolution requires our NEOs to be innovative as they help set the Company's direction and determine the role it plays in the financial markets;
- ***Ability to deliver technology-driven market solutions:*** we are a financial technology company whose NEOs must combine an expertise of the fixed-income securities market with the knowledge and ability to conceptualize, create, implement and deliver technology-driven market solutions; and
- ***Strategic decision making and execution:*** we are a relatively flat organization with approximately 600 employees globally; therefore, our NEOs must have the ability to balance strategic decision making with tactical execution, and they must be able to effectively communicate with, and lead, broad teams of employees across all levels of the organization.

## COMPENSATION DISCUSSION AND ANALYSIS

As described below under *Determination of NEO Annual Cash Incentives – 2020*, in 2020, the Company adopted several changes to the design of the Company's executive compensation program that introduce objective performance criteria and target payouts tied to both corporate results and individual performance. In 2020, the Compensation Committee also assessed the individual performance of our NEOs based on our strategic corporate objectives:

Grow Market Share in Core Products	Build New Product Marketplaces	Expand Data Offering	Growth through Global Client Relationship Management	Best in Post Trade	Corporate Development and M&A	Corporate Culture and Talent Development
<ul style="list-style-type: none"> <li>Expansion of Open Trading</li> <li>Trading automation</li> </ul>	<ul style="list-style-type: none"> <li>EM local markets</li> <li>Municipal Bonds</li> <li>Leveraged Loans</li> <li>US Treasuries</li> <li>ETF share trading</li> <li>Portfolio bond trading</li> </ul>	<ul style="list-style-type: none"> <li>Data products and distribution</li> </ul>	<ul style="list-style-type: none"> <li>Penetration and diversification of top global client relationships</li> </ul>	<ul style="list-style-type: none"> <li>Expansion of post trade and regulatory reporting services</li> <li>Efficiency of clearing &amp; settlements solutions</li> </ul>	<ul style="list-style-type: none"> <li>M&amp;A</li> <li>Joint ventures and partnerships</li> </ul>	<ul style="list-style-type: none"> <li>Diversity, equity and inclusion</li> <li>Attract, develop and retain top talent</li> </ul>

In addition to achieving a 12<sup>th</sup> year of record financial results, the NEOs were credited with the following contributions to our key imperatives:

Strategic Imperative	Richard M. McVey, CEO
<b>Corporate Culture and Talent Development</b>	<ul style="list-style-type: none"> <li>&gt; Invested in building the Company's leadership team and strengthening its succession plans; expanded the global leadership team with key new hires and augmented the responsibilities of some of the existing leaders; actively involved in the mentorship and development of other high potential managers</li> <li>&gt; Advocate for various DE&amp;I internal and external initiatives, including Board diversity, the Company's diversity and minority-owned dealer initiative, and the adoption of the UN Women's Empowerment Principles</li> <li>&gt; Established the MarketAxess Foundation to support charitable initiatives in underserved communities</li> <li>&gt; Led a significant increase in employee communications, including leading bi-weekly global town halls and regular virtual coffee meetings for employee groups around the world</li> </ul>
<b>Grow Market Share in Core Products</b>	<ul style="list-style-type: none"> <li>&gt; Actively advocated for the Company through client engagement, conference and speaker opportunities and regulatory initiatives</li> <li>&gt; Contributed to the Company's automation strategy, which included Auto-X functionality that significantly increases clients' trading efficiency</li> </ul>
<b>Build New Product Marketplaces</b>	<ul style="list-style-type: none"> <li>&gt; Participated in the efforts to promote growth in new product offerings; demonstrated growth in municipal bonds and local markets EM, although internal targets were not met for U.S. Treasury trading</li> <li>&gt; Actively involved in building depth in the international management team and was a proponent for additional technology functionality, which contributed to the increase in Emerging Markets and Eurobond estimated market share in the applicable regions</li> </ul>
<b>Expand Data Offering</b>	<ul style="list-style-type: none"> <li>&gt; Continued investment in the Company's data strategy resulted in double digit growth in applicable revenue</li> </ul>
<b>Growth through Global Client Relationship Management</b>	<ul style="list-style-type: none"> <li>&gt; Active involvement in the client development of our largest global investor and dealer clients in support of the Company's global sales effort</li> <li>&gt; Assisted with the implementation of the global client coverage strategy</li> </ul>

<b>Best in Post Trade</b>	<ul style="list-style-type: none"> <li>&gt; Continued investment in the Company's post trade business resulted in double digit growth in applicable revenue</li> <li>Together with the Company's President, led the response to the operational inefficiencies which occurred in the immediate period following the Company's conversion to self-clearing</li> <li>&gt; Led the Company's successful effort to increase its revolving line of credit to support its conversion to self-clearing</li> </ul>
<b>Corporate Development and M&amp;A</b>	<ul style="list-style-type: none"> <li>&gt; Supported the acquisition of Regulatory Reporting Hub and the execution of an agreement to acquire MuniBrokers</li> </ul>
<b>Other - Board of Directors and Regulatory Relationships</b>	<ul style="list-style-type: none"> <li>&gt; Demonstrated a strong focus on corporate governance as evidenced by the successful recruitment of independent directors that are industry leaders with diverse background and skills</li> <li>&gt; Active involvement in the SEC's FIMSAC, including chairing the Technology and Electronic Trading Subcommittee, which led to three specific recommendations to the SEC in 2020; on-going dialog with senior officials at the SEC, FINRA and other regulators</li> </ul>
<b>Strategic Imperative</b> <span style="float: right;"><b>Christopher R. Concannon, President</b></span>	
<b>Corporate Culture and Talent Development</b>	<ul style="list-style-type: none"> <li>&gt; Led the Company's Pandemic response team, which allowed us to safely, quickly and effectively move our employees to a productive work-from-home environment while supporting clients during this period of market disruption and transition</li> <li>&gt; Advocate of internal DE&amp;I initiatives; executive sponsor of the UN Women's Empowerment Principles and Trading for Trees</li> <li>&gt; Building out and developing the next generation of the leadership team remains an area of focus</li> </ul>
<b>Grow Market Share in Core Products</b>	<ul style="list-style-type: none"> <li>&gt; Sponsored the launch of Live Markets, Mid X and Auto-X enhancements</li> <li>Sponsor of automation initiatives, including the integration of Auto-X automated trading into the Axess IQ workflow, which contributed to a 66% increase in automated trading volumes</li> </ul>
<b>Build New Product Marketplaces</b>	<ul style="list-style-type: none"> <li>&gt; Oversaw double-digit growth in municipal bonds by volume</li> <li>&gt; Led the expansion and rollout of U.S. Treasuries trading solutions and net hedging product offerings; the growth of U.S. Treasuries continues to be an area of focus</li> <li>&gt; Delivered on the Company's planned technology releases despite market volatility and employee dislocation</li> </ul>
<b>Expand Data Offering</b>	<ul style="list-style-type: none"> <li>&gt; Led the development of unique data products that support automation tools</li> <li>&gt; Oversaw the double-digit growth in data revenue</li> </ul>
<b>Growth through Global Client Relationship Management</b>	<ul style="list-style-type: none"> <li>&gt; Active in the relationship management of our largest global clients</li> <li>&gt; Continues to expand and build deeper senior executive relationships with our clients</li> </ul>

## COMPENSATION DISCUSSION AND ANALYSIS

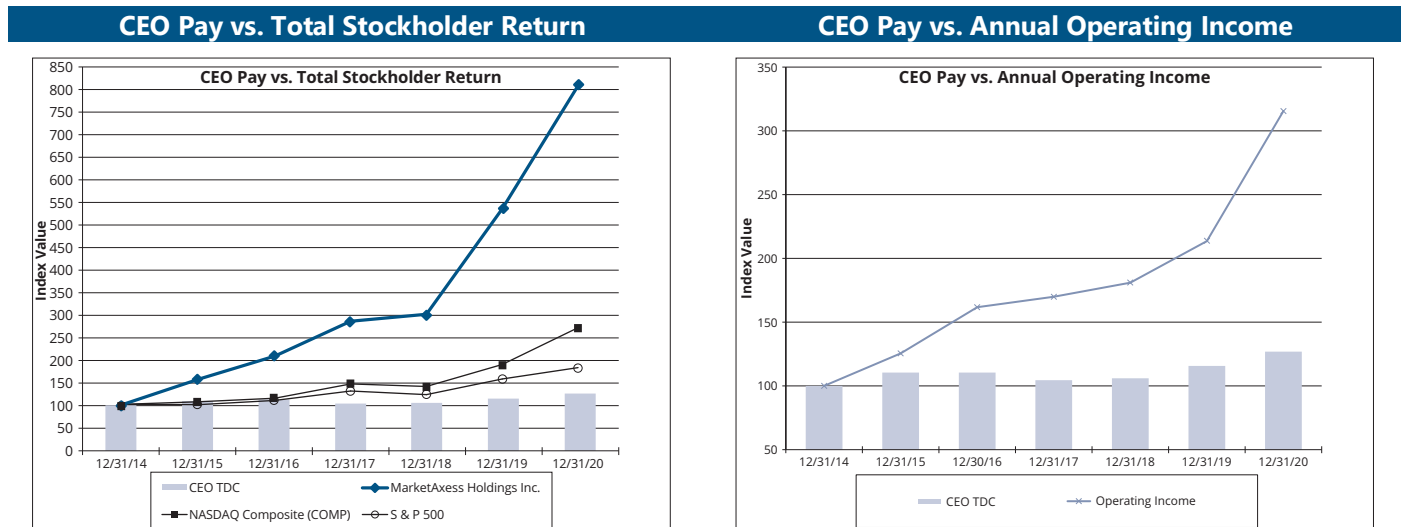
<b>Best in Post Trade</b>	<ul style="list-style-type: none"> <li>&gt; Sponsor of the Company's conversion to self-clearing for U.S. bond trades and the build-out of the operations and settlements functions. Took responsibility for the operational inefficiencies that occurred in the immediate period following the conversion</li> <li>&gt; Sponsored the acquisition of Regulatory Reporting Hub that provides substantial expansion of the Company's Post Trade business</li> </ul>
<b>Corporate Development and M&amp;A</b>	<ul style="list-style-type: none"> <li>&gt; Led the Company's M&amp;A efforts, including the above-mentioned acquisition of Regulatory Reporting Hub and the announced acquisition of MuniBrokers</li> <li>&gt; Drove the due diligence of other M&amp;A opportunities and strategic alliances</li> </ul>
<b>Strategic Imperative</b> <span style="float: right;"><b>Antonio L. DeLise, CFO</b></span>	
<b>Corporate Culture and Talent Development</b>	<ul style="list-style-type: none"> <li>&gt; Attracted new talent to build depth in the Finance, Accounting, Investor Relations and Audit groups and implemented a number of organizational changes to provide promotional opportunities to the next generation of the Company's leadership team</li> </ul>
<b>Build New Product Marketplaces</b>	<ul style="list-style-type: none"> <li>&gt; Partnered with business executives and other business sponsors on designing and implementing scalable fee plans for new products and trading protocols</li> </ul>
<b>Best in Post Trade</b>	<ul style="list-style-type: none"> <li>&gt; Organized and provided for an expanded revolving line of credit to support the new U.S. bond self-clearing initiative; sponsored and guided the development of reporting tools to proactively manage risk and liquidity</li> </ul>
<b>Corporate Development and M&amp;A</b>	<ul style="list-style-type: none"> <li>&gt; Led the financial due diligence of a number of M&amp;A opportunities culminating in the closure of Regulatory Reporting Hub acquisition and the announcement of the MuniBrokers acquisition</li> </ul>
<b>Strategic Imperative</b> <span style="float: right;"><b>Kevin McPherson, Head of Sales</b></span>	
<b>Corporate Culture and Talent Development</b>	<ul style="list-style-type: none"> <li>&gt; Expanded and diversified the U.S. and Asian sales management teams by hiring new talent and promoting internal high potential talent</li> </ul>
<b>Grow Market Share in Core Products</b>	<ul style="list-style-type: none"> <li>&gt; Sales leadership has resulted in record trading volumes in the Company's core products; however, opportunities exist for faster incubation of newer product offerings</li> </ul>
<b>Build New Product Marketplaces</b>	<ul style="list-style-type: none"> <li>&gt; Actively involved in the restructuring of the leadership team in Asia and the onboarding of the new Head of Asia; innovative approaches to virtual client engagement, including virtual client forums resulting in the Company becoming an integral part of clients' trading days during the Pandemic</li> <li>&gt; Opportunities exist for faster incubation of newer product offerings</li> </ul>
<b>Growth through Global Client Relationship Management</b>	<ul style="list-style-type: none"> <li>&gt; Active involvement in the business development of our largest global investor and dealer clients</li> <li>&gt; Implemented our global sales coverage strategy and ensured proper resourcing and executive sponsorship across the organization</li> <li>&gt; Implemented virtual open client forums across the globe</li> </ul>

**Strategic Imperative** **Nicholas Themelis, CIO**

<b>Corporate Culture and Talent Development</b>	<ul style="list-style-type: none"> <li>&gt; Sponsored the continued evolution to an Agile environment; provided promotional leadership opportunities internally and created a more diverse management team; supported all employees in the work-from-home transition, ensuring their technology demands were met and that there was limited impact on productivity</li> </ul>
<b>Grow Market Share in Core Products</b>	<ul style="list-style-type: none"> <li>&gt; Delivered multiple enhancements and functionality to the Company's automated trading portfolio, including Live Markets, Mid-X and Auto-X; oversaw the risk control development for automation projects</li> </ul>
<b>Build New Product Marketplaces</b>	<ul style="list-style-type: none"> <li>&gt; Delivered new trading protocols for South Korea and other emerging local markets</li> <li>&gt; Delivered enhancements to U.S. Treasury, Municipal Bond, Portfolio and Open Trading functionality</li> </ul>
<b>Corporate Development and M&amp;A</b>	<ul style="list-style-type: none"> <li>&gt; Led the technology due diligence of M&amp;A targets and actively participated in the technology integration strategies</li> <li>&gt; Executive sponsor of the migration to a new technology stack to increase the velocity of new products and functionality releases</li> </ul>

**Alignment of CEO TDC and Performance**

The charts below compare the growth of the CEO's TDC to the Company's Common Stock price appreciation, the performance of various indices and the growth of the Company's operating income for the six-year period ended December 31, 2020 on an indexed basis:



(1) Calendar year 2014 is the baseline year and was the start of the measurement period.

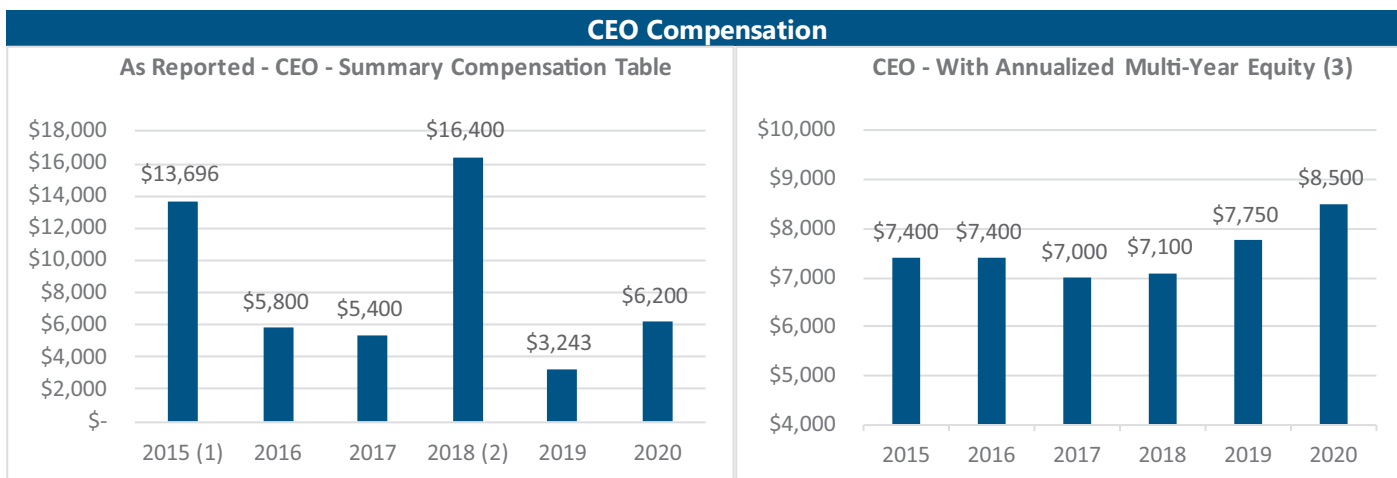
As illustrated in the above graphs, the CEO's annual TDC has increased 27% in the aggregate during the six-year period ending December 31, 2020 (representing an approximately 4% compound annual growth rate ("CAGR")). During this same period, the Company's operating income under U.S. generally accepted accounting principles (GAAP) has increased 215% (approximately 21% CAGR over 6 years) and TSR has increased 708% (almost 42%



## COMPENSATION DISCUSSION AND ANALYSIS

CAGR over 6 years), while the 6-year CAGR for the NASDAQ and S&P 500 for this period increased by approximately 18% and 10.5%, respectively. In addition, over \$18 billion in stockholder value (as measured by increased market capitalization) has been created during the six-year period ended December 31, 2020.

We believe the CEO's compensation has consistently reflected our pay for performance philosophy during this period. However, because the Summary Compensation Table requires multi-year equity awards to be reported in full in the year received, our use of such awards can make an NEO's compensation appear to be volatile. The chart below illustrates and contrasts TDC levels for the CEO over the past six years as reported in the Summary Compensation Table (pursuant to SEC rules) versus the TDC calculated by the Company as a result of annualizing multi-year equity awards over the term of each such award:



- (1) Includes \$8 million performance equity grant that is spread over the five performance years from 2015 to 2019 (see *Use of Multi-Year Awards* below).
- (2) Includes \$11 million performance equity award that is spread over 5 years (2 months for year-end 2018, 10 months for year-end 2023, and full year for each year-end 2019-2022).
- (3) Annualized Multi-Year Equity Grants spread the grant value of multi-year equity awards over the relevant performance/vesting period.

## Elements of executive compensation

The compensation structure for our NEOs is comprised of base salaries, annual cash incentive compensation and various forms of equity which, for 2020, was granted under our Equity Incentive Plan. The combination of these elements enables us to offer a competitive, cost effective compensation program that balances variable, or at-risk, compensation with prudent risk taking and stockholder interests. Equity awards may be granted on an annual basis or as special awards, including multi-year awards, that are attributed over multiple years of compensation. We believe that equity awards serve as an important part of an NEO's compensation in that they further ensure alignment of the NEO's interests with those of our stockholders.

Annual variable cash and equity compensation gives the Compensation Committee the flexibility to tie NEO compensation to individual and corporate performance, which is an important element of our pay philosophy and each NEO's compensation.

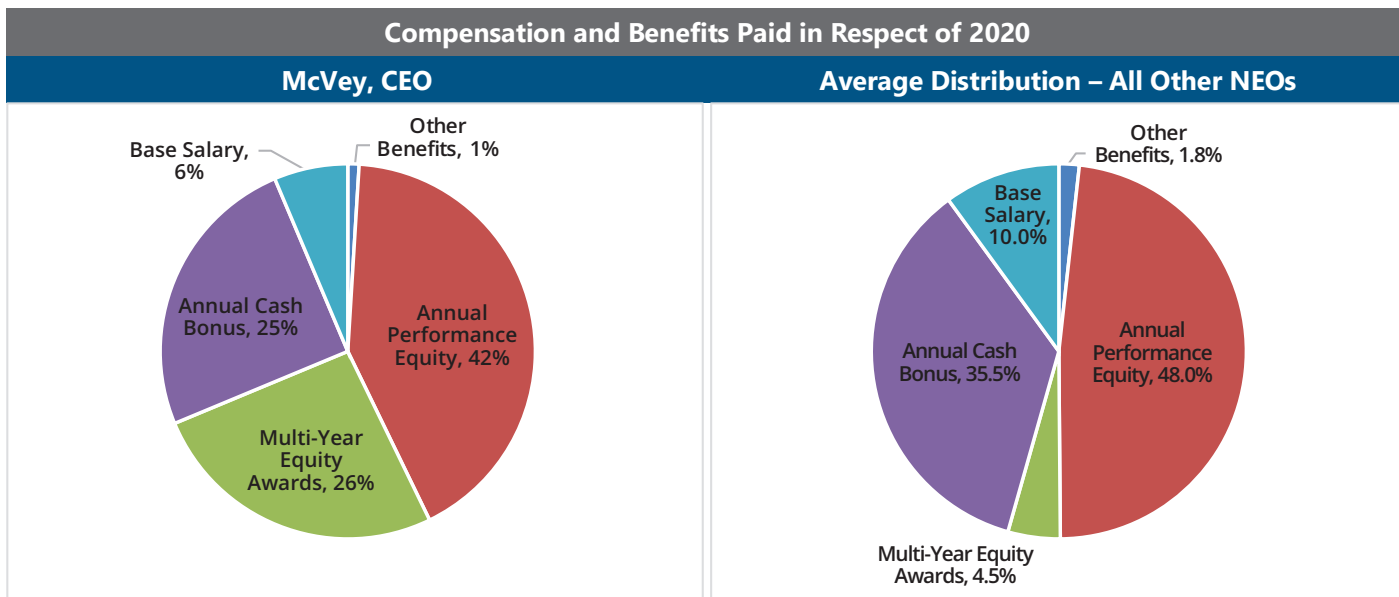


NEOs also receive standard employee benefits.

Elements of Pay		
Component	Description	Purpose
<b>Base Salary</b>	Fixed pay based on role and responsibilities, experience and expertise, and individual performance	Provides a consistent minimum level of compensation that is paid throughout the year at a cost-effective level for the Company
<b>Annual Cash Bonus</b>	Variable cash payments based on achievement of annual corporate financial goals and individual performance	Rewards short-term performance in a framework that discourages excessive risk taking by limiting maximum award opportunities
<b>Annual Equity Awards</b>	Equity awards that vest over three or more years	Designed to tie compensation to stockholder value creation; rewards attainment of corporate and individual goals
<b>Multi-Year Equity Awards</b>	Performance awards that vest over four or more years, often with back-ended vesting	Serve as retention tools while aligning compensation to long-term stockholder value creation
<b>Other Benefits</b>	Include healthcare, life insurance, disability and retirement savings plans	Provide assistance with healthcare-related costs and income protection in the event of disability, as well as a base level of replacement pay upon retirement

**Pay Mix**

We believe that lower base salaries and higher levels of variable performance awards motivate our NEOs, facilitate the achievement of our growth objectives and promote decision-making that is aligned with our stockholders’ interests. A lower base of fixed costs (including base salary) also allows us to better manage expenses, which helps improve profitability. We also believe that the balance among pay components in our compensation program design mitigates against a focus on short-term results and decreases the potential for excessive or inappropriate risk taking (see *Compensation Risk Assessment* above). An overview of the elements of pay provided to the CEO and, on average, to the other NEOs for fiscal year 2020 is as follows:



In 2020, all NEOs received over 40% of their annual TDC in equity, which was intended to align each NEO’s interests with the interests of our stockholders. Our CEO received 42% of his 2020 annual TDC through a new equity award and an additional 26% of his 2020 TDC was attributed to a portion of his 2018 multi-year equity award. All other NEOs received over 45% of their annual TDC in the form of new equity awards. The percentage of TDC attributed to annual equity awards was higher than in previous years for Messrs. DeLise, Themelis and McPherson because they no longer had the value of their previously granted multi-year equity awards attributed to their compensation, and as such, the Compensation Committee determined to increase their annual equity awards in lieu of a portion of their annual cash award so that they would have a greater amount of unvested equity in the Company. This is further detailed below in *Determination of NEO Annual Cash Incentives*.

2020 compensation

**Base Salary**

Base salary is the only fixed component of our NEO’s total cash consideration and is intended to provide a minimum consistent level of compensation throughout the year. We avoid automatic base salary increases and target our NEO’s base salaries below applicable median base pay levels to manage our fixed compensation costs and reinforce our pay-for-performance philosophy.

While most of the NEOs’ base salaries were at or below the 25th percentile of base salaries reported by our Peer Group, we did not adjust base salaries in 2020. Instead, we provided our NEOs with the opportunity for higher compensation through improved variable and long-term incentive opportunities as described below. Our CEO’s base salary has remained unchanged since 2011.

**Determination of NEO Annual Cash Incentives**

Starting with performance year 2020, 50% of the target cash incentive for our executive officers was directly linked to the Company's Adjusted Operating Income results and 50% was based on the executive's delivery against individual goals and key strategic initiatives for the Company. For 2020, the NEOs cash incentives were paid out of the 2009 Employee Performance Incentive Plan (the "Employee Cash Incentive Plan").

	Target Cash Incentive		
	Target	Portion Tied to Adjusted Operating Income	Actual Earned on Adjusted Operating Income
		(\$ in thousands)	
Richard M. McVey, CEO	2,000	1,000	1,250
Christopher R. Concannon, President	1,500	750	938
Antonio L. DeLise, CFO	875	438	547
Kevin McPherson, Head of Sales	1,100	550	688
Nicholas Themelis, CIO	1,200	600	750

As our Adjusted Operating Income was almost \$424 million, 27% greater than the target of \$334 million, the portion of each executive officer's cash award payable based on Adjusted Operating Income was paid out at 125% in accordance with the table below.

Payout on Adjusted Operating Income		
Performance	Adjusted Operating Income	Payout
	(\$ in thousands)	
125% of Target or Higher	417,936+	125%
110% of Target	367,784	110%
100% of Target	334,349	100%
90% of Target	300,914	90%
75% of Target	250,762	75%
Less Than 75% of Target	<250,762	0%

The remainder of each NEO's annual cash incentive awards for 2020 was determined by the Compensation Committee's assessment of the following:

- The Company's financial results for 2020;
- The benchmark data for each position;
- The individual performance of each NEO and his contribution to our corporate objectives for 2020 as summarized in the Individual Performance section above; and
- Whether it was beneficial to the Company and the NEO to increase the NEO's annual equity award in lieu of a portion of NEO's annual cash award. In the case of Messrs. DeLise, McPherson and Themelis, the Compensation Committee believed that, as a result of the final vesting of previously-granted multi-year equity awards in January 2021, each NEO should have a greater amount of unvested equity in the Company in order to increase the probability of retention and alignment to the interests of the Company's stockholders.

## COMPENSATION DISCUSSION AND ANALYSIS

A summary of the total cash incentives paid to our NEOs for 2020 based on both measures is set forth below. The Compensation Committee then reviewed the summary of the payouts against the 2019 payouts and in the context of the year-over-year growth of some key financial performance indicators:

Cash Incentive Paid Compared to Financial Metrics			
	2020	2019	Change
Revenues (in millions)	\$ 689.1	\$ 511.4	35%
Operating Income (in millions)	\$ 374.7	\$ 250.9	49%
Diluted EPS	\$ 7.85	\$ 5.40	45%
(\$ in thousands)			
Richard M. McVey, CEO (1)	\$ 2,250	\$ -	-
Christopher R. Concannon, President	\$ 1,500	\$ 1,500	-
Antonio L. DeLise, CFO	\$ 900	\$ 875	3%
Kevin McPherson, Head of Sales	\$ 1,200	\$ 1,100	9%
Nicholas Themelis, CIO	\$ 1,200	\$ 1,200	-

(1) In 2020, the CEO received equity in lieu of a cash incentive for 2019 performance.

### **Non-Qualified Deferred Cash Plan**

The Company offers a voluntary non-qualified deferred cash plan that allows U.S.-based NEOs and other select participants to defer all or part of their cash bonus. For the cash bonus paid in 2021 for 2020 performance, our President deferred 20% of his \$1,500,000 cash incentive bonus or \$300,000, and our CFO deferred 50% of his \$900,000 cash incentive bonus or \$450,000. Please see *Nonqualified Deferred Compensation* in the Executive Compensation Section of this Proxy.

### **Long-term Equity Incentives**

We grant equity awards to our NEOs annually as part of our on-going compensation program. In addition, special equity awards have historically been granted to our NEOs at the time of hire ("new hire" awards) or, for the CEO, upon renewal of his employment agreement. We did not make any such awards in 2020.

### **Annual Equity Awards**

We grant annual equity awards on January 15 using the average closing price of our Common Stock for the ten consecutive trading days leading up to and including the date of grant. This helps to ensure that the timing of any award will not be subject to manipulation and reduces the impact of any significant short-term swings in stock price. All annual equity awards vest over a minimum of three years, and the first vesting date is at least one year from the date of grant.

The value of the annual equity awarded to each NEO is considered by the Compensation Committee in determining TDC for each NEO. The amount awarded is based upon benchmark data, the Company's desire for our NEOs to maintain appropriate upside leverage in our annual incentive program while managing risk, stock ownership guidelines, and our desire to retain our NEOs.

SEC rules require that we report all equity granted during the applicable reporting year in our executive compensation tables (see *Executive Compensation* below). As such, we are providing an overview of all equity awards granted in January 2020 for 2019 performance. However, in calculating TDC for performance year 2020, we used the value of equity granted in January 2021 in recognition of performance during 2020. Accordingly, we have also included an overview of equity awards granted in 2021.

### **Flex Share Program**

Annual equity awards are made pursuant to our “Flex Share” program that permits our NEOs to have some input into the form of their equity compensation, subject to a general framework and limitations imposed by the Compensation Committee. The Flex Share program allows the Company to deliver more individualized awards without incurring additional expense to the Company.

50% of the annual equity awards granted to our NEOs are granted as performance shares with a three-year performance and vesting period. For the remaining 50% of their award, NEOs have the choice of receiving all RSUs or a combination of RSUs and stock options. The RSUs and the stock options will vest in equal installments on the first three anniversaries of the grant. For the stock options granted in January 2020, the ratio of stock options to RSUs granted was 3.77 stock options to one RSU, based upon the relative accounting cost of each award component on the award date.

In addition, settlement of RSU grants may be deferred at the NEO’s election, which provides an added benefit of allowing the NEO to maintain additional upside leverage in our shares of Common Stock through delayed taxation. Generally, deferring RSUs has no impact on an RSU’s vesting schedule, except that the initial vesting date for an RSU deferred in the year of grant must occur at least 13 months after the grant date in accordance with Section 409A of the Internal Revenue Code of 1986, as amended (the “Code”).

### **2020 Annual Equity Awards for 2019 Performance**

The chart below shows the annual equity award value granted to our NEOs in January 2020 to reward their performance in 2019 and the value of any special multi-year awards included in their TDC for 2019 (see Special Multi-Year and Other Special Equity-based Awards below).

The annual equity value received by the NEOs was determined after (i) setting a target TDC for each NEO, (ii) subtracting the base salary already paid and the actual cash incentive, and (iii) subtracting the annualized value of their respective special multi-year grants (see Special Multi-Year and other Equity Awards below).

The chart below also shows the type of equity awarded under our Flex Share program. The 2020 annual equity awards have the following features:

- Fifty percent of the NEOs’ annual equity award was granted in the form of three-year performance shares;
- The performance share metrics (operating margin and market share) are different than the metric used for the Company’s cash incentive plan (Adjusted Operating Income), and each of the performance share metrics will have an equal weighting in determining performance; and
- The performance shares will cliff vest on the third-year anniversary of the grant.

The payout for the performance shares granted in January 2020 will range from 0% to 150% based on the Company’s operating margin and market share results for the three years following the grant.

## COMPENSATION DISCUSSION AND ANALYSIS

	Equity Awarded in January 2020			Multi-Year Awards	
	50% Performance Shares 3-year Performance Based Share Value	50% - Time Vested RSU Value (1)	50% - Time Vested Stock Option Value (\$ in thousands)	Granted Prior to 2020 Attribution of Annualized Portion of Previously Granted Awards	Total Value
Richard M. McVey, CEO	1,725	862.5	862.5	3,800	7,250
Christopher R. Concannon, President	1,125	1,125		1,000	3,250
Antonio L. DeLise, CFO	275	275		360	910
Kevin McPherson, Head of Sales	300	300		500	1,100
Nicholas Themelis, CIO	350	350		600	1,300

(1) The CEO opted to defer receipt of the RSUs awarded in January 2020

### 2021 Annual Equity Awards for 2020 Performance

The chart below details the annual equity award value awarded in January 2021 to the NEOs for their 2020 performance. In the case of Messrs. DeLise, McPherson and Themelis, as discussed in the *Determination of NEO Annual Cash Incentives* section above, the Compensation Committee believed that, as a result of the final vesting of previously-granted multi-year equity awards in January 2021, each NEO should have a greater amount of unvested equity in the Company in order to increase the probability of retention and alignment to the interests of the Company's stockholders.

The following table sets out the equity award value granted for performance year 2020:

	Equity Awarded in January 2021			Multi-Year Awards	
	50% Performance Shares 3-year Performance Based Share Value	50% - Time Vested RSU Value (1)	50% - Time Vested Stock Option Value (\$ in thousands)	Granted Prior to 2020 Attribution of Annualized Portion of Previously Granted Awards	Total Value
Richard M. McVey, CEO	1,775	887.5	887.5	2,200	5,750
Christopher R. Concannon, President	1,250	625	625	1,000	3,500
Antonio L. DeLise, CFO	600	600		-	1,200
Kevin McPherson, Head of Sales	700	700		-	1,400
Nicholas Themelis, CIO	850	850		-	1,700

(1) No NEOs opted to defer receipt of their RSUs awarded in January 2021

Similar to the 2020 program, the 2021 annual equity awards have the following features:

- Fifty percent of the NEOs' annual equity award was granted in the form of three-year performance shares;
- The performance share metrics (operating margin and market share) are different than the metric used for the Company's cash incentive plan (Adjusted Operating Income), and each of the performance share metrics will have an equal weighting in determining performance; and
- The performance shares will cliff vest on the third-year anniversary of the grant.

### Special Multi-Year and Other Equity-based Awards

Special awards are not a regular part of the Company's compensation program for existing NEOs. In alignment with the feedback we received from our stockholders, we expect that the use of special multi-year and other special equity awards will be limited to circumstances such as the hiring of new executives or the retention of key executives. In all past cases, multi-year awards granted by the Company have been attributed to four or more years of future compensation and reduce the annual compensation awarded to the NEOs for those years of attribution. Importantly, these awards act as dollar for dollar offset against future equity awards.

#### CEO 2015 Multi-Year Equity Award

In January 2015, our CEO was awarded a special performance-based multi-year equity award in connection with the execution of a new employment agreement. The award was comprised of (i) \$6 million in performance shares and (ii) \$2 million in premium priced stock options. All performance metrics were met resulting in the full payout of the targeted number of shares. In January 2020, the final 50% of the performance shares (58,329 shares) and the final one-third of the premium options (40,076 options) vested. The expiration date for all the premium options was July 15, 2020.

#### CEO 2018 Multi-Year Equity Award

In November 2018, the Compensation Committee determined it was desirable to extend the CEO's employment agreement for an additional five-year term in order to secure his employment. In connection with the extension, the Company awarded him a special five-year performance award ("2018 Performance Award") with an aggregate \$11 million grant date fair value to incentivize and reward future stock price appreciation. The CEO was entering the final year of his then-current employment agreement and the Compensation Committee noted that a significant portion of the CEO's January 2015 award would vest in January 2019. The Compensation Committee designed the 2018 Performance Award such that the aggregate \$11 million grant date fair value of the Award will be spread over five years of annual compensation and will reduce the amount of the annual equity award that the CEO will receive for each of those performance years by \$2.2 million on a dollar for dollar basis (the first and last years are partial year attributions).

The 2018 Performance Award was issued with a grant date fair value of \$11 million. The chart below shows how the grant value is spread over a 5-year attribution period:

2018 Multi-Year Performance Award		
	Value	Attribution
	(\$ in thousands)	
Total Award Value	11,000	—
Year-End 2018 (2 months)		367
Each Year-End 2019 – 2022		2,200
Year-End 2023 (10 months)		1,833

All stock options and performance shares earned pursuant to the 2018 Performance Award are subject to five-year cliff vesting and the CEO must remain as an employee or director throughout the vesting period, except in the event of certain involuntary terminations. The CEO cannot dispose of either options or performance shares prior to the vesting date (November 8, 2023) to capitalize on any increase in the stock price, short term or otherwise.

## COMPENSATION DISCUSSION AND ANALYSIS

As discussed above, the 2018 Performance Award is contingent both upon the Company meeting certain stock price thresholds, as well as tenure requirements specific to the CEO. The performance thresholds were met in 2019.

The amounts attributed to the CEO's previously granted performance awards reduced his annual incentive opportunity by the same amount:

CEO - Annual Grant Value Offset			
Attribution Years	2015 Performance Award Value	2018 Performance Award Value (\$ in thousands)	Total Offset to Annual Award
Year-End 2018	\$ 1,600	\$ 367	\$ 1,967
Year-End 2019	\$ 1,600	\$ 2,200	\$ 3,800
Year-End 2020	\$ -	\$ 2,200	\$ 2,200

### President and COO Multi-Year Equity Award

In connection with Mr. Concannon's hire as President and Chief Operating Officer in January 2019, he was granted a special equity award of \$11.75 million (the "President's Award"). The award was granted to off-set unvested, forfeited equity compensation from the previous employer and in lieu of a 2018 cash bonus payment from the previous employer.

The equity was structured as follows:

Award Type	Value	Vesting	Multi-Year Attribution
Restricted Stock Units	\$5 million	3 equal installments on first three anniversaries of grant	N/A
Restricted Stock Units	\$1 million	Cliff vesting on third anniversary of grant	N/A
Performance Equity	\$5 million	Cliff vesting on fifth anniversary of grant	\$1 million per year attributed to compensation for performance years 2019 - 2023
Performance Equity	\$.75 million	Cliff vesting on fifth anniversary of grant	N/A

\$5 million of the grant value is attributed to the President's total direct compensation over a 5-year period, thereby reducing the annual equity award which the President may otherwise receive by \$1 million each year, through performance year 2023.

The performance portion of the President's Award was structured similarly to the CEO's 2018 Performance Award. The President's Award consisted of a grant of: (i) stock options with a grant date value of \$2.875 million as determined by an independent third party, and (ii) performance shares with a grant date value of \$2.875 million as determined by an independent third party. The performance of the President's Award is contingent both upon the Company meeting certain stock price thresholds, as well as tenure requirements specific to the President. All performance requirements were met in 2019.

### Other NEO Special Multi-Year Awards

In January 2016, Messrs. DeLise, McPherson and Themelis were granted multi-year awards valued at \$1.8 million, \$2.5 million and \$3.0 million, respectively. The awards were comprised of performance shares (representing 40% of the



award value), restricted stock units (representing 30% of the award value) and stock options (representing 30% of the award value). Half of the outstanding equity vested in January 2020. The remainder vested in January 2021.

### **Total Direct Compensation (TDC)**

Our compensation decisions for year-end 2020 were a balance between the Company's record financial results for the 12th consecutive year and its performance in light of its peers, individual performance, benchmarking data, and the impact and value of any long-term retention incentives previously awarded to each NEO. A summary of each NEO's 2020 TDC and year-over year change in TDC can be found below:

2020 Compensation Decisions							
	Base Salary	Cash Incentive	Total Cash	Annual Equity (1)	Residual Multi-Year Equity (2)	TDC	Change 2020 vs. 2019
	(\$ in thousands)						
Richard M. McVey, CEO	500	2,250	2,750	3,550	2,200	8,500	10%
Christopher R. Concannon, President	500	1,500	2,000	2,500	1,000	5,500	5%
Antonio L. DeLise, CFO	300	900	1,200	1,200		2,400	15%
Kevin McPherson, Head of Sales	300	1,200	1,500	1,400		2,900	16%
Nicholas Themelis, CIO	300	1,200	1,500	1,700		3,200	14%

(1) Represents an annual equity award granted on January 15, 2021 for 2020 performance

(2) See discussion regarding special multi-year awards above

## Additional Compensation Information

### **Common Stock Ownership Guidelines**

We believe that equity-based awards are an important factor in aligning the long-term financial interest of our NEOs and our stockholders. As such, we maintain stock ownership guidelines for our NEOs. Generally, under the guidelines, our CEO is required to own not less than a number of shares of Common Stock equal in value to ten times his base salary using a price of \$509.46 per share, which was the average of the daily closing price of our Common Stock for the twelve-month period ending March 31, 2021. At his current base salary of \$500,000, our CEO's required ownership level is not less than 9,814 shares. Additionally, effective April 2016, for the remainder of the time our CEO holds this title and for the twelve months thereafter, he will be required to maintain beneficial ownership of at least 50% of the shares that he received as equity compensation as of the date of the guideline or thereafter. All of his vested and unvested restricted shares, vested and unvested restricted stock units, settled performance shares, and shares deferred under a non-qualified deferred compensation arrangement will be counted for the post-termination holding requirement; vested and unvested stock options are excluded from the requirement.

## COMPENSATION DISCUSSION AND ANALYSIS

Except for the President, the Company's other NEOs are required to own not less than three times their base salary as in effect on such date. The President is required to own not less than five times his base salary. At their current base salaries, the President's required ownership is not less than 4,907 shares and the CFO's, Head of Sales', and CIO's required ownership is not less than 1,767 shares. New NEOs will be subject to the same guidelines and will be required to be in compliance within five years of becoming an NEO. Under our ownership guidelines, shares purchased and held beneficially, vested and unvested RSUs and restricted shares and settled performance shares count toward the minimum ownership requirement. Vested and unvested options and unsettled performance shares are not counted toward the ownership requirement. Compliance with the Common Stock ownership guidelines is reviewed by our Board's Nominating and Corporate Governance Committee every year or more often at the discretion of the Board or Nominating and Corporate Governance Committee. All of our NEOs are currently in compliance with the guidelines.

NEO Stock Ownership Requirements		
	Requirement	Current Holdings
Richard M. McVey, CEO	10x	783x
Christopher R. Concannon, President	5x	44x
Antonio L. DeLise, CFO	3x	47x
Kevin McPherson, Sales	3x	121x
Nicholas Themelis, CIO	3x	30x

### ***Incentive Compensation Clawback***

The Board is dedicated to maintaining and enhancing a culture focused on integrity and accountability which discourages conduct detrimental to the Company's sustainable growth. Each of our incentive plans therefore contain a clawback provision that allows the Company to recoup all or part of the year-end incentive compensation paid to NEOs in the event of a misstatement of financial results (whether through mistake or wrongdoing) discovered within 12 months of December 31<sup>st</sup> of the respective performance year. The clawback provisions apply to all cash and equity incentive awards for our NEOs. In addition, the CEO's and President's employment agreements provide the Company with the right to recapture all compensation paid, whether in the form of cash, Common Stock or any other form of property, to the extent required by the Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010 and the related rules of the SEC (the "Dodd-Frank Act") and the Remuneration Code published by the U.K. Financial Conduct Authority.

### ***Prohibition of Employee and Director Hedging and Pledging***

The Company's anti-hedging and pledging policy applies to all Company "insiders" including directors, employees (including officers), consultants, representatives or independent contractors or other persons in a special relationship with the Company who know material nonpublic information about the Company, and certain persons related to such insiders. The policy prohibits these individuals from engaging in any hedging transaction with respect to Company securities or transactions of a speculative nature at any time. Hedging includes the purchase of financial instruments (including prepaid variable forward contracts, equity swaps, collars, and exchange funds) and other transactions designed to hedge or offset, or that have the effect of hedging or offsetting, any decrease in the market value of Company securities or limit the ability to profit from an increase in the value of Company securities. All insiders are prohibited from short-selling Company securities or engaging in transactions involving Company-based derivative securities (which include options, warrants, stock appreciation rights or similar rights whose value is derived from the value of Company securities). This prohibition includes, but is not limited to, trading in Company-based put and call option contracts, transacting in straddles, and similar transactions. These individuals are also prohibited from holding Company securities in a margin account or otherwise pledging Company securities as collateral for a loan.

### **Other Benefits**

We provide our NEOs with the same benefits offered to all other employees. The cost of these benefits constitutes a small percentage of each NEO's total compensation. In the U.S. and the U.K., key benefits include paid vacation, premiums paid for group life insurance and disability policies, employer contributions to the NEO's retirement account, and the payment of all or some of the NEO's healthcare premiums in fiscal year 2020. We review these other benefits on an annual basis and make adjustments as warranted based on competitive practices and our performance. Comparable benefits are offered to employees in other geographic locations in which we operate.

### **Severance and Change in Control Arrangements**

In hiring and retaining executive level talent, the Compensation Committee believes that providing the executive with a level of security in the event of an involuntary termination of employment or in the event of a change in control is an important and competitive part of the executive's compensation package. We entered into employment agreements with the CEO and President that provide for severance payments and benefits in the event of the termination of their employment under certain circumstances. The other NEOs are entitled to severance payments and benefits in the event of termination of their employment under certain circumstances pursuant to the terms of severance protection agreements. The employment agreements and severance protection agreements also provide for the accelerated vesting of outstanding equity awards in the event of termination of their employment under certain circumstances or upon a change in control of the Company.

While the agreements with our NEOs are designed to protect them in the event of a change in control, they do not provide for "single-trigger" protection, nor does the Company provide any 280G protection or "gross-up" for excise taxes that may be imposed under Code Section 4999. The agreements do provide that if any payments or benefits paid or provided to him would be subject to, or result in, the imposition of the excise tax imposed by Code Section 4999, then the amount of such payments will be automatically reduced to one dollar less than the amount that subjects such payment to the excise tax, unless they would, on a net after-tax basis, receive less compensation than if the payment were not so reduced.

See below under *Executive Compensation — Potential termination or change in control payments and benefits* for additional information regarding these arrangements, payments and benefits.

### **Impact of Tax and Accounting**

As a general matter, the Compensation Committee reviews and considers the tax and accounting implications of using the various forms of compensation employed by the Company.

When determining the size of grants to our NEOs and other employees under the Company's Equity Incentive Plan, the Compensation Committee examines the accounting cost associated with the grants. Under FASB ASC Topic 718, grants of stock options, restricted stock, RSUs, performance shares and other share-based payments result in an accounting charge for the Company. The accounting charge is equal to the fair value of the instruments being issued. For restricted stock, RSUs and performance shares, the cost is equal to the fair value of the Common Stock on the date of grant times the number of shares or units granted. For stock options, the cost is equal to the fair value determined using an option pricing model. This expense is recognized over the requisite service or performance period.

## COMPENSATION DISCUSSION AND ANALYSIS

Code Section 162(m) of the Internal Revenue Code of 1986, as amended (“Section 162(m)”) generally prohibited any publicly-held corporation from taking a Federal income tax deduction for compensation paid in excess of \$1 million in any taxable year to certain executive officers and certain other individuals. Exceptions to this rule had historically included qualified performance-based compensation. However, this performance-based exception from the deduction limit has been repealed, effective for taxable years beginning after December 31, 2017, such that compensation paid to our U.S. named executive officers in excess of \$1 million is not deductible unless it qualifies for the limited transition relief applicable to certain arrangements in place as of November 2, 2017. While the Compensation Committee considers tax deductibility as one factor in determining executive compensation, the Compensation Committee also looks at other factors in making its decisions, as noted above, and retains the flexibility to award compensation that it determines to be consistent with the goals of our executive compensation program even if the awards are not deductible by us for tax purposes. There can be no assurance that any compensation will in fact be deductible.

# REPORT OF THE COMPENSATION AND TALENT COMMITTEE OF THE BOARD OF DIRECTORS

The Compensation and Talent Committee (the "Compensation Committee") has reviewed and discussed with management the Compensation Discussion and Analysis to be included in this Proxy Statement. Based on the reviews and discussions referred to above, the Compensation Committee recommended to the Board that the Compensation Discussion and Analysis be included in this Proxy Statement.

Submitted by the Compensation and Talent Committee of the Board of Directors:

Steven L. Begleiter — Chair  
Nancy Altobello  
Richard L. Prager  
John Steinhardt

# EXECUTIVE COMPENSATION

## Summary compensation table

The following table sets forth all compensation received during fiscal years 2018, 2019 and 2020 by our (i) Chief Executive Officer, (ii) President and Chief Operating Officer, (iii) Chief Financial Officer, (iv) Global Head of Sales and (v) Chief Information Officer. These executives are referred to as our “named executive officers” or “NEOs” elsewhere in this Proxy Statement.

2020 Summary Compensation Table								
Name and Principal Position	Year	Salary(\$) (1)	Bonus (\$) (2)	Stock Awards (\$)(3)(4)	Option Awards (\$)(3)(4)	Non-Equity Incentive Plan Compensation (\$)(5)	All Other Compensation (\$)(6)	Total (\$)
<b>Richard M. McVey</b> <i>Chief Executive Officer</i>	2020	500,000	—	2,532,567	854,119	2,250,000	7,000	6,143,686
	2019	500,000	—	2,715,708	—	—	7,000	3,222,708
	2018	500,000	1,890,000	7,590,245	6,399,840	—	7,000	16,387,085
<b>Christopher Concannon</b> <i>President and Chief Operating Officer</i>	2020	500,000	—	2,209,599	—	1,500,000	7,000	4,216,599
	2019	473,717	1,500,000	8,986,309	2,875,003	—	7,000	13,842,029
<b>Antonio L. DeLise</b> <i>Chief Financial Officer</i>	2020	300,000	—	540,189	—	900,000	7,000	1,747,189
	2019	300,000	875,000	386,473	—	—	7,000	1,568,473
	2018	300,000	850,000	337,809	—	—	7,000	1,494,809
<b>Kevin McPherson</b> <i>Global Head of Sales</i>	2020	300,000	—	589,032	—	1,200,000	7,000	2,096,032
	2019	300,000	1,100,000	346,942	—	—	7,000	1,753,942
	2018	300,000	1,100,000	347,762	—	—	7,000	1,754,762
<b>Nicholas Themelis</b> <i>Chief Information Officer</i>	2020	300,000	—	687,447	—	1,200,000	7,000	2,194,447
	2019	300,000	1,200,000	411,128	—	—	7,000	1,918,128
	2018	300,000	1,175,000	472,087	—	—	7,000	1,954,087

- (1) Mr. Concannon’s salary represented a partial year of service for 2019.
- (2) As determined by the Compensation Committee, Mr. McVey received additional equity in lieu of a cash incentive for performance year 2019, which is reflected in the Stock Awards column.
- (3) The amounts represent the aggregate grant date fair value of stock and option awards granted by the Company in 2018, 2019 and 2020, computed in accordance with FASB ASC Topic 718. For further information on how we account for stock-based compensation and certain assumptions made, see Note 11 to the consolidated financial statements included in the Company’s Annual Report on Form 10-K for the year ended December 31, 2020, filed with the SEC on February 19, 2021. These amounts reflect the Company’s accounting expense for these awards and do not correspond to the actual amounts, if any, that will be realized by the named executive officers. The amounts reported for stock awards in 2018, 2019 and 2020 include performance shares. For 2020, the grant date fair value of the performance shares is \$1,677,102, \$1,093,888, \$267,427, \$291,607 and \$340,329 for Messrs. McVey, Concannon, DeLise, McPherson and Themelis, respectively. The grant date fair value of the performance shares is reported based on achievement of 100% of the target performance goals, which represents the probable outcome of the performance goals as of the grant date. If the Company achieves the maximum performance goals, as measured at the end of the three-year performance period ending December 2022, then the fair value of the performance shares granted in 2020 would be \$2,515,653, \$1,640,832, \$401,140, \$437,411, and \$510,493 for Messrs. McVey, Concannon, DeLise, McPherson and Themelis, respectively.
- (4) In November 2018, in connection with an extension of his employment agreement, Mr. McVey was awarded an equity grant that consists of performance shares and performance-based stock options with an aggregate grant date fair value of \$11,000,000. The performance criteria for this award was met, in full, in 2019. The award remains subject to time-based vesting conditions and will fully vest in November 2023 if such conditions are met. In January 2019, Mr. Concannon was awarded a hire-on equity grant that consists of performance shares and performance-based stock options with an aggregate grant date fair value of \$5,750,000. The performance criteria for this award was met, in full, in 2019. The award remains subject to time-based vesting conditions and will fully vest in January 2024 if such conditions are met.
- (5) These amounts represent annual cash incentive compensation earned under the Employee Cash Incentive Plan.
- (6) These amounts represent employer matching contributions to the Company’s 401(k) defined contribution plan of \$7,000 to each NEO for each year reported.

## Grants of plan-based awards

The following table summarizes the grants of performance shares, performance awards, restricted stock units and stock options we made to the named executive officers in 2020, as well as potential payouts pursuant to certain performance-based compensation arrangements. There can be no assurance that the grant date fair value of stock awards will ever be realized.

2020 Grants of Plan-Based Awards Table									
Name	Approval Date	Grant Date	Estimated Future Payouts Under Equity Incentive Plan Awards			All Other Stock Awards:	All Other Option Awards:	Exercise or Base Price of Option Awards (\$ / Sh)	Grant Date Fair Value of Stock and Option Awards (\$ (1))
			Threshold (#)	Target (#)	Maximum (#)	Number of Shares of Stock or Units (#)	Number of Securities Underlying Options (#)		
Richard M. McVey	1/14/2020	1/15/2020	—	—	—	2,324	—	—	855,464
	1/14/2020	1/15/2020 (2)	2,324	4,647	6,971	—	—	—	1,677,102
	1/14/2020	1/15/2020	—	—	—	—	9,342	368	854,119
Christopher R. Concannon	1/14/2020	1/15/2020	—	—	—	3,031	—	—	1,115,711
	1/14/2020	1/15/2020 (2)	1,516	3,031	4,547	—	—	—	1,093,888
Antonio L. DeLise	1/14/2020	1/15/2020	—	—	—	741	—	—	272,762
	1/14/2020	1/15/2020 (2)	371	741	1,112	—	—	—	267,427
Kevin McPherson	1/14/2020	1/15/2020	—	—	—	808	—	—	297,425
	1/14/2020	1/15/2020 (2)	404	808	1,212	—	—	—	291,607
Nicholas Themelis	1/14/2020	1/15/2020	—	—	—	943	—	—	347,118
	1/14/2020	1/15/2020 (2)	472	943	1,415	—	—	—	340,329

- (1) The value of a restricted stock unit is based on the fair value of such award, computed in accordance with FASB ASC Topic 718. The value of a performance share is based on the grant date fair value of such award assuming 100% of target, computed in accordance with FASB ASC Topic 718. For further information on how we account for stock-based compensation, see Note 11 to the consolidated financial statements included in the Company's Annual Report on Form 10-K for the year ended December 31, 2020.
- (2) Reflects the number of performance shares that would vest based on the level of achievement by the Company of operating margin and market share targets for the three-year performance period beginning on January 1, 2020 and ending on December 31, 2022. Each performance share that is earned will convert into an equal number of restricted stock units that will cliff vest on January 31, 2023, subject to the participant's continued service.

## Outstanding equity awards at fiscal year-end

The following table summarizes unexercised stock options, shares of restricted stock and restricted stock units that had not vested, and related information for each of our named executive officers, as of December 31, 2020. The market value of restricted stock awards and restricted stock units is based on the closing price of the Company's Common Stock on December 31, 2020 of \$570.56.

Outstanding Equity Awards - Year End 2020								
Name	Option Awards				Stock Awards			
	Number of Securities Underlying Unexercised Options (#) Exercisable	Number of Securities Underlying Unexercised Options (#) Unexercisable(1)	Option Exercise Price (\$)	Option Expiration Date	Number of Shares or Units of Stock That Have Not Vested (#)(2)	Market Value of Shares or Units of Stock That Have Not Vested (\$)	Equity Incentive Plan Awards: Number of Unearned Shares, Units or Other Rights That Have Not Vested (#)	Equity Incentive Plan Awards: Market or Payout Value of Unearned Shares, Units or Other Rights That Have Not Vested (\$)
Richard M. McVey	27,020		101.77	1/15/2022				
	24,515		156.85	1/15/2023				
	10,744		203.72	1/15/2024				
		5,293	203.72	1/15/2024				
		69,113	257.78	5/8/2024				
		79,411	278.40	5/8/2024				
		9,342	368.10	1/15/2026				
					(3)	2,946	1,680,870	
					(3)	1,458	831,876	
					(5)	37,742	21,534,076	
				(4)	7,142	4,074,940		
				(4)	5,120	2,921,267		
				(6)	2,324	1,325,981		
				(7)			4,647	2,651,392
Christopher R. Concannon		35,679	272.88	7/22/2024				
		41,189	294.71	7/22/2024				
					(8)	18,914	10,791,572	
					(9)	15,398	8,785,483	
					(10)	4,666	2,662,233	
					(6)	3,031	1,729,367	
				(7)			3,031	1,729,367
Antonio L. DeLise	1,547		156.85	1/15/2023				
		8,060	103.30	1/31/2022				
					(3)	3,692	2,106,508	
					(3)	2,600	1,483,456	
					(3)	357	203,690	
					(3)	291	166,033	
					(4)	850	484,976	
					(4)	761	434,196	
					(6)	741	422,785	
				(7)			741	422,785
Kevin McPherson	11,194		103.30	1/31/2022				
		11,194	103.30	1/31/2022				
					(3)	5,128	2,925,832	
					(3)	3,611	2,060,292	
					(3)	368	209,966	
					(3)	300	171,168	
					(4)	763	435,337	
					(4)	684	390,263	
				(6)	808	461,012		
				(7)			808	461,012
Nicholas Themelis		12,465	103.30	1/31/2022				
					(3)	6,153	3,510,656	
					(3)	4,333	2,472,236	
					(3)	461	263,028	
					(3)	465	265,310	
					(4)	926	528,339	
					(4)	830	473,565	
					(6)	943	538,038	
				(7)			943	538,038

(1) 5,293 stock options granted to Mr. McVey vested on January 31, 2021. Of the 9,342 stock options granted to Mr. McVey, 3,176 vested on January 31, 2021 and the remainder will vest 50% on each of January 31, 2022 and January 31, 2023, subject to time-based performance conditions. 69,113 and 79,411 stock options granted to Mr. McVey will fully vest on November 8, 2023, subject to time-based performance conditions. 35,679 and 41,189 stock options granted to Mr. Concannon will fully vest on January 22, 2024, subject to time-based performance conditions. 8,060 stock options for Mr. DeLise, 11,194 options for Mr. McPherson, and 12,465 stock options for Mr. Themelis vested on January 31, 2021. The stock options will also vest and become exercisable in the event of certain terminations of employment. See *Potential termination or change in control payments and benefits* for additional information.



- (2) Each share of restricted stock and each restricted stock unit represents one share of the Company's Common Stock that is subject to forfeiture if the applicable vesting requirements are not met. Generally, vesting is subject to the NEOs continued employment through the vesting date, except that shares of restricted stock and restricted stock units will vest in the event of certain terminations of employment and, in certain circumstances, may vest upon a change in control. See *Potential termination or change in control payments and benefits* for additional information.
- (3) These restricted shares and restricted stock units fully vested on January 31, 2021.
- (4) 50% of these restricted shares and restricted stock units vested on January 31, 2021 and the remainder will vest on January 31, 2022.
- (5) 37,742 shares for Mr. McVey outstanding as of December 31, 2020 represent 100% of the target unearned performance shares awarded on November 8, 2018. The shares were settled as the applicable performance goals were met. The shares will fully vest on November 8, 2023.
- (6) For Mr. McVey, 790 RSUs vested on February 15, 2021 and 50% of the remainder will vest on each of January 31, 2022 and 2023. For Mr. Concannon, 1,030 vested on January 31, 2021 and 50% of the remainder will vest on each of January 31, 2022 and 2023. For Mr. DeLise, 251 RSUs vested on January 31, 2021 and 50% of the remainder will vest on each of January 31, 2022 and 2023. For Mr. McPherson, 274 RSUs vested on January 31, 2021 and 50% of the remainder will vest on each of January 31, 2022 and 2023. For Mr. Themelis, 320 RSUs vested on January 31, 2021 and 50% of the remainder will vest on each of January 31, 2022 and 2023.
- (7) The 4,647 shares for Mr. McVey, 3,031 shares for Mr. Concannon, 741 shares for Mr. DeLise, 808 shares for Mr. McPherson and 943 shares for Mr. Themelis outstanding as of December 31, 2020 represent 100% of the target performance shares awarded on January 15, 2020. The shares will not settle until January 2023 and will vest on January 31, 2023.
- (8) 18,914 shares for Mr. Concannon outstanding as of December 31, 2020 represent 100% of the target unearned performance shares awarded on January 22, 2019. The shares were settled as the applicable performance goals were met. The shares will fully vest on January 22, 2024.
- (9) 7,699 shares for Mr. Concannon vested on January 22, 2021. The remaining 7,699 shares will vest on January 22, 2022.
- (10) These shares will vest on January 22, 2022.

## Option exercises and stock vested

The following table summarizes each exercise of stock options, each vesting of restricted stock and related information for each of our named executive officers on an aggregated basis during 2020.

2020 Option Exercises and Stock Vesting				
Name	Option Awards		Stock Awards	
	Number of Shares Acquired on Exercise (#)	Value Realized on Exercise (\$)(1)	Number of Shares Acquired on Vesting (#)	Value Realized on Vesting (\$)(2)
Richard M. McVey	143,361	62,612,979	80,069	29,396,366
Christopher R. Concannon	—	—	7,931	2,937,642
Antonio L. DeLise	9,334	3,098,650	9,821	3,461,693
Kevin McPherson	—	—	10,109	3,580,406
Nicholas Themelis	17,262	7,587,119	12,611	4,466,564

- (1) Value realized represents the market value on the date of exercise in excess of the exercise price.
- (2) Value realized represents the market value on the date of vesting.

## Nonqualified deferred compensation

All U.S.-based NEOs were eligible to elect to defer the settlement of the RSUs awarded in whole or in part (see *Compensation Discussion and Analysis — 2020 Compensation — Long-term incentives — Flex Share Program* above). The following table sets forth information with respect to vested RSUs held by Messrs. McVey and DeLise as of December 31, 2020, for which they have elected to defer the delivery of the underlying shares until the earlier of (i) separation of service (within the meaning of Code Section 409A), subject to the six-month delay required under Code Section 409A, (ii) a change of control of the Company and (iii) the calendar year in which the applicable anniversary following vesting occurs:

Name	Deferral Elections				Deferral Period (Years)
	Award / Deferral Date	Amount Deferred (#)	Re-deferral Date		
Richard M. McVey	1/14/2011	67,961	12/01/2015		10
	1/19/2011	119,565	12/01/2015		10
	1/15/2013	44,882	N/A (1)		7
	1/15/2014	26,087	11/18/2019	separation of service	
	1/15/2015	25,084	N/A (1)		5
	1/15/2016	9,033			5
	1/15/2017	6,222		separation of service	
	1/15/2018	4,418			3
	1/15/2019	7,757		separation of service	
	1/15/2020	2,324		separation of service	
Antonio L. DeLise	1/13/2012	16,260	10/18/2016		10
	1/15/2014	1,999	N/A (2)		5
	1/15/2015	1,824	N/A (2)		4

- (1) Mr. McVey took receipt of 16,206 shares from his January 2012 award in January 2020. He did not elect to re-defer his January 2013 and January 2015 RSU awards, and he began taking receipt of the underlying shares in February 2021.
- (2) Mr. DeLise did not elect to re-defer his January 15, 2014 and 2015 RSU awards. He began taking receipt of the shares underlying the RSUs in February 2020.

The table below shows (i) the contributions made by each NEO during the fiscal year ended December 31, 2020, (ii) aggregate earnings on each NEO's account balance during the fiscal year ended December 31, 2020, (iii) the aggregate amount of withdrawals or distribution made for each NEO and (iv) the aggregate balance of each of our NEOs as of December 31, 2020:

2020 Non-qualified Deferred Compensation Table					
Name	Executive Contributions in Last Fiscal Year (\$)(1)(2)	Registrant Contributions in Last Fiscal Year (\$)	Aggregate Earnings in Last Fiscal Year (\$)(3)(4)	Aggregate Withdrawals / Distributions (\$)	Aggregate Balance at Last Fiscal Year- End (\$)(5)
Richard M. McVey	2,176,620	—	55,539,426	5,965,429	181,226,715
Christopher R. Concannon	300,000	—	—	—	300,000
Antonio L. DeLise	450,000	—	3,693,734	680,318	18,084,629
Kevin McPherson	—	—	—	—	—
Nicholas Themelis	—	—	—	—	—

- (1) For Mr. McVey, reflects the market value of the Common Stock underlying 1,458 RSUs that vested on January 31, 2020 and 2,637 RSUs that vested on February 15, 2020 based on the closing price of our Common Stock on such dates of \$354.18 and \$345.69, respectively. In addition, it includes the value of amounts accrued and unpaid under dividend equivalent rights in 2017 through 2019 as of such vesting dates. The dividend equivalents are equal in amount to the ordinary cash dividends paid to the holders of our Common Stock in 2017 through 2019 and will be paid when Mr. McVey takes receipt of the underlying shares of the applicable RSUs.

- (2) Executive contributions for Mr. Concannon and Mr. DeLise, consist of \$300,000 and \$450,000, respectively that were voluntarily deferred from their 2020 cash bonuses under the non-qualified deferred cash plan. Their full cash bonus amounts are reported in the Summary Compensation Table for 2020.
- (3) Aggregate Earnings with respect to vested and undelivered RSUs include changes in the market value of the shares of Common Stock underlying the RSUs based on the difference of the closing price of our Common Stock on December 31, 2020 of \$570.56 and the closing price of our Common Stock on the date of vesting, as well as the value of amounts accrued under a dividend equivalent right in 2020 that were unpaid as of December 31, 2020. Additionally, Aggregate Earnings include the difference in value of shares of Common Stock underlying the RSUs deferred by Mr. DeLise in 2012, 2014 and 2015 and by Mr. McVey in 2011, 2013, 2014, 2015, 2016, 2017, 2018, and 2019 at Fiscal Year End 2020 versus Fiscal Year End 2019, as well as the value of accrued but unpaid dividend equivalents. These amounts are not included in the Summary Compensation table because plan earnings were not preferential or above market.
- (4) Earnings of \$546,733 were added to Mr. DeLise's Aggregate Earnings for 2020 representing the returns he incurred through the non-qualified deferred cash plan.
- (5) The value of the Aggregate Balance at Last Fiscal Year End for the RSUs was determined by adding all Executive Contributions for Fiscal Year-End 2020 to any Aggregate Earnings for Fiscal Year 2020 and the Aggregate Balance at Last Fiscal Year-End as previously reported for year-end 2019 (\$129,476,098 for McVey and \$14,621,213 for Mr. DeLise).

## Employment agreements and severance arrangements with our Named Executive Officers

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### ***Richard M. McVey Employment Agreement***

Effective November 8, 2018, Mr. McVey and the Company entered into an amendment to his employment agreement (the "*CEO Employment Agreement*") providing for an initial term ending on January 15, 2025 with successive one-year automatic renewals unless either party elects not to extend the term at least 90 days prior to the last day of the term.

The CEO Employment Agreement provides that Mr. McVey will be employed by us as Chief Executive Officer and Chairman of the Board of Directors, and his employment may be terminated by him or by the Company at any time. Mr. McVey's annual base salary under the CEO Employment Agreement is a minimum of \$500,000 per year.

Under the CEO Employment Agreement, Mr. McVey is eligible to receive an annual bonus in accordance with the Company's annual performance incentive plan as is in effect from time to time and is entitled to participate in all benefit plans and programs available to our other senior executives, at a level commensurate with other senior management of the Company.

The CEO Employment Agreement provides for severance payments and benefits (subject to Mr. McVey's execution of a waiver and general release) if Mr. McVey's employment is terminated under various conditions. See below under *Potential termination or change in control payments and benefits* for a description of such payments and benefits.

The Company does not provide tax reimbursements to executives in the event of a Change of Control. The CEO Employment Agreement provides that if any payments or benefits paid or provided to him would be subject to, or result in, the imposition of the excise tax imposed by Section 4999 of the Code, then the amount of such payments will be automatically reduced to one dollar less than the amount that subjects such payment to the excise tax, unless he would, on a net after-tax basis, receive less compensation than if the payment were not so reduced. The CEO Employment Agreement further provides that any award gains and annual incentive awards received by Mr. McVey are subject to potential claw-back under policies adopted by the Company to comply with applicable law, rules or other regulatory requirements.

For purposes of the CEO Employment Agreement, "Cause Event" generally means Mr. McVey's:

- willful misconduct or gross negligence in the performance of his duties;
- conviction of, or plea of guilty or *nolo contendere* to, a crime relating to us or any of our affiliates, or any felony; or
- material breach of his employment agreement or any other material written agreement with us.

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For purposes of the CEO Employment Agreement, “Good Reason” generally means:

- Mr. McVey’s no longer holding the title of Chief Executive Officer, or the failure of the Board to nominate him as a director or, once elected to the Board, the failure of the Board to elect him as Chairman;
- a material diminution in his duties, authorities or responsibilities or the assignment of duties or responsibilities materially adversely inconsistent with his then-current position (other than as a result of his ceasing to be a director);
- our material breach of his employment agreement;
- a relocation of his principal place of business of more than 50 miles; or
- our failure to obtain a reasonably satisfactory written agreement from any successor to all or substantially all of our assets to assume and agree to perform our obligations under his employment agreement.

For purposes of the CEO Employment Agreement, “Change in Control” generally means:

- an acquisition representing 50% or more of the combined voting power of our then outstanding securities;
- a change in the majority of the members of our Board during any two-year period, unless such members are approved by two-thirds of the Board members who were members at the beginning of such period or members whose nominations were so approved;
- our merger or consolidation, other than (a) a transaction resulting in our voting securities outstanding immediately prior thereto continuing to represent more than 50% of the combined voting power of the voting securities of such surviving entity immediately after such transaction or (b) a transaction effected to implement a recapitalization (or similar transaction) in which no person acquires more than 50% of the combined voting power of our then outstanding securities; or
- our stockholders’ approval of a plan of complete liquidation or the consummation of the sale or disposition of all or substantially all of our assets other than (a) the sale or disposition of all or substantially all of our assets to a beneficial owner of 50% or more of the combined voting power of our outstanding voting securities at the time of the sale or (b) pursuant to a spinoff type transaction of such assets to our stockholders.

### ***Christopher Concannon Employment Agreement***

On January 7, 2019, the Company entered into an employment letter agreement (the “*President Employment Agreement*”), effective as of January 22, 2019, with Christopher Concannon, pursuant to which Mr. Concannon became the Company’s President and Chief Operating Officer.

The President Employment Agreement provides that Mr. Concannon will be employed by the Company as the President and Chief Operating Officer for an initial five-year term with successive one-year automatic renewals unless either party elects not to extend the term at least 90 days prior to the last day of the term. Under the President Employment Agreement, Mr. Concannon’s minimum annual base salary is \$500,000 per year and he is eligible to receive an annual bonus in accordance with the Company’s annual performance incentive plan as in effect from time to time and annual equity grants on terms and conditions determined by the Compensation Committee in its sole discretion (provided that the annual cash incentive for the 2019 calendar year will be no less than \$1.5 million; and provided further, that the annual equity award for the 2019 calendar year, to be awarded in 2020, will be in an amount equal to no less than \$1.5 million as of the award date, subject to Mr. Concannon’s continued employment on the grant date). The President Employment Agreement also entitled Mr. Concannon to receive certain equity awards (i) to replace the 2018 year-end equity compensation he forfeited from his prior employer in order to commence employment with the Company, (ii) to replace the unvested deferred compensation he forfeited from his prior employer, and (iii) as a sign-on award with the Company, which were granted in January 2019.

The President Employment Agreement provides that Mr. Concannon's employment may be terminated by him or by the Company at any time. The President Employment Agreement provides for severance payments and benefits (subject to Mr. Concannon's execution of a waiver and general release) if Mr. Concannon's employment is terminated under various conditions. See below under *Potential termination or change in control payments and benefits* for a description of such payments and benefits.

For purposes of the President Employment Agreement, the terms "Cause Event", "Change in Control", and "Good Reason" generally have the same meaning as defined in the CEO Employment Agreement, except that Good Reason refers to Mr. Concannon no longer holding the title of President.

The President Employment Agreement provides that if any payments or benefits paid or provided to Mr. Concannon would be subject to, or result in, the imposition of the excise tax imposed by Code Section 4999, then the amount of such payments will be automatically reduced to one dollar less than the amount that subjects such payment to the excise tax, unless Mr. Concannon would, on a net after-tax basis, receive less compensation than if the payment were not so reduced. The President Employment Agreement further provides that any award gains and annual incentive awards received by Mr. Concannon will be subject to potential claw-back under policies adopted by the Company to comply with applicable law, rules or other regulatory requirements.

In connection with entering into the President Employment Agreement, Mr. Concannon also executed a Proprietary Information and Non-Competition Agreement and the Company's standard form of Indemnification Agreement.

### **Severance Protection Agreements**

Messrs. DeLise, McPherson and Themelis do not have employment agreements with us but are entitled to severance payments and benefits under their respective severance protection agreements (the "Severance Protection Agreements" or the "SPAs"), which provide for severance payments and benefits (subject to such executive's execution of a waiver and general release) if such executive's employment is terminated under various conditions. See below under *Potential termination or change in control payments and benefits* for a description of such payments and benefits.

For purposes of the Severance Protection Agreements, "Cause" generally means such executive's:

- willful misconduct, gross misconduct, or gross negligence in the performance of such executive's duties;
- conviction of, or plea of guilty or *nolo contendere* to, a crime relating to us or any of our affiliates, or any felony;
- material breach of any material written agreement (including such executive's proprietary information and non-competition agreement) with us or on of our written policies signed by such executive;
- intentional failure or refusal to follow a lawful and proper direction of the Board or the CEO; or
- any other conduct by the executive, whether or not in the course of performing the executive's responsibilities to the Company, that has or is reasonably likely to have a material adverse effect on the business, assets or reputation of the Company.

For purposes of the Severance Protection Agreements, "Good Reason" generally means the occurrence of any of the following:

- an adverse change in such executive's title
- a material diminution in such executive's duties, authorities or responsibilities or the assignment of duties or responsibilities materially adversely inconsistent with such executive's then-current position;
- a reduction in such executive's base salary or annual target incentive bonus (as a percentage of base salary)
- a relocation of his principal place of business of more than 50 miles;
- we provide written notice of our intent not to renew the applicable Severance Protection Agreement;

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- our failure to obtain a reasonably satisfactory written agreement from any successor to all or substantially all of our assets to assume and agree to perform our obligations under the Severance Protection Agreement.

For purposes of the Severance Protection Agreements, the term “Change in Control” generally has the same meaning as defined in the CEO Employment Agreement.

### ***Proprietary Information and Non-Competition Agreements***

Each of our U.S.-based NEOs has entered into, and is subject to the terms of, a Proprietary Information and Non-Competition Agreement with us that contains, among other things, (i) certain provisions prohibiting disclosure of our confidential information without our prior written consent, (ii) certain non-competition provisions that restrict their engaging in certain activities that are competitive with us during their employment and for one year thereafter for the CEO, President, Head of Sales and CIO and six months thereafter for the CFO, (iii) certain non-solicitation provisions that restrict their recruiting, soliciting or hiring our non-clerical employees or consultants during their employment and for two years thereafter and (iv) certain non-solicitation provisions that restrict their soliciting any person or entity to terminate, cease, reduce or diminish their relationship with us, during their employment and for two years thereafter for the CEO and President and one year thereafter for the CFO, Head of Sales and CIO.

### **Potential termination or change in control payments and benefits**

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Each of the named executive officers is entitled to certain payments and benefits pursuant to their employment agreements and/or other agreements, as applicable, entered into between us and such executive upon a termination of such executive’s employment in certain circumstances or in the event of a change in control of the Company. For Messrs. McVey and Concannon, their rights upon certain termination or change in control events: (a) to base salary continuation, bonus and healthcare benefits are governed by the CEO Employment Agreement and President Employment Agreement, respectively; and (b) to vesting of unvested equity awards are governed by their equity award agreements. For Messrs. DeLise, McPherson and Themelis, their rights upon certain termination or change in control events are governed by their applicable Severance Protection Agreement, or where more favorable, their applicable equity award agreement. The benefits described herein are subject to the applicable NEO’s, his estate’s or his legal guardian’s, as applicable, execution of a general release of claims and covenant not to sue.

The following tables estimate the payments we would be obligated to make to each of our NEOs as a result of such NEO’s termination or resignation under the circumstances shown or because of a change in control, in each case assuming such event had occurred on December 31, 2020. We have calculated these estimated payments to meet SEC disclosure requirements. The estimated payments are not necessarily indicative of the actual amounts any of our NEOs would receive in such circumstances. The table excludes (i) compensation amounts accrued through December 31, 2020 that would be paid in the normal course of continued employment, such as accrued but unpaid salary, and (ii) vested account balances under our 401(k) Plan that are generally available to all of our salaried employees. Where applicable, the information in the table uses a price per share for our Common Stock of \$570.56, the closing price on December 31, 2020. In addition, where applicable, the amounts listed for bonuses reflect the average of the actual amounts paid to the NEOs in the year following each of the performance years 2017 through 2019, since the hypothetical termination or Change in Control date is the last day of the fiscal year.



Payments and Benefits for Mr. McVey, Chief Executive Officer and Chairman								
	Termination for Cause or Without Good Reason	Prior to CIC Termination <sup>(1)</sup>	Following CIC Termination <sup>(1)</sup>	CIC Trigger <sup>(1)</sup>	Enhanced Non-CCPP Termination <sup>(1)</sup>	Death or Disability CCPP Termination <sup>(1)</sup>	Death or Disability Non-CCPP Termination <sup>(1)</sup>	Non-Extension Non-CCPP Termination <sup>(1)</sup>
Base Salary <sup>(2)</sup>	—	\$ 1,000,000	\$ 1,000,000	—	\$ 1,000,000	\$ 1,000,000	\$ 500,000	\$ 500,000
Bonus <sup>(3)</sup>	—	\$ 2,520,000	\$ 2,520,000	—	\$ 2,520,000	\$ 2,520,000	\$ 1,260,000	\$ 1,260,000
Health Benefits <sup>(4)</sup>	—	\$ 45,510	\$ 45,510	—	\$ 34,132	\$ 45,510	\$ 22,755	\$ 22,755
Unvested Restricted Stock <sup>(5)</sup>	—	\$ 21,534,076	\$ 27,289,885	\$ 27,289,885	\$ 10,767,038	\$ 24,411,980	\$ 24,411,980	—
Unvested Performance Shares <sup>(6)</sup>	—	—	\$ 2,651,392	\$ 2,651,392	—	\$ 1,325,696	\$ 1,325,696	—
Unvested Restricted Stock Units <sup>(7)</sup>	—	—	\$ 3,753,144	\$ 5,079,125	—	\$ 2,539,563	\$ 2,539,563	—
Unvested Stock Options <sup>(8)</sup>	—	\$ 44,817,882	\$ 48,650,947	\$ 3,833,065	\$ 44,817,882	\$ 24,325,474	\$ 24,325,474	—
<b>Total</b>	<b>—</b>	<b>\$ 69,917,467</b>	<b>\$ 85,910,878</b>	<b>\$ 38,853,468</b>	<b>\$ 59,139,052</b>	<b>\$ 56,168,222</b>	<b>\$ 54,385,468</b>	<b>\$ 1,782,755</b>

- (1) A "Prior to CIC Termination" occurs if Mr. McVey resigns for Good Reason or his employment is terminated for any reason other than his resignation without Good Reason (including due to his providing a notice of non-extension of the term of the CEO Employment Agreement at least 90 days prior to the end of the term (a "Non-Extension Notice")), or by us for Cause, in any case, within three months prior to a "change in control event" within the meaning of Section 409A of the Code (such period, a "Prior Change in Control Protection Period" or a "Prior CCPP"). A "Following CIC Termination" occurs if Mr. McVey resigns for Good Reason or his employment is terminated for any reason other than his resignation without Good Reason (including due to his providing a Non-Extension Notice), or by us for Cause, in any case, within 18 months after a Change in Control as defined in the CEO Employment Agreement (such period, combined with a Prior CCPP, a "CCPP"). A "CIC Trigger" occurs if, immediately prior to a Change in Control, the Compensation Committee determines that the applicable equity award will not be continued, assumed or have new rights substituted therefor in accordance with the applicable incentive plans. An "Enhanced Non-CCPP Termination" occurs if Mr. McVey's employment is terminated outside of a CCPP for any reason other than: (a) his death, (b) his voluntary resignation without Good Reason (including due to his providing a Non-Extension Notice), (c) due to our providing a Non-Extension Notice, (d) by us as a result of his having a disability or (e) for Cause. A "Death or Disability CCPP Termination" occurs if Mr. McVey's employment is terminated during a CCPP due to his death or by us as a result of his having a disability. A "Death or Disability Non-CCPP Termination" occurs if Mr. McVey's employment is terminated outside of a CCPP due to his death or by us as a result of his having a disability. A "Non-Extension Non-CCPP Termination" occurs if Mr. McVey's employment is terminated outside a CCPP due to our providing a Non-Extension Notice. An "Average Bonus" for Mr. McVey means the average of his annual bonus amounts received for the Company's three fiscal years immediately preceding the termination.
- (2) Represents the continued payment of base salary: (a) upon a Prior to CIC Termination, a Following CIC Termination, an Enhanced Non-CCPP Termination or a Death or Disability CCPP Termination for 24 months; and (b) upon a Death or Disability Non-CCPP Termination or a Non-Extension Non-CCPP Termination, for 12 months.
- (3) Represents a bonus: (a) upon a Prior to CIC Termination, a Following CIC Termination, an Enhanced Non-CCPP Termination or a Death or Disability CCPP Termination, in the amount of two times Mr. McVey's Average Bonus, payable in 24 monthly installments; and (b) upon a Death or Disability Non-CCPP Termination or a Non-Extension Non-CCPP Termination, in the amount of one times Mr. McVey's Average Bonus, payable in 12 monthly installments.
- (4) Represents healthcare coverage: (a) upon a Prior to CIC Termination, a Following CIC Termination or a Death or Disability CCPP Termination, for 24 months; (b) for an Enhanced Non-CCPP Termination, for 18 months; and (c) upon a Death or Disability Non-CCPP Termination or a Non-Extension Non-CCPP Termination, for 12 months.
- (5) Represents the value of the unvested restricted stock issued to Mr. McVey upon the settlement of performance shares granted to him in January 2018, as part of his multi-year award (the "McVey 2018 Multi-Year"), and in January 2018 (the "McVey 2018 Annual") and January 2019 (the "McVey 2019 Annual"), each as part of his annual award, which will vest as follows: (a) for the McVey 2018 Multi-Year, (i) upon a Prior to CIC Termination, a Following CIC Termination, a CIC Trigger, a Death or Disability CCPP Termination or a Death or Disability Non-CCPP Termination, his unvested restricted stock shall fully vest; and (ii) upon an Enhanced Non-CCPP Termination, half of his restricted stock shall vest; and (b) for the McVey 2018 Annual and the McVey 2019 Annual, (i) upon a Following CIC Termination or a CIC Trigger, his unvested restricted stock shall fully vest; and (ii) upon a Death or Disability CCPP Termination or a Death or Disability Non-CCPP Termination, half of his restricted stock shall vest.
- (6) Represents the target value of the unvested performance shares granted to Mr. McVey in January 2020 as part of his annual award (the "McVey 2020 Annual" and together with the McVey 2018 Annual and McVey 2020 Annual, the "McVey Annual Awards"), which will vest as follows (a) upon a Following CIC Termination or a CIC Trigger, his unvested performance shares shall fully vest; and (b) upon a Death or Disability CCPP Termination or a Death or Disability Non-CCPP Termination, half of his unvested performance shares shall vest.
- (7) Represents the value of the unvested restricted stock units granted to Mr. McVey as part of the McVey Annual Awards, which will vest as follows: (a) for the McVey 2018 Annual and McVey 2019 Annual, (i) upon a Following CIC Termination or a CIC Trigger, his unvested restricted stock units shall fully vest; and (ii) upon a Death or Disability CCPP Termination or a Death or Disability Non-CCPP Termination, half of his



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unvested restricted stock units shall vest; and (b) for the McVey 2020 Annual, (i) upon a CIC Trigger, his unvested restricted stock units shall fully vest; and (ii) upon a Death or Disability CCPP Termination or Death or Disability Non-CCPP Termination, half of his unvested restricted stock units shall vest.

- (8) Represents the value of the unvested stock options granted to Mr. McVey as part of the McVey 2018 Multi-Year, the McVey 2018 Annual and the McVey 2020 Annual, which will vest as follows: (a) for the McVey 2018 Multi-Year, (i) upon a Prior to CIC Termination, a Following CIC Termination, or an Enhanced Non-CIC Termination, his unvested stock options shall fully vest; (ii) upon a Death or Disability CCPP Termination or a Death or Disability Non-CCPP Termination, half of his unvested restricted stock units shall vest; (b) for the McVey 2018 Annual and McVey 2020 Annual, (i) upon a Following CIC Termination or a CIC Trigger, his unvested stock options shall fully vest; and (ii) upon a Death or Disability CCPP Termination or a Death or Disability Non-CCPP Termination, half of his unvested restricted stock units shall vest.

Payments and Benefits for Mr. Concannon, President and Chief Operating Officer							
	Termination for Cause or Without Good Reason	Death or Disability CCPP Termination <sup>(1)</sup>	Death or Disability Non-CCPP Termination <sup>(1)</sup>	CCPP Without Cause or for Good Reason Termination <sup>(1)</sup>	Non-CCPP Without Cause or for Good Reason <sup>(1)</sup>	CIC Trigger <sup>(1)</sup>	Non-Extension Termination <sup>(1)</sup>
Base Salary <sup>(2)</sup>	—	\$ 1,000,000	\$ 500,000	\$ 1,000,000	\$ 1,000,000	—	\$ 500,000
Bonus <sup>(3)</sup>	—	\$ 3,000,000	\$ 1,500,000	\$ 3,000,000	\$ 3,000,000	—	\$ 1,500,000
Health Benefits <sup>(4)</sup>	—	\$ 34,132	\$ 22,755	\$ 34,132	\$ 34,132	—	\$ 22,755
Unvested Restricted Stock <sup>(5)</sup>	—	\$ 10,791,572	\$ 10,791,572	\$ 10,791,572	\$ 5,395,786	\$ 10,791,572	—
Unvested Performance Shares <sup>(6)</sup>	—	\$ 864,684	\$ 864,684	\$ 1,729,367	—	\$ 1,729,367	—
Unvested Restricted Stock Units <sup>(7)</sup>	—	\$ 12,312,400	\$ 12,312,400	\$ 13,177,083	\$ 11,447,716	\$ 13,177,083	—
Unvested Stock Options <sup>(8)</sup>	—	\$ 10,991,455	\$ 10,991,455	\$ 21,982,910	\$ 21,982,910	—	—
Total	—	\$ 38,994,243	\$ 36,982,865	\$ 51,715,065	\$ 42,860,545	\$ 25,698,022	\$ 2,022,755

- (1) A "Death or Disability CIC Termination" occurs upon Mr. Concannon's death or disability during a CCPP (as defined in footnote (1) to the "Payments and Benefits for Mr. McVey" table). A "Death or Disability Non-CCPP Termination" occurs upon Mr. Concannon's death or disability outside of a CCPP. A "CCPP Without Cause or for Good Reason Termination" occurs: (i) A prior termination by Mr. Concannon for Good Reason during a Prior CCPP (as defined in footnote (1) to the "Payments and Benefits for Mr. McVey" table) or; (ii) the Company terminates Mr. Concannon without Cause or for Good Reason during the portion of a CCPP that is not a Prior CCPP. A "Non-CCPP Without Cause or for Good Reason Termination" means a termination by the Company without Cause or by Mr. Concannon for Good Reason that is not a CCPP Without Cause or for Good Reason Termination. A "CIC Trigger" occurs if, immediately prior to a Change in Control, the Compensation Committee determines that the applicable equity award will not be continued, assumed or have new rights substituted therefor in accordance with the applicable incentive plans. A "Non-Extension Termination" occurs if Mr. Concannon's employment is terminated due to our providing a Non-Extension Notice (as defined in footnote (1) to the "Payments and Benefits for Mr. McVey" table, except with respect to the President Employment Agreement). An "Average Bonus" for Mr. Concannon means the average of his annual bonus amounts received in 2019.
- (2) Represents the continued payment of base salary: (a) upon a Death or Disability CIC Termination, a CCPP Without Cause or for Good Reason Termination or a Non-CCPP Without Cause or for Good Reason Termination, for 24 months; and (b) upon a Death or Disability Non-CCPP Termination or a Non-Extension Termination, for 12 months.
- (3) Represents a bonus: (a) upon a Death or Disability CIC Termination, a CCPP Without Cause or for Good Reason Termination or a Non-CCPP Without Cause or for Good Reason Termination, in the amount of two times Mr. Concannon's Average Bonus, payable in 24 monthly installments; and (b) upon a Death or Disability Non-CCPP Termination or a Non-Extension Termination, in the amount of one times Mr. Concannon's Average Bonus, payable in 12 monthly installments.
- (4) Represents healthcare coverage: (a) upon a Death or Disability CIC Termination, a CCPP Without Cause or for Good Reason Termination or a Non-CCPP Without Cause or for Good Reason Termination, for 18 months; and (b) upon a Death or Disability Non-CCPP Termination or a Non-Extension Termination, for 12 months.
- (5) Represents the value of the unvested restricted stock issued to Mr. Concannon upon the settlement of performance shares granted to him in January 2019, as part of his sign on award (the "Concannon Sign On"), which will vest as follows: (a) upon a Death or Disability CIC Termination, a Death or Disability Non-CCPP Termination, CCPP Without Cause or For Good Reason Termination or a CIC Trigger, his unvested restricted stock shall fully vest; (b) upon a Non-CCPP Without Cause or For Good Reason Termination, half of his restricted stock shall vest.
- (6) Represents the target value of the unvested performance shares granted to Mr. Concannon in January 2020 as part of his annual award (the "Concannon 2020 Annual"), which will vest as follows (a) upon a CCPP Without Cause or for Good Reason Termination or a CIC Trigger, his unvested performance shares shall fully vest; provided that the unvested performance shares would not vest if his employment was terminated by him for Good Reason; and (b) upon a Death or Disability CIC Termination or a Death or Disability Non-CCPP Termination, half of his unvested performance shares shall vest.
- (7) Represents the value of the unvested restricted stock units granted to Mr. Concannon as part of the Concannon Sign On and the Concannon 2020 Annual, which will vest as follows: (a) for the Concannon Sign On, (i) upon a Death or Disability CIC Termination, a Death or Disability Non-CCPP Termination, a CCPP Without Cause or For Good Reason Termination, a Non-CCPP Without Cause or For Good Reason Termination, or a CIC Trigger, his unvested restricted stock units shall fully vest; (b) for the Concannon 2020 Annual, (i) upon a CCPP Without Cause or For Good Reason Termination or a CIC Trigger, his unvested restricted stock units shall fully vest; provided that the unvested restricted stock units would not vest if his employment was terminated by him for Good Reason; and (ii) upon a Death or Disability CIC Termination, a Death or Disability Non-CCPP Termination, half of his unvested restricted stock units shall vest.
- (8) Represents the value of the unvested stock options granted to Mr. Concannon as part of the Concannon Sign On, which will vest as follows: (a) upon a CCPP Without Cause or For Good Reason Termination or a Non-CCPP Without Cause or For Good Reason Termination, his unvested stock options shall fully vest; (b) upon a Death or Disability CIC Termination, a Death or Disability Non-CCPP Termination, half of his unvested restricted stock units shall vest.

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Payments and Benefits for Mr. DeLise, Chief Financial Officer							
	Termination for Cause or Without Good Reason	SPA CIC Termination <sup>(1)</sup>	CIC Trigger <sup>(1)</sup>	SPA Non-CIC Termination <sup>(1)</sup>	Death or Disability	Multi-Year Termination <sup>(1)</sup>	Multi-Year CIC Prior Termination <sup>(1)</sup>
Severance <sup>(2)</sup>	—	\$ 1,712,500	—	\$ 1,141,667	\$ 570,833	—	—
Pro Rata Bonus <sup>(3)</sup>	—	\$ 841,667	—	\$ 841,667	\$ 420,833	—	—
Health Benefits <sup>(4)</sup>	—	\$ 34,133	—	\$ 22,755	\$ 22,755	—	—
Unvested Restricted Stock <sup>(5)</sup>	—	\$ 2,706,737	\$ 2,706,737	\$ 2,489,639	\$ 2,406,622	\$ 1,053,254	\$ 2,106,508
Unvested Performance Shares <sup>(6)</sup>	—	\$ 422,785	\$ 422,785	—	\$ 211,392	—	—
Unvested Restricted Stock Units <sup>(7)</sup>	—	\$ 2,594,907	\$ 2,594,907	\$ 2,070,562	\$ 1,297,453	\$ 370,864	\$ 741,728
Unvested Stock Options <sup>(8)</sup>	—	\$ 3,766,116	\$ 3,766,116	\$ 3,766,116	\$ 1,883,058	\$ 3,766,116	—
<b>Total</b>	<b>—</b>	<b>\$ 12,078,843</b>	<b>\$ 9,490,544</b>	<b>\$ 10,332,405</b>	<b>\$ 6,812,947</b>	<b>\$ 5,190,233</b>	<b>\$ 2,848,236</b>

- (1) An “SPA CIC Termination”, occurs upon termination by the Company without Cause or a termination by the applicable NEO for Good Reason during the period beginning on the effective date of a Change in Control and ending on the second anniversary following such effective date (such period, a “SPA CIC Protection Period”). A “CIC Trigger” occurs if, immediately prior to a Change in Control, the Compensation Committee determines that the applicable equity award will not be continued, assumed or have new rights substituted therefor in accordance with the applicable incentive plans. An “SPA Non-CIC Termination” occurs either upon (a) a termination by the Company without Cause prior to a Change in Control, or (b) a termination by the Company without Cause or a termination by the applicable NEO for Good Reason following the expiration of an SPA CIC Protection Period. A “Multi-Year Termination” applies only to the applicable NEO’s multi-year equity awards granted in January 2016 and occurs upon a termination by the applicable NEO for Good Reason prior to a Change in Control. A “Multi-Year CIC Prior Termination” applies only to the applicable NEO’s multi-year equity awards granted in January 2016 and occurs upon a Change in Control that occurs within three months of the applicable NEO’s prior termination for Good Reason. The applicable NEO’s “Average Annual Bonus” means the average of his annual bonus amounts earned and payable for the Company’s three fiscal years immediately preceding the termination.
- (2) Represents severance: (a) upon an SPA CIC Termination, equal to one and a half times the sum of Mr. DeLise’s base salary and his Average Annual Bonus, payable in a lump sum; (b) upon an SPA Non-CIC Termination, equal to one times the sum of Mr. DeLise’s base salary and his Average Annual Bonus, payable in regular installments over twelve months; and (c) upon Mr. DeLise’s death or disability, equal to half of the sum of Mr. DeLise’s base salary and his Average Annual Bonus, payable in a lump sum.
- (3) Represents a pro rata bonus: (a) upon an SPA CIC Termination or an SPA Non-CIC Termination, equal to Mr. DeLise’s Average Annual Bonus, payable in a lump sum; and (b) upon Mr. DeLise’s death or disability, equal to half of his Average Annual Bonus, payable in a lump sum.
- (4) Represents healthcare coverage: (a) upon an SPA CIC Termination, for eighteen months; and (b) upon an SPA Non-CIC Termination or upon Death or Disability, for twelve months.
- (5) Represents the value of the unvested restricted stock issued to Mr. DeLise upon the settlement of performance shares granted to him in January 2016, January 2018 and January 2019, which will vest as follows: (a) for his January 2016 award: (i) upon an SPA CIC Termination, CIC Trigger, death or disability or Multi-Year CIC Prior Termination, his unvested restricted stock shall fully vest; (ii) upon an SPA Non-CIC Termination, his restricted stock shall continue to vest for a year from such termination; and (iii) upon a Multi-Year Termination, half of his restricted stock shall vest; and (b) for his January 2018 and 2019 awards: (i) upon an SPA CIC Termination or CIC Trigger, his restricted stock shall fully vest; (ii) upon an SPA Non-CIC Termination, his restricted stock shall continue to vest for a year from such termination; and (iii) upon death or disability, half of his restricted stock shall vest.
- (6) Represents the target value of the unvested performance shares granted to Mr. DeLise in January 2020, which will vest as follows: (a) upon an SPA CIC Termination or CIC Trigger, his unvested performance shares shall fully vest; (b) upon an SPA Non-CIC Termination, his performance shares shall continue to vest for a year from such termination (but as such shares cliff vest in 2023, no shares shall vest); and (c) upon death or disability, half of his unvested performance shares shall vest.
- (7) Represents the value of the unvested restricted stock units granted to Mr. DeLise in January 2016, January 2018, January 2019 and January 2020, which will vest as follows: (a) for his January 2016 award, (i) upon an SPA CIC Termination or a CIC Trigger, his unvested restricted stock units shall fully vest; (ii) upon an SPA Non-CIC Termination, his unvested restricted stock units shall continue to vest for a year from such termination; (iii) upon death or disability or a Multi-Year CIC Termination, half of his unvested restricted stock units shall vest; and (iv) upon a Multi-Year Termination, one quarter of his unvested restricted stock units shall vest; and (b) for his January 2018, January 2019 and January 2020 awards, (i) upon an SPA CIC Termination or a CIC Trigger, his unvested restricted stock units shall fully vest; (ii) upon an SPA Non-CIC Termination, his unvested restricted stock units shall continue to vest for a year from such termination; and (iii) upon death or disability, half of his unvested restricted stock units shall vest.
- (8) Represents the value of the unvested stock options granted to Mr. DeLise in January 2016, which will vest as follows: (a) upon an SPA Period Termination, a CIC Trigger, an SPA Non-CIC Termination or a Multi-Year Termination, his unvested stock options shall fully vest; and (b) upon death or disability, half of his unvested restricted stock units shall vest.

Payments and Benefits for Mr. McPherson, Global Head of Sales							
	Termination for Cause or Without Good Reason	SPA CIC Termination <sup>(1)</sup>	CIC Trigger <sup>(1)</sup>	SPA Non-CIC Termination <sup>(1)</sup>	Death or Disability	Multi-Year Termination <sup>(1)</sup>	Multi-Year CIC Prior Termination <sup>(1)</sup>
Severance <sup>(2)</sup>	—	\$ 2,137,500	—	\$ 1,425,000	\$ 712,500	—	—
Pro Rata Bonus <sup>(3)</sup>	—	\$ 1,125,000	—	\$ 1,125,000	\$ 562,500	—	—
Health Benefits <sup>(4)</sup>	—	\$ 34,133	—	\$ 22,755	\$ 22,755	—	—
Unvested Restricted Stock <sup>(5)</sup>	—	\$ 3,487,263	\$ 3,487,263	\$ 3,292,131	\$ 3,206,547	\$ 1,462,916	\$ 2,925,832
Unvested Performance Shares <sup>(6)</sup>	—	\$ 461,012	\$ 461,012	—	\$ 230,506	—	—
Unvested Restricted Stock Units <sup>(7)</sup>	—	\$ 3,166,608	\$ 3,166,608	\$ 2,641,598	\$ 1,583,304	\$ 515,073	\$ 1,030,146
Unvested Stock Options <sup>(8)</sup>	—	\$ 5,230,508	\$ 5,230,508	\$ 5,230,508	\$ 2,615,254	\$ 5,230,508	—
Total	—	\$ 15,642,024	\$ 12,345,392	\$ 13,736,992	\$ 8,933,367	\$ 7,208,497	\$ 3,955,978

- (1) Refer to footnote (1) under the “Payments and Benefits Payable to Mr. DeLise” table for applicable definitions.
- (2) Represents severance: (a) upon an SPA CIC Termination, equal to one and a half times the sum of Mr. McPherson’s base salary and his Average Annual Bonus, payable in a lump sum; (b) upon an SPA Non-CIC Termination, equal to one times the sum of Mr. McPherson’s base salary and his Average Annual Bonus, payable in regular installments over twelve months; and (c) upon Mr. McPherson’s death or disability, equal to half of the sum of Mr. McPherson’s base salary and his Average Annual Bonus, payable in a lump sum.
- (3) Represents a pro rata bonus: (a) upon an SPA CIC Termination or an SPA Non-CIC Termination, equal to Mr. McPherson’s Average Annual Bonus, payable in a lump sum; and (b) upon Mr. McPherson’s death or disability, equal to half of Mr. McPherson’s Average Annual Bonus, payable in a lump sum.
- (4) Represents healthcare coverage: (a) upon an SPA CIC Termination, for eighteen months; and (b) upon an SPA Non-CIC Termination or upon Death or Disability, for twelve months.
- (5) Represents the value of the unvested restricted stock issued to Mr. McPherson upon the settlement of performance shares granted to him in January 2016, January 2018 and January 2019, which will vest as follows: (a) for his January 2016 award: (i) upon an SPA CIC Termination, CIC Trigger, death or disability or Multi-Year CIC Prior Termination, his unvested restricted stock shall fully vest; (ii) upon an SPA Non-CIC Termination, his restricted stock shall continue to vest for a year from such termination; and (iii) upon a Multi-Year Termination, half of his restricted stock shall vest; and (b) for his January 2018 and 2019 awards: (i) upon an SPA CIC Termination or CIC Trigger, his restricted stock shall fully vest; (ii) upon an SPA Non-CIC Termination, his restricted stock shall continue to vest for a year from such termination; and (iii) upon death or disability, half of his restricted stock shall vest.
- (6) Represents the target value of the unvested performance shares granted to Mr. McPherson in January 2020, which will vest as follows: (a) upon an SPA CIC Termination or CIC Trigger, his unvested performance shares shall fully vest; (b) upon an SPA Non-CIC Termination, his performance shares shall continue to vest for a year from such termination (but as such shares cliff vest in 2023, no shares shall vest); and (c) upon death or disability, half of his unvested performance shares shall vest.
- (7) Represents the value of the unvested restricted stock units granted to Mr. McPherson in January 2016, January 2018, January 2019 and January 2020, which will vest as follows: (a) for his January 2016 award, (i) upon an SPA CIC Termination or a CIC Trigger, his unvested restricted stock units shall fully vest; (ii) upon an SPA Non-CIC Termination, his unvested restricted stock units shall continue to vest for a year from such termination; (iii) upon death or disability or a Multi-Year CIC Termination, half of his unvested restricted stock units shall vest; and (iv) upon a Multi-Year Termination, one quarter of his unvested restricted stock units shall vest; and (b) for his January 2018, January 2019 and January 2020 awards, (i) upon an SPA CIC Termination or a CIC Trigger, his unvested restricted stock units shall fully vest; (ii) upon an SPA Non-CIC Termination, his unvested restricted stock units shall continue to vest for a year from such termination; and (iii) upon death or disability, half of his unvested restricted stock units shall vest.
- (8) Represents the value of the unvested stock options granted to Mr. McPherson in January 2016, which will vest as follows: (a) upon an SPA Period Termination, a CIC Trigger, an SPA Non-CIC Termination or a Multi-Year Termination, his unvested stock options shall fully vest; and (b) upon death or disability, half of his unvested restricted stock units shall vest.

EXECUTIVE COMPENSATION

Payments and Benefits for Mr. Themelis, Chief Information Officer							
	Termination for Cause or Without Good Reason	SPA CIC Termination <sup>(1)</sup>	CIC Trigger <sup>(1)</sup>	SPA Non-CIC Termination <sup>(1)</sup>	Death or Disability	Multi-Year Termination <sup>(1)</sup>	Multi-Year CIC Prior Termination <sup>(1)</sup>
Severance <sup>(2)</sup>	—	\$ 2,262,500	—	\$ 1,508,333	\$ 754,167	—	—
Pro Rata Bonus <sup>(3)</sup>	—	\$ 1,208,333	—	\$ 1,208,333	\$ 604,167	—	—
Health Benefits <sup>(4)</sup>	—	\$ 34,133	—	\$ 22,755	\$ 22,755	—	—
Unvested Restricted Stock <sup>(5)</sup>	—	\$ 4,249,531	\$ 4,249,531	\$ 4,012,748	\$ 3,880,093	\$ 1,755,328	\$ 3,510,656
Unvested Performance Shares <sup>(6)</sup>	—	\$ 538,038	\$ 538,038	—	\$ 269,019	—	—
Unvested Restricted Stock Units <sup>(7)</sup>	—	\$ 3,801,641	\$ 3,801,641	\$ 3,178,780	\$ 1,900,821	\$ 950,410	\$ 1,900,821
Unvested Stock Options <sup>(8)</sup>	—	\$ 6,276,704	\$ 6,276,704	\$ 6,276,704	\$ 3,138,352	\$ 6,276,704	—
<b>Total</b>	<b>—</b>	<b>\$ 18,370,880</b>	<b>\$ 14,865,914</b>	<b>\$ 16,207,654</b>	<b>\$ 10,569,373</b>	<b>\$ 8,982,442</b>	<b>\$ 5,411,477</b>

- (1) Refer to footnote (1) under the “Payments and Benefits Payable to Mr. DeLise” table for applicable definitions.
- (2) Represents severance: (a) upon an SPA CIC Termination, equal to one and a half times the sum of Mr. Themelis’ base salary and his Average Annual Bonus, payable in a lump sum; (b) upon an SPA Non-CIC Termination, equal to one times the sum of Mr. Themelis’ base salary and his Average Annual Bonus, payable in regular installments over twelve months; and (c) upon Mr. Themelis’ death or disability, equal to half of the sum of Mr. Themelis’ base salary and his Average Annual Bonus, payable in a lump sum.
- (3) Represents a pro rata bonus: (a) upon an SPA CIC Termination or an SPA Non-CIC Termination, equal to Mr. Themelis’ Average Annual Bonus, payable in a lump sum; and (b) upon Mr. Themelis’ death or disability, equal to half of Mr. Themelis’ Average Annual Bonus, payable in a lump sum.
- (4) Represents healthcare coverage: (a) upon an SPA CIC Termination, for eighteen months; and (b) upon an SPA Non-CIC Termination or upon Death or Disability, for twelve months.
- (5) Represents the value of the unvested restricted stock issued to Mr. Themelis upon the settlement of performance shares granted to him in January 2016, January 2018 and January 2019, which will vest as follows: (a) for his January 2016 award: (i) upon an SPA CIC Termination, CIC Trigger, death or disability or Multi-Year CIC Prior Termination, his unvested restricted stock shall fully vest; (ii) upon an SPA Non-CIC Termination, his restricted stock shall continue to vest for a year from such termination; and (iii) upon a Multi-Year Termination, half of his restricted stock shall vest; and (b) for his January 2018 and 2019 awards: (i) upon an SPA CIC Termination or CIC Trigger, his restricted stock shall fully vest; (ii) upon an SPA Non-CIC Termination, his restricted stock shall continue to vest for a year from such termination; and (iii) upon death or disability, half of his restricted stock shall vest.
- (6) Represents the target value of the unvested performance shares granted to Mr. Themelis in January 2020, which will vest as follows: (a) upon an SPA CIC Termination or CIC Trigger, his unvested performance shares shall fully vest; (b) upon an SPA Non-CIC Termination, his performance shares shall continue to vest for a year from such termination (but as such shares cliff vest in 2023, no shares shall vest); and (c) upon death or disability, half of his unvested performance shares shall vest.
- (7) Represents the value of the unvested restricted stock units granted to Mr. Themelis in January 2016, January 2018, January 2019 and January 2020, which will vest as follows: (a) for his January 2016 award, (i) upon an SPA CIC Termination or a CIC Trigger, his unvested restricted stock units shall fully vest; (ii) upon an SPA Non-CIC Termination, his unvested restricted stock units shall continue to vest for a year from such termination; (iii) upon death or disability or a Multi-Year CIC Termination, half of his unvested restricted stock units shall vest; and (iv) upon a Multi-Year Termination, one quarter of his unvested restricted stock units shall vest; and (b) for his January 2018, January 2019 and January 2020 awards, (i) upon an SPA CIC Termination or a CIC Trigger, his unvested restricted stock units shall fully vest; (ii) upon an SPA Non-CIC Termination, his unvested restricted stock units shall continue to vest for a year from such termination; and (iii) upon death or disability, half of his unvested restricted stock units shall vest.
- (8) Represents the value of the unvested stock options granted to Mr. Themelis in January 2016, which will vest as follows: (a) upon an SPA Period Termination, a CIC Trigger, an SPA Non-CIC Termination or a Multi-Year Termination, his unvested stock options shall fully vest; and (b) upon death or disability, half of his unvested restricted stock units shall vest.

## Compensation Committee interlocks and insider participation

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The Compensation Committee is composed of four independent directors. No member of the Compensation Committee is, or was during 2020, a current or former officer or employee of the Company or any of its subsidiaries. Additionally, during 2020, none of our executive officers served on the board of directors or compensation committee of any entity that had one or more of its executive officers serving on the Board or the Compensation Committee of the Company.

## PROPOSAL 3 — ADVISORY VOTE ON EXECUTIVE COMPENSATION

In accordance with the requirements of Section 14A of the Securities Exchange Act of 1934 (which was added by the Dodd-Frank Act), the Company is providing its stockholders the opportunity to cast an advisory vote to approve the compensation of its named executive officers. This proposal, commonly known as a “Say-on-Pay” proposal, gives the Company’s stockholders the opportunity to express their views on the named executive officers’ compensation. We will include an advisory vote on executive compensation on an annual basis at least until the next shareholder advisory vote on the frequency of such votes.

As described in detail in the *Compensation Discussion and Analysis* above, the Company’s named executive officer compensation program is designed to attract, reward and retain the caliber of officers needed to ensure the Company’s continued growth and profitability. The primary objectives of the program are to:

- align and reward Company and individual performance and decision-making with long-term stockholder value creation;
- attract, reward and retain high caliber executives;
- motivate high performance from our NEOs by offering greater incentives for superior performance and reduced awards for underperformance;
- discourage imprudent risk taking by avoiding undue emphasis on any one metric or short-term goal; and
- be transparent and fair to both our NEOs and our stockholders.

The Company seeks to accomplish these goals in a manner that is aligned with the long-term interests of the Company’s stockholders. The Company believes that its named executive officer compensation program achieves this goal with its emphasis on long-term equity awards and performance-based compensation, in addition to short-term (annual) incentive awards, which has enabled the Company to successfully motivate and reward its named executive officers. The Company believes that its ability to retain its current high-performing team of seasoned executive officers is critical to its continuing financial success and that its focus on the long-term interests of its named executive officers aligns with the interests of its stockholders.

We urge stockholders to read the letter from the Compensation Committee found on page 30 and the *Compensation, Discussion and Analysis* beginning on page 31, which describes in more detail how our executive compensation policies and procedures operate and are designed to achieve our compensation objectives, as well as the *Summary Compensation Table* and other related compensation tables and narratives beginning on page 58, which provide detailed information on the compensation of our Named Executive Officers. For these reasons, the Board recommends a vote in favor of the following resolution:

“RESOLVED, that the compensation paid to the Company’s named executive officers, as disclosed in the Company’s proxy statement for the 2021 Annual Meeting, pursuant to the compensation disclosure rules of the Securities and Exchange Commission, including the Compensation Discussion and Analysis, compensation tables and narrative discussion, is hereby APPROVED.”

## Your vote

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As an advisory vote, this proposal is not binding upon the Company, our Board or our Compensation Committee. Notwithstanding the advisory nature of this vote, our Board and the Compensation Committee, which is responsible for designing and administering the Company's named executive officer compensation program, value the opinions expressed by stockholders in their vote on this proposal, and will consider the outcome of the vote when making future compensation decisions for named executive officers. The affirmative vote of the holders of a majority of the outstanding shares of Common Stock present in person or represented by proxy and entitled to vote is required to approve this Proposal 3.



### **BOARD RECOMMENDATION**

**The board unanimously recommends that you vote "FOR" the approval, on an advisory basis, of the compensation of the Company's named executive officers as disclosed in this proxy statement.**



## CEO PAY RATIO

The Company's compensation and benefits philosophy and the overall structure of our compensation and benefits programs are broadly consistent across the global organization, notwithstanding regional nuances. Our goal is to ensure that the compensation and benefits program of each employee reflects his or her specific role, responsibilities and contributions and is competitive for the employee's location based on the market data provided by our compensation consultants.

As required by Section 953(b) of the Dodd-Frank Act and Item 402(u) of Regulation S-K, our Company is required to calculate and disclose the total compensation paid to its median employee, as well as the ratio of the total compensation paid to such median employee as compared to the total compensation paid to the Company's CEO. The Company believes that the ratio of pay included in this information is a reasonable estimate calculated in a manner consistent with Item 402(u) of Regulation S-K.

### ***Measurement Date***

We identified the median employee using our employee population on October 1, 2020.

### ***Consistently Applied Compensation Measure (CACM)***

Under the relevant rules, we were required to identify our median employee by use of a consistently applied compensation measure ("CACM"). We chose a CACM that closely approximates the annual total direct compensation of our employees and corresponds to how we disclose our CEO's compensation in the Summary Compensation Table ("Calculation"). In our Calculation, we included:

- Actual base salary paid;
- Cash bonus paid in 2021 for 2020 results;
- Other payments including, but not limited to, severance payments, overtime and allowances;
- Value of equity awards granted in 2020, computed in accordance with FASB ASC Topic 718;
- Value of dividends and dividend equivalents accrued on unvested equity in 2020; and
- Company's contribution to a pension or retirement plan, including, but not limited to, a 401(k) defined contribution plan in the U.S.

### ***De Minimis Exception***

As of October 1, 2020, we had 599 employees globally, including 373 U.S. employees and 226 non-U.S. employees. In determining the median employee, we did not include employees from the following countries as they represented, in aggregate, less than 5% of our employee population:

- Brazil – 4 employees
- France – 1 employee
- Hong Kong – 11 employees
- Singapore – 7 employees
- The Netherlands – 5 employees

***Methodology and Pay Ratio Outcome***

After excluding the countries and employees described above, we determined our median employee from a population of 571 employees globally, including 373 U.S. employees and 198 non-U.S. employees. Our median employee compensation was \$149,138 according to the Calculation. Based on the Calculation, the CEO's compensation in 2020 was \$6,279,843 and the median employee pay ratio was 42:1.

This pay ratio information is being provided solely for compliance purposes. Neither the Compensation Committee nor management of the Company used the pay ratio measure in making compensation decisions.

# OTHER INFORMATION

## General information

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This Proxy Statement is furnished in connection with a solicitation of proxies by the Board of Directors of the Company, to be used at our Annual Meeting scheduled for Wednesday, June 9, 2021, at 10:00 a.m., Eastern Daylight Time, via live audio webcast at [www.virtualshareholdermeeting.com/MKTX2021](http://www.virtualshareholdermeeting.com/MKTX2021).

Holders of record of our Common Stock at the close of business on the Record Date are entitled to notice of, and to vote at, the Annual Meeting. On that date, there were 37,607,108 shares entitled to be voted.

Due to the continuing public health impact of the Pandemic and to support the health and well-being of our shareholders and other participants at the Annual Meeting, the Annual Meeting will be held in virtual format only. You will not be able to attend the Annual Meeting physically, however you may vote and submit questions while attending the Annual Meeting online via the live audio webcast.

To participate in the Annual Meeting, you must have your 16-digit control number that is shown on your Notice of Internet Availability of Proxy Materials or on your proxy card. You will be able to submit questions during the meeting by typing in your question in the “ask a question” box on the meeting page. Should you require technical assistance, support will be available by dialing 800-586-1548 (U.S.) or 303-562-9288 (International) during the meeting. We are committed to ensuring that our stockholders will be afforded the same rights and opportunities to participate as they would at an in-person meeting.

**We encourage you to vote your shares, either by voting online during the Annual Meeting or by granting a proxy (i.e., authorizing someone to vote your shares). If you vote via the Internet or telephone or execute the attached paper proxy card, the individuals designated will vote your shares according to your instructions. If any matter other than the Proposals listed in the Notice of Annual Meeting of Stockholders is presented at the Annual Meeting, the designated individuals will, to the extent permissible, vote all proxies in the manner that the Board may recommend or, in the absence of such recommendation, in the manner they perceive to be in the best interests of the Company.**

If you indicate when voting via the Internet that you wish to vote as recommended by the Board or if you execute the enclosed paper proxy card but do not give instructions, your proxy will be voted as follows: (1) FOR the election of the nominees for director named herein, (2) FOR ratification of the appointment of PricewaterhouseCoopers LLP as our independent registered public accounting firm for the year ending December 31, 2021, (3) FOR the approval, on an advisory basis, of the compensation of the Company’s named executive officers as disclosed in this Proxy Statement and (4) in accordance with the best judgment of the persons appointed as proxies with respect to any other matters that properly come before the Annual Meeting. If your shares are held in a stock brokerage account or by a bank or other nominee, see the information under the heading *Voting — Broker authority to vote*.

Information on how you may vote at the Annual Meeting (such as granting a proxy that directs how your shares should be voted, or attending the Annual Meeting), as well as how you can revoke a proxy, is contained in this Proxy Statement under the headings *Solicitation of Proxies* and *Voting*.

We are furnishing proxy materials to our stockholders primarily via the Internet. On April 28, 2021, we expect to mail beneficial owners of our Common Stock a Notice of Internet Availability containing instructions on how to access our proxy materials, including this Proxy Statement and our Annual Report. The Notice of Internet Availability also instructs you on how to vote via the Internet. Other stockholders, in accordance with their prior requests, received e-mail notification of how to access our proxy materials and vote via the Internet, or have been mailed paper copies of our proxy materials and a proxy card or voting form. The proxy card includes instructions on how to vote via the telephone. All beneficial owners will have the ability to access the proxy materials, including this Proxy Statement and our Annual Report, on the website referred to in the Notice of Internet Availability.

Internet distribution of our proxy materials is designed to provide our stockholders with the information they need, while lowering costs of delivery and reducing the environmental impact of our Annual Meeting. However, if you would prefer to receive paper copies of proxy materials, please follow the instructions included in the Notice of Internet Availability. If you have previously elected to receive our proxy materials electronically, you will continue to receive these materials via e-mail unless you elect otherwise.

**Our Proxy Statement and 2020 Annual Report to Stockholders are available at <https://materials.proxyvote.com/57060D>**

## Solicitation of proxies

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### **General**

The attached proxy card allows you to instruct the designated individuals how to vote your shares. You may vote in favor of, against, or abstain from voting on any proposal.

### **Solicitation**

We will bear the entire cost of solicitation, including the preparation, assembly, printing and mailing of a Notice of Internet Availability of Proxy Materials, this Proxy Statement, the proxy card and any additional soliciting materials furnished to stockholders. Copies of solicitation materials will be furnished to brokerage houses, fiduciaries and custodians holding shares in their names that are beneficially owned by others so that they may forward the solicitation materials to such beneficial owners. In addition, we may reimburse such persons for their costs of forwarding the solicitation materials to such beneficial owners. The original solicitation of proxies by mail may be supplemented by solicitation by telephone or other means by our directors, officers, employees or agents. No additional compensation will be paid to these individuals for any such services. Except as described above, we do not presently intend to solicit proxies other than by mail.

## Voting

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### **Stockholders entitled to vote and shares outstanding**

Each stockholder is entitled to one vote for each share of Common Stock held on each matter submitted to a vote at the Annual Meeting. As of the Record Date, 37,607,108 shares of Common Stock were outstanding and entitled to be voted at the Annual Meeting.

### **How to vote**

#### **Submitting a proxy via mail, the Internet or telephone**

You may vote by calling the toll-free telephone number listed on the proxy card or visiting the website address listed on the Notice or the proxy card. If you choose to submit your proxy with voting instructions by telephone or through the Internet, you will be required to provide your assigned control number noted on the Notice before your proxy will

## OTHER INFORMATION

be accepted. In addition to the instructions that appear on the Notice, step-by-step instructions will be provided by recorded telephone message or at the designated website on the Internet. Votes submitted by telephone or via the Internet must be received by 11:59 p.m., EDT, on June 8, 2021 in order for them to be counted at the Annual Meeting.

If you are a stockholder of record, or otherwise received a printed copy of the proxy materials, in addition to the methods described above, you may also submit your proxy with voting instructions by mail by following the instructions set forth on the proxy card included with the proxy materials. Specifically, if you are a stockholder of record on the Record Date, you may vote by mailing your proxy card, with voting instructions, to the address listed on your proxy card.

### **Voting your shares online at the Annual Meeting**

*For Shares Directly Registered in the Name of the Stockholder:* You may vote online at the Annual Meeting at [www.virtualshareholdermeeting.com/MKTX2021](http://www.virtualshareholdermeeting.com/MKTX2021); however, we encourage you to vote by proxy card or the Internet even if you plan to attend the online meeting. If you plan to attend the online Annual Meeting, you will need the 16-digit control number included on your Notice of Internet Availability of Proxy Materials or your proxy card (if you received a printed copy of the proxy materials) in order to be able to enter the meeting.

*For Shares Registered in the Name of a Brokerage Firm or Bank:* If your shares of Common Stock are held in street name, you will receive instructions from your broker, bank or other nominee that you must follow in order to have your shares of Common Stock voted prior to or during the online meeting, or contact your broker, bank or other nominee for such information.

### ***Revoking a proxy***

A proxy that was submitted via the Internet or by telephone may be revoked at any time before it is exercised by (1) executing a later-dated proxy card via the Internet or by telephone or (2) attending the Annual Meeting and voting online.

A proxy that was submitted by mail may be revoked at any time before it is exercised by (1) giving written notice revoking the proxy to our General Counsel and Corporate Secretary at MarketAxess Holdings Inc., 55 Hudson Yards, 15th Floor, New York, NY 10001, (2) subsequently sending another proxy bearing a later date or (3) attending the Annual Meeting and voting online.

If your shares are registered in the name of a brokerage firm or bank, you must contact your brokerage firm or bank to change your vote or obtain a proxy to vote your shares if you wish to cast your vote online at the meeting.

**Your attendance at the Annual Meeting in and of itself will not automatically revoke a proxy that was submitted via the Internet, by telephone or by mail.**

**Broker authority to vote**

If your shares are held in a stock brokerage account or by a bank or other nominee, you are considered to be the beneficial owner of shares held in street name. These proxy materials are being forwarded to you by your broker or nominee, who is considered to be the holder of record with respect to your shares. As the beneficial owner, you have the right to direct your broker or nominee how to vote by filling out the voting instruction form provided by your broker or nominee. Telephone and Internet voting options may also be available to beneficial owners. As a beneficial owner, you are also invited to attend the Annual Meeting, but you will need the 16-digit control number included on your Notice of Internet Availability of Proxy Materials or your proxy card (if you received a printed copy of the proxy materials) in order to be able to enter the meeting.

If your shares are held in street name, your broker or nominee will ask you how you want your shares to be voted. If you provide voting instructions, your shares must be voted as you direct. If you do not furnish voting instructions, one of two things can happen, depending upon whether a proposal is "routine." Under the rules that govern brokers that have record ownership of shares beneficially owned by their clients, brokers have discretion to cast votes only on routine matters, such as the ratification of the appointment of independent registered public accounting firms, without voting instructions from their clients. Brokers are not permitted, however, to cast votes on "non-routine" matters without such voting instructions, such as the election of directors. A "broker non-vote" occurs when a beneficial owner has not provided voting instructions and the broker holding shares for the beneficial owner does not vote on a particular proposal because the broker does not have discretionary voting power for that proposal.

**Quorum**

A quorum is required for the conduct of business at the meeting. The presence at the meeting, in person or by proxy, of the holders of a majority of the stock issued and outstanding and entitled to vote at the meeting on the Record Date will constitute a quorum, permitting us to conduct the business of the meeting. Proxies received but marked as abstentions, if any, and broker non-votes (as described above) will be included in the calculation of the number of shares considered to be present at the meeting for quorum purposes. If we do not have a quorum, we will be forced to reconvene the Annual Meeting at a later date.

**Votes necessary to approve each proposal**

*Election of Directors.* Our Bylaws include a majority voting standard for the election of directors in uncontested elections, which are generally defined as elections in which the number of nominees does not exceed the number of directors to be elected at the meeting. In the election of directors (Proposal 1), you may either vote "FOR," "AGAINST" or "ABSTAIN" as to each nominee. Cumulative voting is not permitted. Under the majority voting standard, in uncontested elections of directors, such as this election, each director must be elected by the affirmative vote of a majority of the votes cast with respect to that nominee's election at any meeting for the election of directors at which a quorum is present. A majority of the votes cast means that the number of votes cast "FOR" a candidate for director exceeds the number of votes cast "AGAINST" that candidate for director. Abstentions will have no effect in determining whether a director nominee has received a majority of the votes cast because an abstention does not count as a vote cast. In addition, brokers do not have discretionary authority to vote for directors, therefore, broker non-votes will not count as a vote cast "FOR" or "AGAINST" a nominee's election and thus will have no effect in determining whether a director nominee has received a majority of the votes cast.

*Other Items.* For each of the other proposals listed in the Notice of Annual Meeting of Stockholders (Proposals 2 and 3), if a quorum is present, the proposals will be decided by the affirmative vote of the holders of a majority of the shares having voting power present in person or represented by proxy. Abstentions will be counted as shares present having voting power on these proposals and will have the same effect as votes "AGAINST." Brokers have discretionary authority to vote on Proposal 2, the ratification of the appointment of PwC. Therefore, there will be no broker non-votes on Proposal 2. Brokers do not have discretionary authority to vote on Proposal 3 (Say-on-Pay), therefore, broker

## OTHER INFORMATION

non-votes will not be counted as shares present having voting power on Proposal 3 and will have no effect on the vote for this proposal.

### Availability of certain documents

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#### ***Householding of Annual Meeting materials***

The Company and some banks, brokers and other nominee record holders may participate in the practice of “householding” proxy statements and their accompanying documents. This means that only one copy of our Proxy Statement is sent to multiple stockholders in your household. This “householding” procedure reduces our printing costs and postage fees as well as the environmental impact of the annual meeting. Stockholders who participate in householding will continue to receive separate proxy cards. We will promptly deliver a separate copy of these documents to you upon written or oral request to our Investor Relations Department at MarketAxess Holdings Inc., 55 Hudson Yards, 15th Floor, New York, NY 10001 or 212-813-6000. If you want to receive separate copies of our proxy statements in the future, or if you are receiving multiple copies and would like to receive only one copy per household, you should contact your bank, broker or other nominee record holder, or you may contact us at the above address and phone number.

#### ***Additional information***

We are required to file annual, quarterly and current reports, proxy statements and other reports with the SEC. Copies of these filings are available through our Internet website at [www.marketaxess.com](http://www.marketaxess.com) or the SEC’s website at [www.sec.gov](http://www.sec.gov). We will furnish copies of our SEC filings (without exhibits), including our Annual Report on Form 10-K for the year ended December 31, 2020, without charge to any stockholder upon written or oral request to our Investor Relations Department at MarketAxess Holdings Inc., 55 Hudson Yards, 15th Floor, New York, NY 10001 or 212-813-6000.

### Other matters

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As of the date of this Proxy Statement, the Company knows of no other matters that will be presented for consideration at the Annual Meeting. If any other matters properly come before the Annual Meeting, it is the intention of the persons named in the enclosed proxy card to vote the shares they represent as such persons deem advisable. Discretionary authority with respect to such other matters is granted by the execution of the enclosed proxy card.

### Stockholder proposals for 2022 Annual Meeting

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In order to be considered for inclusion in the Company’s proxy statement and proxy card relating to the 2022 Annual Meeting of Stockholders, any proposal by a stockholder submitted pursuant to Rule 14a-8 of the Securities Exchange Act of 1934, as amended, must be received by the Company at its principal executive offices in New York, New York, on or before December 29, 2021. In addition, under the Company’s bylaws, any proposal for consideration at the 2022 Annual Meeting of Stockholders submitted by a stockholder other than pursuant to Rule 14a-8 will be considered timely if it is received by the Secretary of the Company at its principal executive offices between the close of business on November 29, 2021 and the close of business on December 29, 2021 and is otherwise in compliance with the requirements set forth in the Company’s bylaws.



**UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION  
Washington, D.C. 20549**

**Form 10-K**

(Mark One)

- ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**  
For the fiscal year ended December 31, 2020
- TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**  
For the transition period from \_\_\_\_\_ to \_\_\_\_\_  
Commission File Number 001-34091

**MARKETAXESS HOLDINGS INC.**

(Exact name of registrant as specified in its charter)

Delaware  
(State of incorporation)

52-2230784  
(IRS Employer  
Identification No.)

55 Hudson Yards, New York, New York  
(Address of principal executive offices)

10001  
(Zip Code)

(212) 813-6000

(Registrant's telephone number, including area code)

**SECURITIES REGISTERED PURSUANT TO SECTION 12(b) OF THE ACT:**

Title of each class	Trading Symbol	Name of each exchange on which registered
Common Stock, \$0.003 par value	MKTX	NASDAQ Global Select Market

**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 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 (or for such shorter period that the registrant was required to file such reports), 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, smaller reporting company, or an emerging growth company. See definition of "large accelerated filer," "accelerated filer," "smaller reporting company" and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer	<input checked="" type="checkbox"/>	Accelerated filer	<input type="checkbox"/>
Non-accelerated filer	<input type="checkbox"/>	Smaller reporting company	<input type="checkbox"/>
		Emerging growth company	<input type="checkbox"/>

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 Exchange Act). Yes  No

The aggregate market value of the shares of common stock held by non-affiliates of the registrant as of June 30, 2020 (the last business day of the registrant's most recently completed second fiscal quarter) was approximately \$16.3 billion computed by reference to the last reported sale price on the NASDAQ Global Select Market on that date. For purposes of this calculation, affiliates are considered to be officers, directors and holders of 10% or more of the outstanding common stock of the registrant on that date. The registrant had 37,964,515 shares of common stock, 5,492,071 of which were held by affiliates, outstanding on that date.

As of February 16, 2021, the aggregate number of shares of the registrant's common stock outstanding was 37,995,877.

**DOCUMENTS INCORPORATED BY REFERENCE**

Portions of the registrant's definitive proxy statement for the 2021 Annual Meeting of Stockholders are incorporated by reference into Items 10, 11, 12, 13 and 14 of Part III of this Form 10-K.



**MARKETAXESS HOLDINGS INC.**  
**2020 FORM 10-K ANNUAL REPORT**  
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## PART I

### Cautionary Note Regarding Forward-Looking Statements

This report contains certain “forward-looking statements” within the meaning of the Private Securities Litigation Reform Act of 1995. Forward-looking statements may be identified by words such as “expects,” “intends,” “anticipates,” “plans,” “believes,” “seeks,” “estimates,” “will,” or words of similar meaning and include, but are not limited to, statements regarding the outlook for our future business and financial performance. Forward-looking statements are based on management’s current expectations and assumptions, which are subject to inherent uncertainties, risks and changes in circumstances that are difficult to predict. It is routine for our internal projections and expectations to change as the year or each quarter in the year progresses, and therefore it should be clearly understood that the internal projections and beliefs upon which we base our expectations may change prior to the end of each quarter or the year. Although these expectations may change, we are under no obligation to revise or update any forward-looking statements contained in this report. Actual future events or results may differ, perhaps materially, from those contained in the projections or forward-looking statements. Factors that could cause or contribute to such differences include those discussed below and elsewhere in this report, particularly in Item 1A. “Risk Factors.”

### Item 1. *Business.*

#### Overview

MarketAxess Holdings Inc. (the “Company” or “MarketAxess”) operates leading electronic trading platforms delivering expanded liquidity opportunities, improved execution quality and significant cost savings across global fixed-income markets. Over 1,800 institutional investor and broker-dealer firms are active users of our patented trading technology, accessing global liquidity on our platforms in U.S. investment-grade bonds, U.S. high-yield bonds, U.S. Treasuries, municipal bonds, emerging market debt, Eurobonds and other fixed income securities. Through our Open Trading™ protocols, we execute bond trades between and among institutional investor and broker-dealer clients in our leading all-to-all anonymous trading environment. We also offer a number of trading-related products and services, including: Composite+™ pricing and other market data products to assist clients with trading decisions; auto-execution and other execution services for clients requiring specialized workflow solutions; connectivity solutions that facilitate straight-through processing; and technology services to optimize trading environments. In addition, we provide a range of pre- and post-trade services, including trade matching, trade publication, regulatory transaction reporting and market and reference data across a range of fixed-income and other products.

Our platforms’ innovative technology solutions are designed to increase the number of potential trading counterparties and create a menu of solutions to address different trade sizes and bond liquidity characteristics. Our traditional Request-For-Quote (“RFQ”) model allows our institutional investor clients to simultaneously request competing, executable bids or offers from our broker-dealer clients and execute trades with the broker-dealer of their choice from among those that choose to respond. Our anonymous trading protocols (referred to throughout as “Open Trading”) complement our RFQ model by increasing the number of potential counterparties and improving liquidity by allowing all participants to interact anonymously in an all-to-all trading environment. Clients can use our auto-execution technology with both our traditional RFQ and Open Trading protocols, thereby using rules-based execution to connect to diverse sources of liquidity while reducing trading inefficiencies and human errors. Live Markets, an order book that provides a single view of two-way, actionable prices for the most active corporate bonds, including newly issued debt, benchmark issues and news-driven securities, leverages the benefits of our Open Trading marketplace and allows participants to efficiently trade liquid names in larger size.

Our services relating to trade execution range from providing a suite of trading protocols designed to fit the trading needs of our clients to innovative new trading technologies, such as auto-execution and the use of artificial intelligence, to assist our clients’ trading decisions. Trading protocols include single and multiple-dealer inquiries; list trading, which is the ability to request bids and offers on up to 200 bonds at the same time; portfolio trading, which allows clients to competitively trade baskets of up to 1,500 securities; and swap trading, which is the ability to request an offer to purchase one bond and a bid to sell another bond. Auto-execution allows clients to set eligibility criteria for their orders that our system will use to determine whether or not to execute a trade in accordance with the pre-defined parameters. Once a trade is completed, clients will settle the trade with the assistance of our automated post-trade messaging, which facilitates the communication of trade acknowledgment and allocation information between our institutional investor and broker-dealer clients.

We are not a party to any of the disclosed trades that occur on our platforms between institutional investor clients and broker-dealer clients; rather, we serve as an intermediary between broker-dealers and institutional investors, enabling them to meet, agree on a price and then transact directly with each other. However, in connection with our Open Trading and other anonymous protocols, we execute bond transactions between and among institutional investor and broker-dealer clients on a matched principal basis by serving as counterparty to both the buyer and the seller in matching back-to-back trades. In 2020, 32.7% of all credit volume on the MarketAxess platform was executed via Open Trading protocols, up from 26.3% in 2019.

Our broker-dealer clients accounted for approximately 98.5% of the underwriting of newly-issued U.S. corporate bonds and approximately 86.4% of the underwriting of newly issued European corporate bonds in 2020. Although institutional investors, specialist market-making firms, proprietary trading firms and other non-traditional liquidity providers have increasingly provided liquidity on our platforms through Open Trading, we believe these broker-dealers still represent the principal source of secondary market liquidity in the markets in which we operate. Secondary market liquidity refers to the ability of market participants to buy or sell a security quickly and in large volume following the original issuance of the security, without substantially affecting the price of the security.

In 2020, our volume in U.S. high-grade and high yield corporate bonds represented approximately 21.6% and 14.6%, respectively, of the total estimated U.S. high-grade and high yield corporate bond volumes, as reported by the Financial Industry Regulatory Authority (“FINRA”) Trade Reporting and Compliance Engine (“TRACE”). TRACE facilitates the mandatory reporting of over-the-counter (“OTC”) secondary market transactions in eligible fixed-income securities in the U.S., including trading between institutional investors and broker-dealers, as well as inter-dealer and retail trading. All broker-dealers that are FINRA member firms have an obligation to report transactions in corporate bonds to TRACE under a set of rules approved by the Securities and Exchange Commission (“SEC”).

We provide trade matching and regulatory reporting services for European investment firms and market and reference data across a range of fixed-income products. In response to the pre-and post-trade transparency mandates from the recast Markets in Financial Instruments Directive (“MiFID II”) in Europe, we have been authorized by each of the United Kingdom (“U.K.”) Financial Conduct Authority (“FCA”) and the Netherlands Authority for the Financial Markets (“AFM”) as an Approved Publication Arrangement (“APA”) and an Approved Reporting Mechanism (“ARM”). In addition to our APA and ARM reporting services, we have developed a comprehensive suite of value-add solutions for MiFID II, including pre-trade transparency services, systematic internaliser (“SI”) determination and monitoring, best execution reporting, commodity position reporting, data quality analysis and peer benchmarking.

In 2020, 92.1% of our revenues were derived from commissions for transactions executed on our platforms. We also derive revenues from information services, post-trade services and other income. Our revenue can be impacted by seasonal effects caused by increased levels of new bond issuance, which often occurs in the first quarter of a year, or slow-downs in trading activity, particularly during the customary holiday periods in August and December. Our expenses consist of employee compensation and benefits, depreciation and amortization, technology and communication expenses, professional and consulting fees, occupancy, marketing and advertising, clearing costs and other general and administrative expenses.

## **Industry Background**

Fixed-income securities are issued by corporations, governments and other entities, and pay a pre-set absolute or relative rate of return. As of September 30, 2020, the most recent date available, there were approximately \$50.1 trillion principal amount of fixed-income securities outstanding in the U.S. market, including \$10.4 trillion principal amount of U.S. corporate bonds and \$20.4 trillion principal amount of U.S. government bonds, according to the Securities Industry and Financial Markets Association (“SIFMA”). The estimated average daily trading volume of U.S. corporate bonds, as measured by TRACE, was \$35.8 billion in 2020. Primary dealer holdings of U.S. corporate bonds (investment-grade and high-yield) as reported by the Federal Reserve Bank of New York were \$8.9 billion as of December 31, 2020. This represents less than one day of trading volume as measured by TRACE.

Traditionally, bond trading has been a manual process, with product and price discovery conducted over the telephone between two or more parties. This traditional process has a number of shortcomings resulting primarily from the lack of a central trading facility for fixed-income securities, which makes it difficult to match buyers and sellers for particular issues. Many market participants also use e-mail and instant messaging for trading these securities. While these electronic communication methods have addressed some of the limitations associated with telephonic trading, these methods are still hindered by limited liquidity, limited price transparency, significant transaction costs, compliance and regulatory challenges, and difficulty in executing numerous trades at one time. Our platforms’ functionality address many of the remaining shortcomings that result from trading bonds over the telephone, e-mail or instant message.

Demand for our trading platforms has grown as the need for greater execution efficiency and changing regulations have continued to shift trading from voice markets to electronic markets across our product areas. We and other trading platforms have responded to this demand with technological advances which have further automated many of the manual processes required by traditional methods of trading. Although our market share has increased significantly in recent years, large components of the fixed income markets in which we operate have not yet migrated to electronic trading because of the diverse and heterogeneous nature of those instruments and because participants in these markets have traditionally operated in a more relationship-driven environment.

Regulatory changes have also driven demand for the electrification of fixed-income trading processes. The policy objectives of a number of post-2008 crisis reforms, such as the Dodd-Frank Wall Street Reform and Customer Protection Act (the “Dodd-Frank Act”), Basel III and MiFID II, are to increase transparency and reduce systemic risk. These objectives have generally led to increased adoption of electronic trading on regulated markets where price transparency, all-to-all trading and reporting tools are essential components. The Volcker Rule, which limits proprietary trading by banks, has also had an impact on dealer inventories and the ability of dealers to act as market-makers. Our Open Trading protocols, which are designed to allow our broker-dealer and institutional investor clients to interact in an all-to-all trading environment, have helped market participants improve their liquidity and turnover in response to these trends. During 2020, over 1,200 participating client firms provided liquidity via our Open Trading solutions and we completed approximately 1.9 million Open Trading trades, an increase of 42.7% compared to 2019.

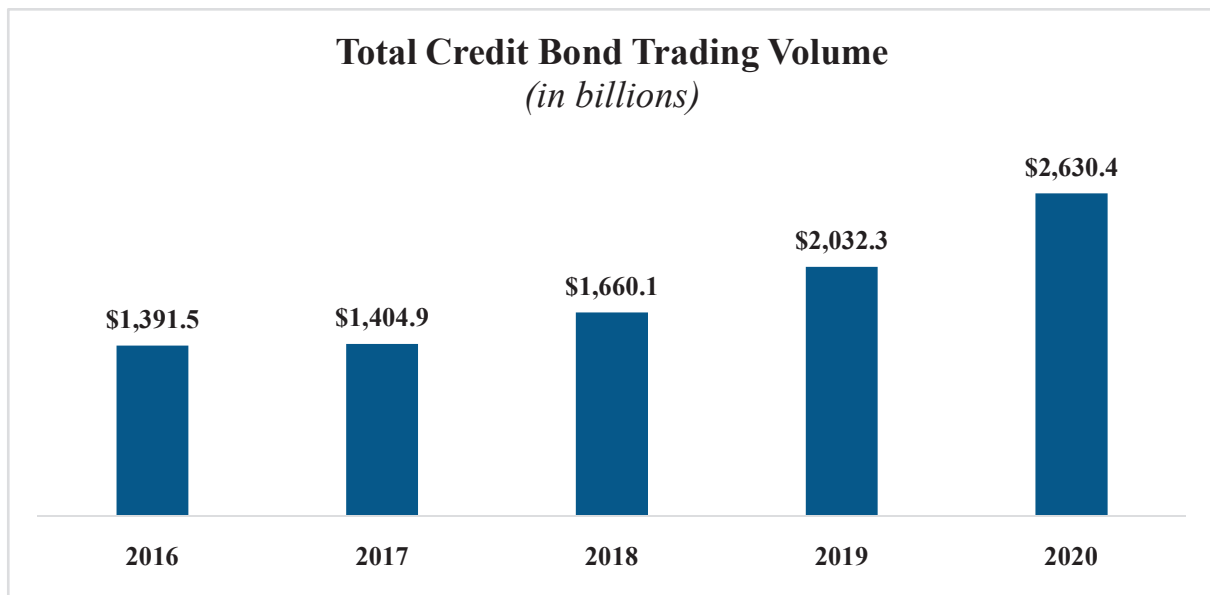
## Our Competitive Strengths

We believe that we are well positioned to strengthen our market position in electronic trading in our existing products and to extend our presence into new products and services by capitalizing on our competitive strengths, including:

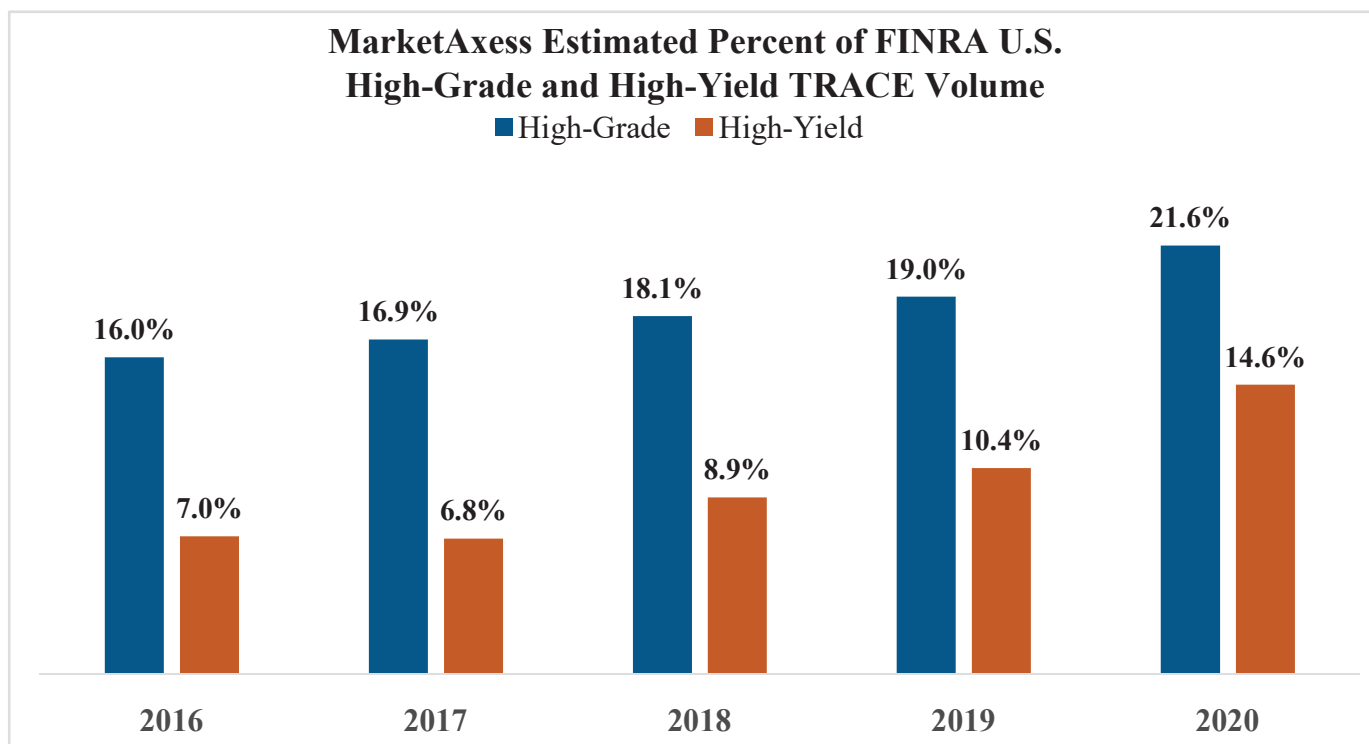
### *Significant Trading Volumes with Participation by Leading Broker-Dealers and Institutional Investors*

Our electronic trading platforms provide access to the liquidity generated by the participation of over 1,800 active institutional investor and broker-dealer clients, including substantially all of the leading broker-dealers in global fixed-income trading. We believe these broker-dealers represent the principal source of secondary market liquidity for U.S. high-grade corporate bonds, emerging markets and high-yield bonds, European high-grade corporate bonds and the other markets in which we operate. Our broker-dealer clients are motivated to continue to utilize our platforms due to the presence on the platforms of our large network of institutional investor clients and their ability to use our Open Trading protocols to help manage their risk, source liquidity, and facilitate transactions on behalf of their clients.

As shown in the chart below, our total credit trading volume increased from approximately \$1.4 trillion in 2016 to \$2.6 trillion in 2020.



Our estimated share of U.S. high-grade and high-yield corporate bond volume from 2016 to 2020 is shown in the chart below:



***Open Trading is a Differentiator that Expands the Liquidity Pool and Further Increases Cost-Savings for Clients***

In the post-financial crisis years, liquidity has remained a persistent concern for market participants as regulators raised banks' capital requirements and adopted other measures that prompted many dealers to reduce market-making activities even as the buy side's bond holdings have grown rapidly. In this environment, Open Trading, our fully electronic, all-to-all trading environment, has emerged as one solution to the post-crisis liquidity problem. As a result, the liquidity options for Open Trading participants are broader and more diverse compared to the traditional model of bilateral trading with a limited set of dealer counterparties. The expanded pool of liquidity providers includes investment managers, global dealers, regional dealers and specialist market-making and proprietary trading firms. During 2020, over 1,200 unique liquidity providers participated in Open Trading, which improved the ability of both dealers and institutional investors to find natural and opportunistic matches, move orders more efficiently, and achieve significant increases in execution quality and price improvement.

We believe our Open Trading protocols enhance our institutional investor clients' ability to obtain a competitive price by allowing all of our Open Trading participants to interact with each other, thereby increasing the potential sources of liquidity for each participant, as well as the likelihood of receiving a competitive price response. We estimate that liquidity takers saved an estimated \$673.7 million in transaction costs through Open Trading during 2020, while liquidity providers saved an estimated \$398.8 million during the year. These Open Trading cost savings are in addition to the potential cost savings institutional investors can achieve by simultaneously requesting bids or offers from our broker-dealer clients via our traditional RFQ protocol. Estimated liquidity taker cost savings is defined as the difference between the winning price and the best disclosed dealer cover price. Estimated liquidity provider cost savings is defined as the difference between the winning price and then current Composite+ bid or offer level (offer if the provider is buying, bid if provider is selling) at the time of the inquiry.

### ***Growing, Comprehensive International Offering and Client Base***

Our platforms provide global fixed-income market participants with trading functionality across global hard currency and local currency markets, connecting clients in over 50 countries to local and global dealers. MarketAxess has over 850 active client firms located outside the U.S. that access our platforms through our regulated venues in Europe, Asia and Latin America. Our Open Trading functionality allows international clients to access cross-border liquidity with minimal ramp-up time or regulatory hurdles.

The MarketAxess emerging markets trading platform also offers the most comprehensive offering for local currency bond trading across the Latin America, Central & Eastern Europe, Middle East and Africa (“CEEMEA”), and Asia-Pacific (“APAC”) regions. Our platforms provide clients with the ability to trade local currency debt denominated in 27 local currencies with over 125 emerging market dealers.

### ***Robust, Scalable Technology Throughout the Full Trading Cycle***

We have developed proprietary technology that is highly secure, fault-tolerant and provides adequate capacity for our current operations, as well as for substantial growth. Our highly scalable systems are designed to accommodate additional volume, products and clients with relatively little modification and low incremental costs. We have consistently used our proprietary technology to find new ways for our clients to trade more effectively and efficiently. Our core software solutions span multiple components of the trading lifecycle and include pre-trade data and analytics, trade execution and post-trade data, analytics and reporting, connectivity and straight-through processing. Our systems are built to be scalable, flexible and resilient. We have also created new trading protocols and developed additional solutions for our clients that are translated and built by our highly experienced technology and business personnel. Going forward, we expect that our agile software development processes will help us continue to be a market leader in developing the technology solutions for our clients’ trading needs.

In addition to services directly related to the execution of trades, we offer our clients several other services throughout the trading cycle. In the pre-trade period, our platforms assist our participants by providing them with value-added services, such as real-time and historical trade price information, liquidity and turnover analytics, bond reference data and trade order matching alerts. Following the execution of a trade, our platforms support all of the essential tools and functionalities to enable our participants to realize the full benefits of electronic trading and demonstrate best execution, including real-time trade details, straight-through processing (“STP”), account allocations, automated audit trails, regulatory trade reporting, trade detail matching, and transaction cost analysis.

### ***Next Generation Data and Analytical Tools Supporting the Increasing Automation of Trading Workflows***

Our data and analytical tools enhance the value proposition of our trading platforms and improve the trading experience of our clients. We support our clients’ trading functions by offering value-added analytics that rely on machine-learning, automation and algorithms that are designed to improve the trading decisions and workflows of our clients. Our data and analytical tools are designed to help clients make better trading decisions, benefitting our current clients and attracting new market participants to our network. For example, our Composite+ pricing algorithm powers many of our automated trading solutions, which allows traders to automatically execute trades according to pre-determined parameters and automatically send completed or rejected order details to internal order management systems. By allowing traders to automate and execute their smaller, low touch trades more efficiently, our auto-execution solutions allow traders to focus their attention on higher value-added trades, with a goal of reducing trading inefficiencies and human errors.

### ***Proven Innovator with an Experienced Management Team***

Since our inception, we have been an innovator in the fixed-income securities markets. The members of our management team average more than 20 years of experience in the securities industry. We have consistently sought to benefit participants in the markets we serve by attempting to replicate the essential features of fixed-income trading, including the existing relationships between broker-dealers and their institutional investor clients, while applying technology to eliminate weaknesses in traditional trading methods and improve liquidity. In recent years, MarketAxess has received industry recognition from key independent publications for its innovations and contributions to the fixed-income market. For example, in 2020, MarketAxess won the Waters Technology “Sell-Side Technology Award” for the Best Sell-Side Trading Network and the Global Capital “Bond Award” for the Best Emerging Markets Bond Trading Platform. In addition, Composite+ won the Waters Technology “Buy-Side Technology Award” for the Best Buy-Side AI Tool. Several awards have recognized our successful use of the agile software development methodology in the development of our Live Markets order book, while a number of our female employees have been honored with leadership awards across the globe.



## ***Independent Ownership Structure***

We believe our ownership structure has been an advantage relative to certain of our competitors that are owned by exchange or dealer groups as we have been free to make balanced business and trading protocol decisions with the best interests of both our institutional investor and broker-dealer clients in mind. We are also able to attract industry leaders with valuable skills and insights to our independent Board of Directors.

## **Our Strategy**

Our objective is to provide the leading global electronic trading platforms for fixed-income securities, connecting broker-dealers and institutional investors more easily and efficiently, while offering a broad array of information, trading and technology services to market participants across the trading cycle. The key elements of our strategy are:

### ***Broaden Our Client Base in Our Existing Markets and Increase Penetration with Existing Clients***

We intend to use our broad network of over 1,800 active institutional investor and broker-dealer participants to drive more clients to our leading electronic fixed-income trading platforms. The number of active participants on our platforms has increased by approximately 80% since 2016. We believe that the continued expansion of our client base will lead to even further increases in the liquidity available on our platforms. We expect that the increased liquidity on our platforms and our ability to innovate and efficiently add new functionality and product offerings will also help us deepen our market share with our existing clients across our product suite. The number of clients trading three or more products on our platforms has increased by 38.7% from 718 in 2016 to 996 in 2020. Last, we plan to increase our international presence by increasing the number of firms located outside the U.S. that access our platforms through our venues in Europe, Asia and Latin America, increasing the number of local currencies available for trading on our platforms; and, subject to regulatory requirements, increasing the number of countries in which we can offer our platforms.

### ***Enhance the Liquidity of Securities Traded on Our Platforms by Leveraging our Client Network and Open Trading Protocols***

We aim to increase the secondary market liquidity on our trading platforms by deploying innovative technology solutions designed to increase the number of potential trading counterparties on our platforms and to address different trade sizes, bond liquidity characteristics and trading preferences. Our Open Trading protocols exponentially increase the potential trading counterparties by allowing broker-dealers and institutional investors to interact in an all-to-all trading environment. During 2020, our clients executed approximately 1.9 million trades using our Open Trading solutions, representing 32.7% of the total credit trading volume on our corporate bond platform. In recent years, we have also significantly increased the number of participants that provide bond prices to our corporate bond platform via an algorithm, which has helped increase the number of algorithmic price responses from 0.9 million in 2016 to 14.2 million in 2020. We intend to continue to improve the liquidity of bonds on our platforms by increasing the number of connections we have with algorithmic trading firms. We also believe that the combination of Open Trading and our vast client network provides the basis for MarketAxess to deliver meaningful cross-border liquidity or enter into new markets where liquidity is scarcer, such as municipal bonds.

### ***Continue to Develop Innovative Next-Generation Technologies that will Allow Our Clients to Further Automate and Improve the Performance of their Trading Desks***

We believe that the increased adoption of next-generation trading technologies by both dealer and investor clients will create improved liquidity, enhanced trading efficiencies and the ability to identify trends within the bond market. In recent years, we have launched a number of innovative technologies that rely on machine-learning, automation and algorithms that are designed to improve the trading decisions and workflows of our clients, while reducing trading inefficiencies and human errors. For example, clients can use our rules-based auto-execution technology with both our traditional RFQ protocol and Open Trading to automatically execute trades meeting defined parameters with diverse sources of liquidity. Our Composite+ pricing algorithm uses machine-learning to generate near real-time prices for approximately 30,000 corporate and sovereign bonds based on a variety of data inputs, and our Like Bonds product uses a data-driven methodology to help clients find liquid, tradable alternatives to illiquid bonds. We intend to continue to invest in and develop advanced technologies such as these that will make MarketAxess an increasingly valuable part of our clients' trading decisions and workflows.

## ***Expand and Strengthen our Trade-Related Service, Data and Analytical Offerings Throughout the Trading Cycle***

We plan to expand and strengthen our existing service, data and analytical offerings throughout the trading cycle so that MarketAxess is more fully integrated into the workflow of our broker-dealer and institutional investor clients. In the pre-trade period, we intend to continue to enhance the value of our information and analytical offerings, including the content and capabilities of BondTicker<sup>®</sup>, Axess All<sup>®</sup> and Composite+. We plan to enhance and expand the usage of LiquidityBridge<sup>®</sup>, our execution management system (“EMS”) service for dealers that allows users to manage and facilitate complex liquidity flows across multiple trading platforms, and Axess IQ<sup>™</sup>, our order and execution workflow solution for the wealth management and private banking community. We also intend to augment our European post-trade matching and regulatory reporting services that enable our clients to comply with their heightened obligations pursuant to MiFID II. The recent acquisition of Deutsche Börse’s regulatory reporting business is expected to help us expand and improve our services across a broader European client base, predominantly in Germany, France and the Nordics regions. As the use of our pre- and post-trade services and products grow, we believe that MarketAxess will become further entrenched as a value-added resource to our clients at each stage of the trading cycle, which we believe will further increase the attractiveness and use of our trading platforms.

## ***Pursue Select Acquisitions and Strategic Alliances***

We continually evaluate opportunities to supplement our internal growth by entering into strategic alliances, or acquiring businesses or technologies, that will enable us to enter new markets, provide new products or services, or otherwise enhance the value of our platforms and existing trade-related services to our clients. In 2017, we expanded our strategic alliance with BlackRock, Inc. (“BlackRock”) to combine BlackRock’s order flow with our Open Trading solution to improve the range of trading connections available to global credit market participants. The acquisition of LiquidityEdge<sup>®</sup> LLC (“LiquidityEdge”) in 2019 provided our clients with access to one of the leading platforms for U.S. Treasury trading, and it supports the further expansion of our U.S. Treasury hedging capabilities for our corporate bond platform. In 2020, we acquired the regulatory reporting business of Deutsche Börse in order to bolster our post-trade and market data services in Europe and entered into an agreement to acquire MuniBrokers, a central electronic venue serving municipal bond inter-dealer brokers and dealers, in order to expand our existing municipal bond trading solution for global institutional investor and dealer clients.

## **Our Key Trading Markets and Services**

### ***U.S. High-Grade Corporate Bond Market***

The U.S. corporate bond market consists of three broad categories of securities: investment-grade debt (so-called “high-grade”), which typically refers to debt rated BBB- or better by Standard & Poor’s or Baa3 or better by Moody’s Investor Service; debt rated below investment-grade (so-called “high-yield”), which typically refers to debt rated lower than BBB- by Standard & Poor’s or Baa3 by Moody’s Investor Service; and debt convertible into equity (so-called “convertible debt”). According to SIFMA, U.S. corporate bond debt outstanding has increased approximately 26% from \$8.3 trillion at year-end 2015 to \$10.4 trillion at September 30, 2020. We use the terms high-grade and investment-grade interchangeably in this Annual Report on Form 10-K.

The U.S. high-grade corporate bond market represents the largest subset of the U.S. corporate bond market. Over the last five years, high-grade corporate bond issuance was over \$1 trillion each year. The total annual amount of U.S. high-grade corporate bond issuance as reported by SIFMA increased by 60% to \$1.8 trillion in 2020 from \$1.1 trillion in 2019. Notwithstanding the growth in the total amount of debt outstanding and new issuance, turnover (which is the total amount traded as a percentage of the amount outstanding for the bonds that traded) is still below pre-credit crisis levels. The average daily trading volume of U.S. high-grade corporate bonds as reported by TRACE for the year ended December 31, 2020 was approximately \$25.3 billion compared to \$22.2 billion and \$20.7 billion for the years ended December 31, 2019 and 2018, respectively.

Our U.S. high-grade corporate bond business consists of U.S. dollar-denominated investment-grade debt issued by corporations for distribution in the U.S. Over 100 broker-dealers utilize our platforms to trade U.S. high-grade corporate bonds, including all of the top 20 broker-dealers as ranked by underwriting volume of newly-issued U.S. high-grade corporate bonds in 2020. Our broker-dealer clients accounted for approximately 98.5% of the underwriting of newly-issued U.S. high-grade corporate bonds in 2020. More than 1,200 active domestic and foreign institutional investor firms use our platforms to trade U.S. high-grade corporate bonds. Our 2020 trading volume in the U.S. high-grade corporate bond market was \$1.4 trillion.

### ***U.S. Crossover and High-Yield Bond Market***

We define the high-yield bond market generally to include all debt rated lower than BBB- by Standard & Poor’s or Baa3 by Moody’s Investor Service. We define the crossover market to include any debt issue rated below investment-grade by one agency but investment-grade by the other. The total annual amount of high-yield corporate bond issuance as reported by SIFMA increased by 62.7% to \$444.9 billion in 2020 from \$273.5 billion in 2019. The average daily trading volume of high-yield bonds as measured by TRACE for the year ended December 31, 2020 was approximately \$10.5 billion compared to \$8.8 billion and \$8.0 billion for the years ended December 31, 2019 and 2018, respectively.



Over 100 of our broker-dealer clients and more than 1,000 active institutional investor firms use our platforms to trade crossover and high-yield bonds. Trading in crossover and high-yield bonds uses many of the same features available in our U.S. high-grade corporate bond offering. We also offer leveraged loan trading for our clients that trade high-yield bonds. Our 2020 trading volume in the high-yield bond market was \$384.8 billion.

### ***Emerging Markets Bond Market***

We define the emerging markets bond market generally to include U.S. dollar, Euro or local currency denominated bonds issued by sovereign entities or corporations domiciled in a developing country. These issuers are typically located in Latin America, Asia, or Central and Eastern Europe. Examples of countries we classify as emerging markets include: Argentina, Brazil, Colombia, Mexico, Peru, the Philippines, Russia, Turkey and Venezuela.

The institutional investor base for emerging markets bonds includes many crossover investors from the high-yield and high-grade investment areas. Institutional investors have been drawn to emerging markets bonds by their high returns and high growth potential. The average daily trading volume of emerging markets debt, as reported by the Emerging Markets Trade Association for the nine months ended September 30, 2020, the most recent date available, was \$17.7 billion compared to \$21.3 billion and \$19.6 billion for the years ended December 31, 2019 and 2018, respectively.

Over 125 of our broker-dealer clients and more than 1,200 active institutional investor firms use our platforms to trade emerging markets bonds. The emerging markets countries whose bonds were most frequently traded on our platforms in 2020 were Mexico, Brazil, China and Indonesia. In 2020, our clients were able to trade corporate and sovereign debt denominated in 27 local market currencies on our platform. Our 2020 trading volume in the emerging market bond market was \$561.8 billion.

### ***European Corporate Bond Market***

The European corporate bond market consists of a broad range of products, issuers and currencies. We define the European corporate bond market generally to consist of bonds intended to be distributed to European investors, primarily bonds issued by European corporations, excluding bonds that are issued by corporations domiciled in an emerging markets country and excluding most government bonds that trade in Europe. Examples include:

- bonds issued by European corporations, denominated in any currency;
- bonds generally denominated in Euros, U.S. dollars or British Pounds Sterling intended to be distributed to European investors, excluding bonds that are issued by corporations domiciled in an emerging market;
- bonds issued by supra-national organizations (entities that include a number of central banks or government financial authorities, such as the World Bank), agencies and governments located in Europe, generally denominated in Euros, U.S. dollars or British Pounds Sterling, provided that such currency is not the currency of the country where the bond was issued; and
- floating-rate notes issued by European corporations.

We believe that the European corporate bond market is impacted by many of the same factors as the U.S. high-grade corporate bond market. The total amount of Euro denominated high-grade and high-yield bonds yearly issuance as reported by the International Capital Markets Association increased 9.7% to \$564.3 billion in 2020 from \$514.4 billion in 2019. The estimated average daily trading volume of European corporate bonds for the year ended December 31, 2020 was approximately \$10.8 billion compared to \$10.5 billion and \$9.2 billion for the years ended December 31, 2019 and 2018, respectively.

We offer secondary trading functionality in U.S. dollar- and Euro-denominated European corporate bonds to our broker-dealer and institutional investor clients. We also offer our clients the ability to trade in other European corporate bonds, including bonds issued in British Pounds Sterling, floating rate notes, European government bonds and bonds denominated in non-core currencies. We offered the first platform in Europe with a multi-dealer disclosed counterparty trading capability for corporate bonds.

In the Eurobond credit market, defined as including European high-grade, high-yield and government bonds, over 50 broker-dealers utilize our platform, including each of the top 20 broker-dealers as ranked by 2020 European corporate new-issue underwriting volume. Approximately 650 active institutional investor firms use our platforms to trade European bonds. Our 2020 trading volume in the Eurobond bond market was \$299.9 billion.

### ***U.S. Treasury Market***

U.S. Treasury securities are government instruments issued by the U.S. Department of the Treasury. The average daily trading volume of U.S. Treasuries as measured by SIFMA was \$607.1 billion for the year ended December 31, 2020 compared to \$593.6 billion and \$547.8 billion for the years ended December 31, 2019 and 2018, respectively.

We entered the U.S. Treasury market in 2019 through our acquisition of LiquidityEdge. LiquidityEdge's custom liquidity pools, as well as direct dealer streaming capabilities, for on- and off-the-run U.S. Treasuries offer a bespoke trading ecosystem to connect a community of dealers, market-makers and institutional investors. In addition to providing MarketAxess clients with an enhanced ability to trade U.S. Treasuries, the acquisition supported the expansion of our treasury hedging services for clients desiring to hedge duration risk of certain credit trades.

Over 75 firms use our LiquidityEdge platform to trade U.S. Treasuries. The Treasury products traded on the LiquidityEdge platform include On the Runs, Off the Runs and guaranteed spreads. Our 2020 trading volume in the U.S. Treasury market was \$3.9 trillion.

### ***U.S. Municipal Bond Market***

Municipal bonds are debt securities issued by states, cities, counties and other governmental entities in the U.S. to fund day-to-day obligations and to finance a wide variety of public projects, such as highways or water systems. Depending on the type of financing, payments of the principal and interest on a municipal bond may come from general revenues of the municipal issuer, specific tax receipts, revenues generated from a public project, payments from private entities or from a combination of sources. In addition to being issued for many different purposes, municipal securities are also issued in many different forms, such as fixed rate, zero coupon or variable rate bonds. The interest paid on municipal securities is typically exempt from federal income taxation and may be exempt from state income and other taxes as well. As of December 31, 2020, there were over 1.0 million different municipal bonds outstanding, in the total aggregate principal amount of more than \$3.9 trillion. The average daily trading volume of municipal bonds, excluding variable rate demand notes, as measured by the Municipal Securities Rulemaking Board ("MSRB") was \$5.7 billion for the year ended December 31, 2020 compared to \$5.3 billion and \$6.0 billion for the years ended December 31, 2019 and 2018, respectively.

Over 75 broker-dealer clients and over 300 institutional investor clients use our platforms to trade municipal bonds. We offer trading for both taxable and non-taxable municipal bonds. Our 2020 trading volume in the U.S. municipal bond market was \$14.0 billion.

### ***U.S. Agency Bond Market***

We define the U.S. agency bond market to include debt issued by a U.S. government-sponsored enterprise. Some prominent issuers of agency bonds are the Federal National Mortgage Association and Federal Home Loan Mortgage Corporation. The total amount of U.S. agency bonds outstanding was approximately \$1.8 trillion as of September 30, 2020 as reported by SIFMA. The average daily trading volume of U.S. agency bonds (excluding mortgage-backed securities) as measured by TRACE was \$5.4 billion for the year ended December 31, 2020 compared to \$4.3 billion and \$3.6 billion for the years ended December 31, 2019 and 2018, respectively.

Over 35 of our broker-dealer clients and more than 300 active institutional investor firms use our platforms to trade U.S. agency bonds. Trading in U.S. agency bonds uses many of the same features available in our U.S. high-grade corporate bond offering. Our 2020 trading volume in the U.S. agency bond market was \$49.4 billion.

### ***Credit Derivative Market***

Credit derivatives are contracts that allow market participants to obtain credit protection or assume credit exposure associated with a broad range of issuers of fixed-income securities and other debt obligations without ownership of the underlying security. Among the most significant requirements of the derivatives section of the Dodd-Frank Act are mandatory clearing of certain derivatives transactions ("swaps") through regulated central clearing organizations and mandatory trading of those swaps through either regulated exchanges or swap execution facilities ("SEFs"), in each case, subject to certain key exceptions. We operate a SEF pursuant to the U.S. Commodity Futures Trading Commission's ("CFTC") rules and we list certain credit derivatives for trading by U.S. persons and other participants on our SEF.

We offer a range of functionality for electronic trading of CFTC-regulated credit derivative instruments on our SEF in compliance with the CFTC's requirements. This includes an RFQ system that allows participants to send anonymous or disclosed RFQs, as well as an order book, which enables market participants to trade anonymously with all other market participants. Approximately 30 active market participants use our SEF to trade credit derivative indices. Our 2020 credit derivatives trading volume was \$45.1 billion.

## **Execution Benefits for Clients**

In addition to our platforms' strengths described above, we believe our platforms provide numerous additional benefits to our clients over both traditional fixed-income trading methods and competing electronic trading systems, including:

### ***Open Trading Functionality***

We offer Open Trading protocols for all of our key trading products, including corporate, municipal and emerging market bonds. Our Market List functionality provides our Open Trading participants with the ability to display requests for bids and offers anonymously to the entire MarketAxess trading community, thereby creating broad visibility of their inquiry among market participants and increasing the likelihood that the request results in a completed trade. Public Axes™ is an order book-style price discovery process that gives clients the ability to view anonymous or disclosed indications of interest from the inventory on our platform. For block-sized trades, clients may use our Private Axes® functionality, a protocol that allows participants to anonymously negotiate round lots (greater than \$1.0 million) and block trades to minimize information leakage. In 2019, we launched Live Markets, an order book that creates a single view of two-way, actionable prices for the most active corporate bonds, including newly issued debt, benchmark issues and news-driven securities.

### ***Transparent Pricing on a Broad Range of Securities***

The price discovery process includes the ability to view indicative prices from our broker-dealer clients' inventory available on our platform, access to real-time pricing information and analytical tools available on our BondTicker® service (including Composite+ predictive pricing, spread-to-Treasury data, search capabilities and independent third-party credit research), and the ability to request executable bids and offers simultaneously from all of our participating broker-dealer clients during the trading process on any debt security in our bond reference database. Institutional investors and broker-dealer clients can search bonds in inventory based on combinations of issuer, issue, rating, maturity, spread-to-Treasury, size and dealer providing the listing, in a fraction of the time it takes to do so manually. We believe that broad participation in client inquiries results in more trade matches and lower transaction costs.

### ***Highly Automated Trading Processes that Create Greater Trading Accuracy and Cost-Efficiency***

We believe that we provide improved efficiency by reducing the time and labor required to conduct broad product and price discovery. Single-security, multi-security (bid or offer lists) inquiries and portfolio trading (baskets of up to 1,500 securities) can be efficiently conducted with multiple broker-dealers or via Open Trading. Our auto-execution technology uses rules-based execution logic to reduce trading inefficiencies and human errors while allowing traders to focus on higher-value trades. In addition, our BondTicker® service eliminates the need for manually-intensive phone calls or e-mail communications to gather, sort and analyze information concerning historical transaction prices.

Our electronic trading platforms also include verification mechanisms at various stages of the execution process which result in greater accuracy in the processing, confirming and clearing of trades between institutional investor and broker-dealer clients, including real-time trade details, STP, account allocations, automated audit trails and trade detail matching. These verification mechanisms are designed to ensure that our institutional investor and broker-dealer clients are sending accurate trade messages by providing multiple opportunities to verify they are trading the correct bond, at the agreed-upon price and size. Our platforms are designed to assist our institutional investor clients in automating the transmittal of order tickets from the portfolio manager to the trader, and from the trader to back-office personnel. This automation provides more timely execution and a reduction in the likelihood of errors that can result from manual entry of information into different systems.

### ***Efficient Risk Monitoring and Compliance***

Institutional investors, broker-dealers and their regulators are increasingly focused on ensuring that best execution is achieved for fixed-income trades. Our electronic trading platforms offer both institutional investors and broker-dealers an automated audit trail for each stage in the trading cycle. This enables compliance personnel to review information relating to trades more easily and with greater reliability. Trade information, including all price responses, execution time, trade price and, if applicable, spread-to-Treasury, is stored securely and automatically on our electronic trading platform and is provided to clients as part of our automated post-trade messaging. This data represents a valuable source of information for our clients' compliance personnel. Importantly, we believe the automated audit trail, together with the competitive pricing and transaction cost analysis that is a feature of our electronic trading platforms, gives fiduciaries the ability to demonstrate that they have achieved best execution on behalf of their clients.

### ***Limited Information Leakage***

Our Open Trading protocols allow our institutional investor clients to maintain their anonymity from trade initiation through to settlement without limiting their number of potential trading counterparties. In addition, our Private Axes<sup>®</sup> protocol allows participants to negotiate bilaterally on an anonymous basis to minimize information leakage when transacting in larger trade sizes.

### ***Greater Sales Efficiency and More Efficient Inventory Management***

We offer our broker-dealer clients broad connectivity with our institutional investor clients. Through this connectivity, our broker-dealer clients are able to efficiently display their indications of interest to buy and sell various securities. We also enable broker-dealers to broaden their distribution by participating in transactions to which they otherwise may not have had access. In addition, the ability to post prices and electronically execute on straightforward trades enables bond sales professionals at broker-dealer firms to focus their efforts on higher value-added trades and more complex transactions.

The posting of inventory to, and the ability to respond to inquiries from, a broad pool of institutional investors, creates an increased opportunity for broker-dealers to identify demand for their inventory, particularly in less liquid securities. Broker-dealers also use Open Trading as a source of liquidity as they manage their risk exposure. As a result, we believe they can achieve enhanced bond inventory turnover by using our platforms, which may limit their credit exposure.

### **Post-Trade Reporting, Publishing and Matching Services**

In the European Union (“E.U.”) and the U.K., all firms regulated as “investment firms” under MiFID II are required to submit complete and accurate details of qualifying transactions to their national regulator no later than the close of the working day following the date of the transaction. This process is known as transaction reporting. Pursuant to the associated Markets in Financial Instruments Regulation (“MiFIR”), the number of fields and the complexity of the information that must be reported to regulators was significantly enhanced. Firms may either report directly to the regulator or use an entity that is licensed as an ARM, such as our subsidiaries in the U.K. and the Netherlands, to validate and submit such reports. Our multi-asset class ARM reporting solution allows our clients to report to 15 different European regulators. We have also collaborated with Equilend on a full front-to-back Securities Financing Transactions Regulation (“SFTR”) solution to support mutual clients with their SFTR reporting requirements.

In addition, under MiFIR, all regulated investment firms in the U.K. and the E.U. are required to comply with pre- and post-trade transparency requirements pursuant to which quotes and trades must be made public subject to a system of waivers and deferrals. Firms are required to utilize an APA, such as our APAs in the U.K. and the Netherlands, to comply with the post trade transparency requirement and, although optional, many firms also utilize a third-party provider to satisfy the pre trade transparency requirement. The MarketAxess transparency and APA trade reporting solutions are available through our Insight<sup>™</sup> platform, offering our clients a pre- and post-trade transparency solution, including APA trade reporting, quote publication, SI determination and instrument liquidity classification. We also offer a commodity position reporting service to assist firms in compliance with the commodity derivative position limit reporting requirements of MiFID II.

Trade matching enables counterparties to agree on the terms of a trade shortly after execution, reducing the risk of trade errors and fails during settlement. We provide a near real-time post-trade matching and exception management tool which covers a broad range of securities, including fixed-income and equities. By confirming all economic details within minutes of trade execution, we help our clients to mitigate their operational risk, improve STP and efficiency and address the complexities of MiFID II and the Central Securities Depositories Regulation.

MarketAxess has approximately 900 post-trade reporting and transparency clients, including broker-dealers, hedge funds and investment banks. We expect that our recent acquisition of Deutsche Börse’s regulatory reporting business will help us expand and improve our services across a broader European client base, predominantly in Germany, France and the Nordics regions.

### ***Information and Execution Management Services***

Traders are increasingly using data and machine-learning for pre-trade analytics, automated execution, transaction cost analysis and post-trade solutions. Our real-time pre-trade data and analytics are an additional value-added resource to our participants at each stage of the trading cycle, which further increases the attractiveness and use of our trading platforms. In the pre-trade period, our platforms assist our participants by providing them with real time and historical trade price information, intelligent Composite+ pricing, BondTicker<sup>®</sup>, liquidity and turnover analytics, bond reference data and trade order matching alerts. The information and analytical tools we provide to our clients help them make investment and trading decisions. Our electronic trading platforms allow institutional investors to compile, sort and use information to discover investment opportunities that might have been difficult or impossible to identify using a manual information-gathering process or other electronic services.

Our Composite+ pricing algorithm generates near real-time prices for approximately 30,000 corporate and sovereign bonds based on a variety of data inputs, including feeds from our trading platform, our post-trade service and TRACE. Composite+ is used by clients as a pre-trade reference price to enhance trading outcomes and transaction cost analysis. Composite+ can be combined with our auto-execution service, providing clients with an alert if a response is “off market”.

Axess All®, the first intra-day trade tape for the European fixed-income market, is sourced from over 39,000 bond transactions processed daily by our post-trade services business and includes aggregated volume and pricing for the most actively traded European fixed-income instruments. We also provide market participants with access to pricing, liquidity and volume data on over 60,000 unique fixed-income securities and securities reference data for approximately 71,000 fixed-income securities.

BondTicker® provides real-time TRACE data and enhances it with MarketAxess trade data and analytical tools in order to provide professional market participants with a comprehensive set of corporate bond price information with associated analytical tools that are not otherwise available. The data includes trade time and sales information, including execution prices, as well as MarketAxess-estimated spread-to-Treasuries, for trades disseminated by the TRACE system. The data also includes actual execution prices and spread-to-Treasury levels for U.S. high-grade corporate bond trades executed on the MarketAxess platform. BondTicker® is currently the source of corporate bond trading information for *The Wall Street Journal* in the U.S.

BondTicker® allows institutional investors to search for and sort bonds based upon specific criteria, such as volume, time/date of transaction, spread change, issuer or security. This search function allows institutional investors to compile information relating to potential securities trades in a fraction of the time that it takes to manually compile this information from disparate sources or other electronic databases, including direct TRACE feeds and European pricing information provided by our end-of-day pricing feed.

BondTicker® is integrated directly into the MarketAxess electronic trading platform and can be seamlessly accessed, either when viewing securities inventory or when launching an inquiry. BondTicker® is also available through the internet for non-trading professional market participants, including, among others, research analysts and rating agencies, who can log in and access the information via a browser-based interface.

We provide order and execution workflow solutions designed to meet the specific needs of the customer. LiquidityBridge® is our EMS service for dealers that allows users to manage and facilitate the complex liquidity flows across multiple trading platforms, including the MarketAxess system. LiquidityBridge® brings together real-time comparison and execution of bond prices across multiple sectors, allowing users to rapidly react to trading opportunities. Axess IQ is our order and execution workflow solution designed to meet the needs of wealth management and private banking community by improving liquidity discovery, execution efficiency and alpha generation for firms with large numbers of individual client orders.

### ***Straight-Through Processing and APIs***

Straight-through processing refers to the integration of systems and processes to automate the trade process from end-to-end — trade execution, confirmation and settlement — without the need for manual intervention. We provide our broker-dealer and institutional investor clients with a range of tools that facilitate straight-through processing, including order upload, easy-to-use online allocation tools and pre- and post-trade messaging features that enable our clients to communicate electronically between their front- and back-office systems. Our straight-through processing tools can be customized to meet specific needs of our clients and allow them to integrate their order, portfolio management and accounting systems in real time. We maintained over 1,700 STP connections as of December 31, 2020. In addition, many of our clients use our Application Programming Interface (“API”) services for pre-trade, trade negotiation and post-trade services to improve efficiency and reduce errors in processing.

### **Sales and Marketing**

We promote our products and services using a variety of direct and indirect sales and marketing strategies. Our sales force, which works closely with our product management and technology teams, is responsible for client acquisition activity and the management of ongoing client relationships to increase clients’ awareness, knowledge and usage of our trading platforms and post-trade solutions, new product launches, information and data services and pre- and post-trade services. Our sales team is also responsible for training and supporting new and existing clients on their use of our platforms and post-trade solutions, including how to optimize their trading performance and efficiency through our various trading protocols. We employ various strategies, including advertising, direct marketing, digital and social media, promotional mailings, and participation in industry conferences and media engagement, to increase awareness of our brand, our trading platforms and our other solutions. For example, we work with *The Wall Street Journal* to leverage BondTicker® data as the source of information for its weekly distressed debt tables.



## Competition

The global fixed-income securities industry generally, and the electronic financial services markets in which we engage in particular, are highly competitive, and we expect competition to intensify in the future. We compete with a broad range of market participants globally. Some of these market participants compete with us in a particular market, while select others compete against the entire spectrum of our platforms and solutions. We face five main areas of competition:

- *Telephone and Direct Electronic Communications* — We compete with bond trading business conducted over the telephone, e-mail or instant messaging directly between broker-dealers and their institutional investor clients. Institutional investors have historically purchased fixed-income securities by telephoning or otherwise communicating via e-mail or instant messaging with bond sales professionals at one or more broker-dealers and inquiring about the price and availability of individual bonds. This remains the manner in which the majority of corporate bond volumes are still traded between institutional investors and broker-dealers.
- *Other electronic trading platforms* — There are numerous other electronic trading platforms currently in existence, including several that have only commenced operations in the last few years. We compete with Tradeweb, Bloomberg, Intercontinental Exchange, Trumid and others in the credit and municipal markets; and Tradeweb, Bloomberg, Nasdaq (Nasdaq Fixed Income), CME Group (NEX Group), BGC Partners (Fenics UST) and others in the rates markets. In addition, some broker-dealers and institutional investors operate, or have invested in, proprietary electronic trading systems or information networks that enable institutional investors to trade directly with a broker-dealer, and/or with other institutional investors over an electronic medium. As we expand our business into new products, we will likely come into more direct competition with other electronic trading platforms or firms offering traditional services.
- *Exchanges* — In recent years, exchanges have pursued acquisitions that have put them in competition with us. For example, London Stock Exchange Group has recently acquired a significant stake in Tradeweb and Intercontinental Exchange acquired BondPoint and TMC Bonds, retail-focused platforms, and IDC, a provider of fixed income data, in an effort to expand its portfolio of fixed income products and services. CME Group and Nasdaq also operate platforms that compete with us. Exchanges also have data and analytics businesses, which increasingly put their offerings in direct competition with us.
- *Market data and information vendors* — Several large market data and information providers, such as Bloomberg, Refinitiv, Intercontinental Exchange, and IHS Markit currently have a data and analytics relationship with virtually every institutional firm. Some of these entities currently offer varying forms of electronic trading of fixed-income securities. Some of these entities have announced their intention to expand their electronic trading platforms or to develop new platforms. These entities are currently direct competitors to our information services business and already are or may in the future become direct competitors to our electronic trading platforms.
- *Other approved regulatory mechanisms* — We compete with other approved regulatory mechanisms in Europe that have ARM and APA designations, such as the London Stock Exchange's UnaVista and Tradeweb, to provide post-trade matching and regulatory transaction reporting and transparency services to European clients.

Competitors, including companies in which some of our clients have invested, have developed electronic trading platforms or have announced their intention to explore the development of electronic trading platforms that compete or will compete with us. Furthermore, some of our clients have made, and may in the future continue to make, investments in or enter into agreements with other businesses that directly or indirectly compete with us.

In general, we compete on the basis of a number of key factors, including:

- broad network of broker-dealer and institutional investor clients using our electronic trading platforms;
- liquidity provided by the participating broker-dealers and, to a growing extent, by other institutional investors;
- magnitude and frequency of price improvement;
- enhancing the quality and speed of execution;
- compliance benefits;
- total transaction costs;
- technology capabilities, including the reliability, security, and ease of use of our electronic trading platforms; and
- range of products, protocols and services offered.

We believe that our ability to grow volumes and revenues will largely depend on our performance with respect to these factors.

Our competitive position is also enhanced by the familiarity and integration of our clients with our electronic trading platforms and other systems. We have focused on the unique aspects of the markets we serve in the development of our platforms, working closely with our clients to provide a system that is suited to their needs.

Our broker-dealer clients have invested in building APIs with us for inventory contributions, electronic trading, government bond benchmark pricing and post-trade messaging. We believe that we have successfully built deep roots with our broker-dealer clients, increasing our level of service to them while at the same time increasing their commitment to use our services; however, the contractual obligations of such clients are non-exclusive. See the Risk Factor captioned “*We are dependent on our broker-dealer clients, who are not restricted from using their own proprietary or third-party platforms to transact with our institutional investor clients.*”

Furthermore, a significant number of our institutional investor clients have built interfaces to enable them to communicate electronically between our platforms and their order, portfolio management and accounting systems. We believe that this increases the reliance of these institutional investor clients on our services and creates significant competitive barriers to entry.

## **Technology**

The design and quality of our technology products are critical to our growth and our ability to execute our business strategy. Our electronic trading platforms have been designed with secure, scalable client-server architecture that makes broad use of distributed computing to achieve speed, reliability and fault tolerance. The platforms are built on industry-standard technologies and have been designed to handle many multiples of our current trading volume.

All critical server-side components, primarily our networks, application servers and databases, have backup equipment running in the event that the main equipment fails. This offers redundant system capacity designed to maximize uptime and minimize the potential for loss of transaction data in the event of an internal failure. We also seek to minimize the impact of external failures by automatically recovering connections in the event of a communications failure. The majority of our broker-dealer clients and a significant number of our institutional investor clients have redundant dedicated high-speed communication paths to our network in order to provide fast data transfer. Our security measures include industry-standard communications encryption.

We have designed our primary application with an easy-to-use, Windows-based interface. Our clients are able to access our electronic trading platforms through a secure, single sign-on. Clients are also able to execute transactions over our platforms directly from their order management systems. We provide users an automatic software update feature that does not require manual intervention.

We prioritize security throughout our platforms, operations and software development. We make architectural, design and implementation choices to structurally address security risks, such as logical and physical access controls, perimeter firewall protection and embedded security processes in our systems development lifecycle. Our cybersecurity program is based on the National Institute of Standards and Technology Cyber Security Framework (the “Framework”). The Framework consists of standards, guidelines and best practices to manage cybersecurity-related risks and promote the protection and resilience of critical infrastructure. Our Global Chief Information Security Officer leads a cybersecurity team in assessing, managing and reducing the relevant risks with a goal to assure critical operations and continuous delivery of service. We constantly monitor connectivity and suspect events are escalated to our global risk and management teams.

## **Intellectual Property**

We rely upon a combination of copyright, patent, trade secret and trademark laws, written agreements and common law to protect our proprietary technology, processes and other intellectual property. Our software code, elements of our electronic trading platforms, website and other proprietary materials are protected by copyright laws. We have been issued 13 patents covering significant trading protocols and other aspects of our trading system technology.

The written agreements upon which we rely to protect our proprietary technology, processes and intellectual property include agreements designed to protect our trade secrets. Examples of these written agreements include third party nondisclosure agreements, employee nondisclosure and inventions assignment agreements, and agreements with customers, contractors and strategic partners. Other written agreements upon which we rely to protect our proprietary technology, processes and intellectual property take many forms and contain provisions related to patent, copyright, trademark and trade secret rights.

We have registered the MarketAxess® name and logo for trademark in the U.S., Europe and in other parts of the world. We also have a number of other registered or pending trademarks and service marks globally, including Open Trading™, BondTicker®, and Now You’re In The Market™, among others. In addition, we own, or have filed applications for, the rights to trade names, copyrights, domain names and service marks that we use in the marketing of products and services to clients.



In addition to our efforts to register our intellectual property, we believe that factors such as the technological and creative skills of our personnel, new product and service developments, frequent enhancements and reliability with respect to our services are essential to establishing and maintaining a technology and market leadership position.

## **Government Regulation**

The securities industry and financial markets in the U.S. and elsewhere are subject to extensive regulation. In these jurisdictions, government regulators and self-regulatory organizations oversee the conduct of our business, and have broad powers to promulgate and interpret laws, rules and regulations that may serve to restrict or limit our business. As a matter of public policy, these regulators are charged with safeguarding the integrity of the securities and other financial markets and with protecting the interests of investors participating in those markets. Our active broker-dealer and regulated venue subsidiaries fall within the scope of their regulations. Rulemaking by regulators, including resulting market structure changes, has had an impact on our business by directly affecting our method of operation and, at times, our profitability.

As registered broker-dealers, trading venues and other types of regulated entities as described below, certain of our subsidiaries are subject to laws, rules and regulations (including the rules of self-regulatory organizations) that cover all aspects of their business, including manner of operation, system integrity, anti-money laundering and financial crimes, handling of material non-public information, safeguarding data, capital requirements, reporting, record retention, market access, licensing of employees and the conduct of officers, employees and other associated persons.

Regulation can impose, and has imposed, obligations on our regulated subsidiaries, including our broker-dealer subsidiaries. These increased obligations require the implementation and maintenance of internal practices, procedures and controls, which have increased our costs. Many of our regulators, as well as other governmental authorities, are empowered to bring enforcement actions and to conduct administrative proceedings, examinations, inspections and investigations, which may result in increased compliance costs, penalties, fines, enhanced oversight, increased financial and capital requirements, additional restrictions or limitations, censure, suspension or disqualification of the entity and/or its officers, employees or other associated persons, or other sanctions, such as disgorgement, restitution or the revocation or limitation of regulatory approvals. Whether or not resulting in adverse findings, regulatory proceedings, examinations, inspections and investigations can require substantial expenditures of time and money and can have an adverse impact on a firm's reputation, client relationships and profitability. From time to time, we and our associated persons have been and are subject to routine reviews, none of which to date have had a material adverse effect on our businesses, financial condition, results of operations or prospects. As a result of such reviews, and any future actions or reviews, we may be required to, among other things, amend certain internal structures and frameworks such as our operating procedures, systems and controls.

The regulatory environment in which we operate is subject to constant change. We are unable to predict how certain new laws and proposed rules and regulations will be implemented or in what form, or whether any changes to existing laws, rules and regulations, including the interpretation, implementation or enforcement thereof or a relaxation or amendment thereof, will occur in the future. We believe that uncertainty and potential delays around the final form of certain new rules and regulations may negatively impact our clients and trading volumes in certain markets in which we transact, although a relaxation of or the amendment of existing rules and requirements could potentially have a positive impact in certain markets. While we generally believe the net impact of the laws, rules and regulations may be positive for our business, it is possible that unintended consequences may materially adversely affect us in ways yet to be determined. See the Risk Factor captioned "*Our business and the trading businesses of many of our clients are subject to increasingly extensive government and other regulation, which may affect our trading volumes and increase our cost of doing business.*"

## ***U.S. Regulation***

In the U.S., the SEC is the federal governmental agency primarily responsible for the administration of the federal securities laws, including adopting and enforcing rules and regulations applicable to broker-dealers. One of our broker-dealers operates an alternative trading system ("ATS") subject to the SEC's Regulation ATS, which includes certain specific requirements and compliance responsibilities in addition to those faced by broker-dealers generally. Another of our broker-dealers operates an exempt ATS for U.S. Treasuries. Broker-dealers are also subject to regulation by state securities administrators in those states in which they conduct business or have registered to do business. We are also subject to the various anti-fraud provisions of the Securities Act of 1933 as amended (the "Securities Act"), the Securities Exchange Act of 1934, as amended (the "Exchange Act"), the Commodity Exchange Act, certain state securities laws and the rules and regulations promulgated thereunder. We also may be subject to vicarious and controlling person liability for the activities of our subsidiaries and our officers, employees and affiliated persons.

The CFTC is the federal agency primarily responsible for the administration of federal laws governing activities relating to futures, swaps and other derivatives, including the rules applicable to our SEF. Our SEF is subject to regulations that relate to trading and product requirements, governance and disciplinary requirements, operational capabilities, surveillance obligations and financial information and resource requirements, including the requirement that they maintain sufficient financial resources to cover operating costs for at least one year. Our SEF is subject to both scheduled and unscheduled examinations by the CFTC.

Much of the regulation of broker-dealers' operations in the United States has been delegated to self-regulatory organizations. These self-regulatory organizations adopt rules (which are generally subject to approval by the SEC) that govern the operations of broker-dealers and conduct periodic inspections and examinations of their operations. In the case of our U.S. broker-dealer subsidiaries, the principal self-regulatory organization is FINRA. Our U.S. broker-dealer subsidiaries are subject to both scheduled and unscheduled examinations by the SEC and FINRA. In addition, our broker-dealers' municipal securities-related activities are subject to the rules of the MSRB.

Title VII of the Dodd-Frank Act ("Title VII") amended the Commodity Exchange Act and the Exchange Act to establish a regulatory framework for swaps, subject to regulation by the CFTC, and security-based swaps, subject to regulation by the SEC. The CFTC has implemented the majority of its regulations in this area, most of which are in effect. The SEC has also finalized many of its security-based swap regulations, although a significant number are not yet in effect. Among other things, Title VII rules require certain standardized swaps to be cleared through a central clearinghouse and/or traded on a designated contract market or SEF, subject to various exceptions. Title VII also requires the registration and regulation of certain market participants, including SEFs.

The SEC is currently conducting a review of the regulatory framework for fixed income electronic trading platforms for the purpose of evaluating the potential regulatory gaps that may exist among such platforms, including ours, with respect to access to markets, system integrity, surveillance, and transparency, among other things. It is unknown at this time to what extent new legislation will be passed into law or whether pending or new regulatory proposals will be adopted or modified, or what effect such passage, adoption or modification will have, whether positive or negative, on our industry, our clients or us.

### ***Non-U.S. Regulation***

Outside of the United States, we are currently regulated by: the FCA in the U.K., De Nederlandsche Bank ("DNB") and the AFM in the Netherlands, the Securities & Futures Commission (the "SFC") of Hong Kong, the Monetary Authority of Singapore (the "MAS"), the Australian Securities and Investment Commission in Australia (the "ASIC"), the Investment Industry Regulatory Organization of Canada (the "IIROC") and provincial regulators in Canada, and the Securities and Exchange Commission and Central Bank in Brazil.

The FCA's strategic objective is to ensure that the relevant markets function well and its operational objectives are to protect consumers, to protect and enhance the integrity of the U.K. financial system and to promote effective competition in the interests of consumers. It has investigative and enforcement powers derived from the Financial Services and Markets Act 2000 ("FSMA") and subsequent legislation and regulations. Subject to the FSMA, individuals or companies that seek to acquire or increase their control in a firm that the FCA regulates is required to obtain prior approval from the FCA.

The legal framework in the Netherlands for financial undertakings is predominantly included in the Dutch Financial Supervision Act ("FSA"). The AFM, like DNB, is an autonomous administrative authority with independent responsibility for fulfilling its supervisory function. Pursuant to the FSA, the AFM authorizes investment firms. The AFM is legally responsible for business supervision. DNB is responsible for prudential supervision. The purpose of prudential supervision is to ensure the solidity of financial undertakings and to contribute to the stability of the financial sector. Holders of a qualifying holding (in short, shareholdings or voting rights of 10% or more) must apply to the DNB for a declaration of no objection and satisfy the applicable requirements of the FSA.

In January 2018, the E.U. implemented enhanced rules and regulations targeted at the financial services industry, including MiFID II and MiFIR. MiFID II and MiFIR introduced significant changes to the E.U. financial markets that were designed to facilitate more efficient markets and greater transparency for participants by: (i) enhancing pre- and post-trade transparency for fixed-income instruments, (ii) increasing and enhancing post-trade reporting obligations with a requirement to submit post-trade data to ARMs, (iii) improving technology synchronization and best execution and (iv) establishing a consolidated tape for trade data. Although MiFID II and MiFIR were intended to help improve the functioning of the E.U. single market by achieving a greater consistency of regulatory standards, MiFID II and MiFIR have caused us to expend significantly more compliance, business and technology resources, to incur additional operational costs and has created additional regulatory exposure for our trading and post-trade businesses. While we generally believe the net impact of the rules and regulations have been positive for our businesses, unintended consequences of the rules and regulations may adversely affect us in ways yet to be determined. In particular, the possible divergence of the U.K. from the E.U. in relation to the future development of MIFID II and MiFIR and other rules and regulations within the financial markets (such as the Central Securities Depository Regulation) may further increase the complexity, operational costs and compliance requirements of our business in the U.K. and E.U.

The securities industry and financial markets in the 27 member states of the E.U. is regulated by agencies in each member state. E.U. regulations provide for a cross-border “passporting regime”, which allows us to provide our services throughout the E.U. in reliance upon our authorization from any E.U. member state. Historically, we have utilized the FCA authorizations held by our U.K. regulated subsidiaries in order to provide regulated services to our European clients outside of the U.K. in reliance on this passport. However, the U.K. ceased to be a member of the E.U. on January 31, 2020, triggering a transition period in which the U.K. continued to observe applicable E.U. regulations through December 31, 2020 (commonly referred to as “Brexit”). In preparation for Brexit, we obtained AFM authorizations for our subsidiaries in the Netherlands in 2019 and we are able to provide regulated services to our clients within the E.U. in reliance on the cross-border services passport held by our Dutch subsidiaries. See the Risk Factor captioned “*The U.K. exit from the European Union could materially adversely impact our business, clients, financial condition, results of operations and prospects.*”

### **Capital Requirements**

Certain of our subsidiaries are subject to jurisdictional specific regulatory capital requirements, designed to maintain the general financial integrity and liquidity of a regulated entity. In general, they require that at least a minimum amount of a regulated entity’s assets be kept in relatively liquid form. Failure to maintain required minimum capital may subject a regulated subsidiary to a fine, requirement to cease conducting business, suspension, revocation of registration or expulsion by the applicable regulatory authorities, and ultimately could require the relevant entity’s liquidation.

In addition, as a result of our self-clearing activities, MarketAxess Corporation is required to finance certain transactions, maintain deposits with various clearing organizations and clearing broker-dealers and maintain a special reserve bank account for the benefit of customers pursuant to SEC Rule 15c3-3. These requirements can fluctuate based on trading activity, market volatility or other factors which may impact our liquidity or require us to use our capital resources.

### **Regulatory Status of MarketAxess Entities**

Our operations span jurisdictions across the Americas, Europe and Asia, and we operate through various regulated entities. The current regulatory status of many of our business entities is described below. We also provide our platforms in other countries pursuant to exemptions from registration under the laws of such countries.

#### **Americas**

MarketAxess Corporation is a SEC registered broker-dealer, a member of FINRA, the MSRB, and the Securities Investor Protection Corporation (“SIPC”). MarketAxess Corporation is registered as a clearing broker with FINRA.

LiquidityEdge is a SEC registered broker-dealer, a member of FINRA, the SIPC and is recognized as a Financial Market Supervisory Authority (“FINMA”) in Switzerland as a foreign trading venue.

MarketAxess SEF Corporation is a CFTC registered SEF.

MarketAxess Canada Company is registered as an Alternative Trading System with the Ontario Securities Commission (“OSC”), the Autorité des Marchés Financiers (“AMF”), the British Columbia Securities Commission (“BCSC”) and the Alberta Securities Commission (“ASC”) and is a member of IIROC.

MarketAxess Plataforma de Negociacao Ltda. is authorized through its parent (MarketAxess Holdings Inc.) by Comissão de Valores Mobiliários (“CVM”) and BACEN (Central Bank of Brazil) to provide a system in Brazil for the trading of fixed income securities by sophisticated institutional investors.

MarketAxess Colombia Corporation is registered with the Superintendence of Finance of Colombia (“SOFC”) as an Information System.

#### **U.K. and Europe**

MarketAxess Capital Limited is authorized and regulated by the FCA as a MiFID investment firm and acts as a matched principal counterparty for Open Trading transactions.

MarketAxess Europe Limited is authorized and regulated by the FCA to operate a multilateral trading facility (“MTF”), licensed by the Australian Securities and Investments Commission to have an Australian Markets License, recognized by FINMA as a foreign trading venue, licensed by BAFIN under the German Securities Trading Act, licensed by the Securities & Futures Commission of Hong Kong as an Automated Trading Service and licensed by the Monetary Authority of Singapore as a Recognized Market Operator. In addition, MarketAxess Europe Limited is recognized or licensed to provide its services in each of Italy, Denmark and Finland following Brexit.

MarketAxess NL B.V. is authorized and regulated by the AFM in the Netherlands as an MTF. MarketAxess NL B.V. may provide services throughout the E.U. 27 and EEA countries under the MiFID passport and is approved by FINMA to provide cross-border services into Switzerland as a foreign trading venue.

Trax NL B.V. is licensed in the Netherlands by the AFM as a Data Reporting Services Provider (“DRSP”), specifically to act as an ARM and APA. Trax NL B.V. may provide services throughout the E.U. 27 and EEA countries under the MiFID passport.

Xtrakter Limited is authorized and regulated by the FCA as a DRSP for ARM and APA services and as a service company.

### **Asia and Pacific**

MarketAxess Singapore Pte. Limited is approved by the Monetary Authority of Singapore as a Recognized Market Operator. Additionally, MarketAxess Singapore Pte. Limited is approved by FINMA in Switzerland as a foreign trading venue, by Hong Kong as an ATS, by Germany as a foreign market operator, and holds an Australian Markets License from ASIC.

### **Human Capital Resources**

As of December 31, 2020, we had 606 employees, 378 of whom were based in the U.S. and 228 of whom were based outside of the U.S., principally in the U.K. During fiscal year 2020, despite the COVID-19 pandemic (the “Pandemic”), we increased our number of employees by 79, or 15.0%, compared to an increase of 73, or 16.1%, in 2019. We did not discontinue any compensation or benefits programs in fiscal year 2020. None of our employees are represented by a labor union. We consider our relationships with our employees to be good and have not experienced any interruptions of operations due to labor disagreements.

#### ***Health and Safety***

In fiscal year 2020, the Pandemic had a significant impact on how we manage human capital. Nearly all of our workforce has worked remotely since March 2020, and we instituted safety protocols and procedures for those employees who chose to work on site on a part-time basis. Our experienced teams of employees adapted to the changes in our work environment and have managed our business successfully during this challenging time.

#### ***Diversity, Equity and Inclusion***

The diverse backgrounds, experiences and perspectives of our employees are one of our biggest strengths. We strive to make our workforce more diverse, inclusive and supportive of all. We embrace a culture and vision that supports and enhances our ability to recruit, develop and retain diverse talent at every level. In 2020, based on the results of an employee survey to further our diversity and inclusion efforts, our employees participated in an educational and developmental program designed to educate our employees about the Company’s diversity and inclusion initiatives and their importance to our success. As of December 31, 2020, our U.S. workforce was approximately 72% men and 28% women, and of our U.S. employees, our workforce was approximately 59% White, 28% Asian, 6% Hispanic or Latinx, 5% Black or African American, and 2% identified with another race or ethnicity.

To broaden our candidate pools, we use diverse hiring sources, including employee referrals, recruitment vendors, postings on diversity job boards and with diversity interest groups, and we attend various recruiting events. We have been able to further diversify our workforce through our summer intern and graduate hire programs, which represent a spectrum of schools, fields of study, interests and socio-economic backgrounds. In 2020, we expanded our partnerships with universities with larger racially diverse student bodies in both New York and London, and we specifically targeted affinity groups on campus in order to diversify our applicant pool.

#### ***Talent and Development***

Our talent management strategy is focused on attracting, developing and retaining top talent within the Company. In 2020, we conducted a global talent review to identify high-potential talent at all levels of seniority within the Company. This review is helping us build short- and long-term succession plans for our executive leadership team and other critical roles within the Company.

The Company also intends to use the talent review process to inform our increasing levels of investment in learning and development for our employees. Currently, we offer a customized management training program for new managers and an accelerated leadership program for our more seasoned leaders who we believe may assume broader or more complex roles within the Company in the future. We also offer a range of technical, markets-related, and soft-skills training courses on an ongoing basis to enable our employees to develop a broad spectrum of skills. We conduct regular engagement surveys of our employee base to better understand what is working well for our employees and identify areas that we can improve. In our latest survey focused on Diversity and Inclusion, 87% of our global employees participated.

### **Company Information**

MarketAxess was incorporated in Delaware in April 2000. Our internet website address is [www.marketaxess.com](http://www.marketaxess.com). Through our internet website, we will make available, free of charge, the following reports as soon as reasonably practicable after electronically filing them with, or furnishing them to, the SEC: our annual report on Form 10-K; our quarterly reports on Form 10-Q; our current reports on Form 8-K; and amendments to those reports filed or furnished pursuant to Section 13(a) of the Securities Exchange Act of 1934, as amended. Our Proxy Statements for our Annual Meetings are also available through our internet website. Our internet website and the information contained therein or connected thereto are not intended to be incorporated into this Annual Report on Form 10-K. You may also obtain copies of our reports without charge by writing to:

MarketAxess Holdings Inc.  
55 Hudson Yards  
New York, NY 10001  
Attn: Investor Relations

Our Board of Directors has standing Audit, Compensation and Talent, Nominating and Corporate Governance, Risk and Investment Committees. Each of these committees has a written charter approved by our Board of Directors and our Board of Directors has also adopted a set of Corporate Governance Guidelines. Copies of the committee charters and the Corporate Governance Guidelines are also posted on our website.

The SEC maintains an internet website that contains annual, quarterly and current reports, proxy and information statements and other information that issuers (including the Company) file electronically with the SEC. The SEC's internet website is [www.sec.gov](http://www.sec.gov).



## Item 1A. Risk Factors.

### Risks Related to Global Economic and Market Conditions

***Global economic, political and market factors beyond our control could reduce demand for our services, and our profitability and business could suffer.***

The global financial services business is, by its nature, risky and volatile and is directly affected by many national and international factors that are beyond our control. Any one of these factors may cause a substantial decline in the U.S. and/or global financial services markets, resulting in reduced trading volume. These events could have a material adverse effect on our business, financial condition and results of operations. These factors include:

- economic and political conditions in the United States, Europe and elsewhere;
- adverse market conditions, including unforeseen market closures or other disruptions in trading;
- broad trends in business and finance;
- consolidation or contraction in the number of market participants;
- actual or threatened acts of war or terrorism or other armed hostilities;
- actual or threatened trade war, including between the United States and China, or other governmental action related to tariffs, international trade agreements or trade policies;
- concerns over inflation and weakening consumer confidence levels;
- the availability of cash for investment by mutual funds, exchange traded funds and other wholesale and retail investors;
- the level and volatility of interest rates, the difference between the yields on corporate securities being traded and those on related benchmark securities and foreign currency exchange rates;
- the effect of monetary policy adopted by the Federal Reserve Board or foreign banking authorities, increased capital requirements for banks and other financial institutions, and other regulatory requirements and political impasses;
- credit availability and other liquidity concerns;
- concerns over credit default or bankruptcy of one or more sovereign nations or corporate entities; and
- legislative and regulatory changes, including changes to financial industry regulations and tax laws.

There have been significant declines in trading volumes in the financial markets generally in the past and there may be similar declines in trading volumes generally or across our platforms in particular in the future. Any one or more of the above factors may contribute to reduced trading volumes. Our revenues and profitability are likely to decline significantly during periods of stagnant economic conditions or low trading volume in the U.S. and global financial markets.

While we are expanding our businesses to new geographic areas, our business operations have historically been substantially located in the U.S. and the U.K. Due to the concentration of our operations in the U.S. and U.K. we are subject to greater regional risks than those of some of our competitors.

***Our business has been, and our results of operations and financial condition may be, impacted by the outbreak of, and global response to, the Pandemic and such impact could be materially adverse.***

The global spread of the novel coronavirus disease 2019 (COVID-19) has created significant volatility in the markets we serve and has increased uncertainty and economic disruption. The extent to which the Pandemic impacts our business, operations, and financial results is uncertain and will depend on numerous evolving factors that we may not be able to accurately predict, including:

- the duration and scope of the Pandemic;
- governmental and business actions taken in response to the Pandemic, and in response to economic disruption, and the impact of those actions on global economic activity;
- the impact of the economic and business disruptions on the trading needs of our clients and the resulting impact on their demand for our electronic trading platforms and solutions;
- adverse market conditions, including unforeseen market closures, disruptions in trading, significant declines in market and trading volumes, credit availability and other liquidity concerns;
- the increase in business failures, liquidations or bankruptcies among market participants that use our electronic trading platforms or to whom we are a trading counterparty; and
- our ability to provide our electronic trading platforms and other solutions, including as a result of our employees or our clients' employees working remotely and/or closures of offices and facilities.

In addition, the increase in our employees working remotely has amplified certain risks related to, among other things, the increased demand on our information technology resources and systems, the increased risk of phishing and other cybersecurity attacks as cybercriminals try to exploit the uncertainty surrounding the Pandemic, and the increased number of possible attacks, such as laptops and mobile devices (both of which are now being used in increased numbers), to be secured. Any failure to effectively manage these increased demands and risks, including to timely identify and appropriately respond to cyberattacks, may adversely affect our business.

As a result of the Pandemic, the global economy is currently experiencing a period of significant turmoil and we have experienced significant changes in our daily operations. See “Item 7. Management’s Discussion and Analysis of Financial Condition and Results of Operations—Critical Factors Affecting our Industry and our Company—Economic, Political and Market Factors.” Due to the uncertainty of the duration, scope and severity of the Pandemic, the uncertainty as to what governmental measures may yet be taken in response to the Pandemic and the unpredictable effect on our business, our employees and our clients, we are not able to reasonably estimate the extent of any potential future impact of the Pandemic on our financial condition or results of operations, but the impact could be material. Even after the Pandemic has subsided, we may continue to experience impacts to our business as a result of the Pandemic’s global economic impact. Further, our operating and financial results may be affected in a manner that is not presently known to us or in a manner that we currently do not consider to present significant risks to our operations given the unprecedented and continuously evolving nature of the Pandemic.

***The U.K. exit from the European Union could materially adversely impact our business, clients, financial condition, results of operations and prospects.***

Brexit has significantly affected the fiscal, monetary and regulatory landscape in both the U.K. and E.U., and could have a material impact on their economies and the growth of various industries in the future. In particular, the ecosystem of the E.U. financial services industry in which we operate, which prior to Brexit has been heavily centered in London, has become more decentralized. The exit of the U.K. has significantly impacted the business environment in which we and our clients operate, increased the complexity and cost of conducting business in both the E.U. and the U.K., and introduces significant new barriers to cross-border trading, including uncertainties with respect to the legal and regulatory requirements to which we and our clients are subject. We historically conducted business in Europe primarily through the “passporting rights” of our U.K. subsidiaries, which have been eliminated as a result of Brexit. Following Brexit, we now have new regulatory and operational costs and challenges associated with the operation of our regulated subsidiaries in the Netherlands, which we use to provide our trading platforms and certain post-trade services to our clients in the E.U. We could also be adversely affected by having to manage a less centralized customer and employee base.

Brexit is expected to lead to legal uncertainty and divergence between the U.K. and E.U. financial regulations, which may impact our ability to comply with the extensive government regulation to which we are subject. In addition, the cost and complexity of operating across increasingly divergent regulatory regimes could increase following Brexit. Brexit has also required us to make changes to the technology underlying our trading platforms and regulatory reporting systems in the U.K. and E.U., which has resulted in new regulatory and operational costs and challenges. Changes to U.K. immigration policy will also occur as a result of Brexit and our access to, and our ability to compete for and hire, skilled employees in both the U.K. and the E.U. is expected to become more constrained.

Although it is not possible at this point in time to predict fully the effects of the exit of the U.K. from the E.U., any of the foregoing factors could have a material adverse effect on our business, financial condition and results of operations.

## **Risks Related to Operating in the Electronic Fixed-Income Trading Markets**

***Decreases in trading volumes in the fixed-income markets generally or on our platforms would harm our business and profitability.***

We have experienced significant decreases in overall market volumes in the past and may experience similar decreases in market volumes in the future. Declines in the overall volume of fixed-income securities trading and in market liquidity generally, as well as declines in interest rate volatility, could result in lower revenues from commissions for trades executed on our electronic trading platforms and fees generated from related activities.



Likewise, decreases in our share of the segments of the fixed-income trading markets in which we operate, or shifts in trading volume to segments of clients which we have not penetrated, could result in lower trading volume on our platforms and, consequently, lower commissions and revenue. During periods of increased volatility in credit markets, the use of electronic trading platforms by market participants may decrease dramatically as institutional investors may seek to obtain additional information during the trade process through conversations with broker-dealers. In addition, during rapidly moving markets, broker-dealers are less likely to post prices electronically. Our market share of the fixed-income trading markets is also impacted by a variety of other factors, including the amount of new issuances of corporate debt, the level of bond fund inflows or outflows, the percentage of volumes comprised of Rule 144A transactions, the percentage of volumes comprised of larger trades known as “block trades”, the level of credit spreads and credit volatility and whether the prevalent market environment is an “offer wanted” or “bid wanted” environment.

A decline in overall market volumes, trading volumes on our platforms or our platforms’ market share for any reason would negatively affect our commission revenue and may have a material adverse effect on our business, financial condition and results of operations.

***The industry in which we operate is rapidly evolving. If we are unable to adapt our business effectively to keep pace with industry changes, we may not be able to compete effectively, which could have a material adverse effect on our business, financial condition and results of operations.***

The electronic financial services industry is characterized by rapidly changing and increasingly complex technologies and systems, changing and increasingly sophisticated client demands (including access to new technologies and markets), frequent technology and service introductions, evolving industry standards, changing regulatory requirements and new business models. If we are not able to keep pace with changing market conditions or client demands and if our competitors release new functionality or technology before we do, our existing platforms, solutions and technologies may become obsolete or our competitive position may be materially harmed, each of which could have a material adverse effect on our business, financial condition and results of operations. Operating in a rapidly evolving industry involves a high degree of risk and our future success depends in part on our ability to:

- attract and retain market participants on our platforms on a cost-effective basis;
- expand and enhance reliable and cost-effective product and service offerings for our clients;
- develop and introduce new features to, and new versions of, our electronic trading platforms;
- respond effectively to competitive pressures;
- respond effectively to the loss of any of our significant broker-dealer or institutional investor clients, including due to merger, consolidation, bankruptcy, liquidation or other cause (including, among other things, the collection of any amounts due from such clients);
- operate, support, expand and develop our operations, technology, website, software, communications and other systems;
- defend our trading platforms and other systems from cybersecurity threats; and
- respond to regulatory changes or demands.

If we are unsuccessful in addressing these risks or in executing our business strategy, our business, financial condition and results of operations may suffer.

***We face substantial competition that could reduce our market share and harm our financial performance.***

The fixed-income securities industry generally, and the electronic financial services markets in which we operate in particular, are highly competitive, and we expect competition to intensify in the future. Within our markets, we compete based on our ability to provide our clients with deep liquidity, a broad network of market participants, a wide range of products and protocols, and comprehensive pre-trade, trade and post-trade functionality, as well as the reliability, security and ease of use of our electronic platforms and solutions, among other factors. We primarily compete with other electronic trading platforms and trading businesses conducted directly between broker-dealers and their institutional investor clients over the telephone, email or instant messaging. Our current and prospective competitors are numerous and include:

- other multi-party electronic trading platforms;
- market data and information vendors;
- securities and futures exchanges;
- inter-dealer brokerage firms;
- technology, software, and information services or other companies that have existing commercial relationships with broker-dealers or institutional investors; and
- other approved regulatory reporting businesses.

Many of our current and potential competitors are more established and substantially larger than we are and have substantially greater market presence, as well as greater financial, technical, marketing and other resources. These competitors may aggressively reduce their pricing to enter into, or otherwise compete in, market segments in which we provide services, potentially subsidizing any losses with profits from trading in other fixed-income or equity securities or other business operations. In addition, many of our competitors offer a wider range of services, have broader name recognition and have larger customer bases than we do. Some of them may be able to respond more quickly to new or evolving opportunities, technologies and client requirements than we can and may be able to undertake more extensive promotional activities.

Competition in the markets in which we operate has intensified due to consolidation, which has resulted in increasingly large and sophisticated competitors. In recent years, our competitors have made acquisitions and/or entered into joint ventures and consortia to improve the competitiveness of their electronic trading offerings. If, as a result of industry consolidation, our competitors are able to offer lower cost and/or a wider range of trading venues and solutions, obtain more favorable terms from third-party providers or otherwise take actions that could increase their market share, our competitive position and therefore our business, financial condition and results of operations may be materially adversely affected.

Our operations also include the sale of pre- and post-trade services, analytics and market data. There is a high degree of competition among market data and information vendors in solutions for pre- and post-trade data, analytics and reporting, and such businesses may become more competitive in the future as new competitors emerge. Some of these companies are already in or may enter the electronic trading business. Accordingly, some of our competitors may be able to combine use of their electronic trading platforms with complementary access to market data and analytical tools and/or leverage relationships with existing clients to obtain additional business from such clients, which could preempt use of our platforms or solutions. For example, Bloomberg, Refinitiv and ICE own trading platforms that compete with ours and also have a data and analytics relationships with the vast majority of institutional, wholesale and retail market participants. If we are not able to compete successfully in this area in the future, our revenues could be adversely impacted and, as a result, our business, financial condition and results of operations would be materially adversely affected.

## **Risks Related to our Future Levels of Business, Profitability and Growth**

*Neither the sustainability of our current level of business nor any future growth can be assured. Even if we do experience growth, we cannot assure you that we will grow profitably.*

The success of our business strategy depends, in part, on our ability to maintain and expand the network of market participants that use our electronic trading platforms. Our business strategy also depends on increasing the use of our platforms by these participants for a wide range of fixed-income products and trade sizes. Individuals at broker-dealers or institutional investors may have conflicting interests, which may discourage their use of our platforms. We cannot assure you that the growth of electronic means of trading securities that we have experienced in recent years will continue.

Our growth may also be dependent on our ability to diversify our revenue base. We currently derive approximately 48.7% of our revenues from secondary trading in U.S. high-grade corporate bonds. Our long-term business strategy includes expanding our service offerings and increasing our revenues from other fixed-income products and other sources. We cannot assure you that our efforts will be successful or result in increased revenues or continued profitability. We have experienced significant growth in trading volumes, revenues and profitability in recent years. We cannot assure you that our business will continue to grow at a similar rate, if at all.

*We may enter into new fee plans, the impact of which may be difficult to evaluate; past trends in commissions are not necessarily indicative of future commissions.*

From time to time, we may introduce new fee plans for the market segments in which we operate. Any new fee plan may include different fee structures or provide volume incentives. We cannot assure you that any new fee plans will result in an increase in the volume of transactions executed over our platforms or that our revenues will increase as a result of the implementation of any such fee plans. It is possible that our broker-dealer or institutional investor clients could respond to a new fee plan by either reducing the amount of their business conducted on our platforms or terminating their contractual relationship with us, which could have an adverse impact on our fees and otherwise have a material adverse effect on our business, financial condition and results of operations.

In addition, under certain of our fee plans, our fees are designated in basis points in yield (and, as a result, are subject to fluctuation depending on the duration of the bond traded) or our fees vary based on trade size or maturity. We anticipate that our average fees per million may vary in the future due to changes in yield, years-to-maturity and nominal size of bonds traded on our platform. Consequently, past trends in commissions are not necessarily indicative of future commissions.

***As we enter new markets, we may not be able to successfully attract clients and adapt our technology and marketing strategy for use in those markets.***

Our strategy includes leveraging our electronic trading platforms to enter new markets, including new asset classes, products and geographies, including markets where we have little or no operating experience. We may have difficulties identifying and entering into new markets due to established competitors, lack of recognition of our brand and lack of acceptance of our platforms and solutions, as has occurred with certain of our initiatives in the past.

Expansion, particularly in new geographic markets, may require substantial expenditures and take considerable time. In particular, we may need to make additional investments in management and new personnel, infrastructure and compliance systems. Furthermore, our expansion efforts may divert management's attention or inefficiently utilize our resources. If we are not able to manage our expansion effectively, our expansion costs could increase at a faster rate than our revenues from these new markets. If we cannot successfully implement the necessary processes to support and manage our expansion, our business, financial condition and results of operations may suffer.

We cannot assure you that we will be able to successfully adapt our proprietary software and technology for use in any new markets. Even if we do adapt our products, services and technologies, we cannot assure you that we will be able to attract clients to our platforms and compete successfully in any such new markets. We cannot assure you that our marketing efforts or our pursuit of any of these opportunities will be successful. If these efforts are not successful, we may realize less than expected earnings, which in turn could result in a decrease in the market value of our common stock.

***We may face increasing economic and regulatory challenges in our growing international operations that we may not be able to meet in the future.***

We operate electronic trading platforms in Europe, Latin America and Asia and we may further expand our operations throughout these and other regions. We have invested significant resources in our foreign operations and the increasing globalization of our platforms and services. However, there are certain risks inherent in doing business in international markets, particularly in the financial services industry, which is heavily regulated in many jurisdictions. These risks include:

- difficulty in obtaining the necessary regulatory approvals for planned expansion, if at all, and the possibility that any approvals that are obtained may impose restrictions on the operation of our business;
- the inability to manage and coordinate the various regulatory requirements of multiple jurisdictions that are constantly evolving and subject to unexpected change;
- difficulties in staffing and managing foreign operations;
- less developed technological infrastructures and generally higher costs, which could result in lower client acceptance of our services or clients having difficulty accessing our trading platforms;
- fluctuations in exchange rates;
- reduced or no protection for intellectual property rights;
- seasonal reductions in business activity; and
- potentially adverse tax consequences.

Our international operations are also subject to the legal, economic and market risks associated with geopolitical uncertainties in other regions of the world, including but not limited to the risk of war, inter and intra national conflict, economic crises and terrorism.

In addition, we must comply with the laws, regulations and registration rules of foreign governments and regulatory bodies for each country in which we conduct business. For example, MiFID II was implemented by regulatory bodies in Europe in January 2018. We cannot predict the full extent to which any of these new regulations or future regulatory changes may impact our European business and operations, but they may cause us to expend significantly more compliance, business and technology resources, incur additional operational costs and create additional regulatory exposure.

Brexit could lead to further legal uncertainty and potentially divergent national laws and regulations as the U.K. determines which E.U. laws to replace or replicate. Our compliance with these changing laws and regulations may be costly and time-consuming and may have a material adverse effect on our clients' trading activities on our platforms. We cannot predict what future actions the regulatory bodies that supervise our business might take, or the impact that any such actions may have on our business.

Further, we may face unexpected challenges in our international operations due to global competitors, established local markets, and economic and political instability. Our inability to manage these risks effectively could adversely affect our business and limit our ability to expand our international operations, which could have a material adverse effect on our business, financial condition and results of operations.

## **Risks Related to our Customer Concentration**

***We are dependent on our broker-dealer clients, who are not restricted from using their own proprietary or third-party platforms to transact with our institutional investor clients.***

We rely on our broker-dealer clients to provide liquidity on our electronic trading platforms by posting prices for bonds in their inventory and responding to institutional investor client inquiries. The contractual obligations of our broker-dealer clients to us are minimal, non-exclusive and terminable by such clients. Our broker-dealer clients buy and sell fixed-income securities through traditional methods, including by telephone and e-mail messaging, and through other electronic trading platforms. Some of our broker-dealer clients have developed electronic trading networks that compete with us or have announced their intention to explore the development of such electronic trading networks, and many of our broker-dealer and institutional investor clients are involved in other ventures, including other electronic trading platforms or other distribution channels, as trading participants and/or as investors. These competing trading platforms may offer some features that we do not currently offer. Accordingly, there can be no assurance that such broker-dealers' primary commitments will not be to one of our competitors.

If bank-affiliated entities reduce their trading activity and that activity is not replaced by other market participants, the level of liquidity and pricing available on our trading platform would be negatively impacted, which could adversely affect our operating results. In the U.S., the Volcker Rule section of the Dodd-Frank Act bans proprietary trading by banks and their affiliates, which could adversely affect our bank-affiliated broker-dealer clients' ability to make markets in a variety of fixed-income securities. In addition, over the past several years, there has been significant consolidation among firms in the banking and financial services industries and several of our large broker-dealer clients have reduced their sales and trading businesses in fixed-income products. Further consolidation, instability, and layoffs in the financial services industry could result in a smaller client base and heightened competition, which may lower volumes.

Any reduction in the use of our electronic trading platforms by our broker-dealer clients could reduce the volume of trading on our platform, which could, in turn, reduce the use of our platforms by our institutional investor clients. The occurrence of any of the foregoing may have a material adverse effect on our business, financial condition and results of operations.

***We could lose significant sources of revenue and trading volume if we lose any of our significant institutional investor clients.***

We rely on our institutional investor clients to launch inquiries over our trading platforms and, increasingly, to provide liquidity through our Open Trading protocols. A limited number of such clients can account for a significant portion of our trading volume. The obligations of our institutional investor clients to us under our standard contractual agreements are minimal, non-exclusive and terminable by such clients. Our institutional investor clients also buy and sell fixed-income securities through traditional methods, including by telephone, e-mail and instant messaging, and through other electronic trading platforms.

There can be no assurance that we will be able to retain our major institutional investor clients or that such clients will continue to use our trading platform. The loss of a major institutional investor client or any reduction in the use of our electronic trading platforms by such clients could have a material adverse effect on our business, financial condition and results of operations.

## **Credit and Operational Risks**

***We are exposed to risks in connection with certain transactions in which we act as a matched principal intermediary.***

In connection with our anonymous trading protocols, we execute certain bond transactions between and among institutional investor and broker-dealer clients on a matched principal basis by serving as counterparty to both the buyer and the seller in trades which are then settled by us or through a third-party clearing broker. Settlement typically occurs within one to two trading days after the trade date. Cash settlement of the transaction occurs upon receipt or delivery of the underlying instrument that was traded.

We are exposed to credit and performance risks in our role as matched principal trading counterparty to the clients on our platforms, including the risk that counterparties that owe us money or securities will not perform their obligations. These parties may default on their obligations to us due to bankruptcy, lack of liquidity, operational failure or other reasons. Adverse movements in the prices of securities that are the subject of these transactions can increase our risk. In connection with Open Trading or other anonymous protocols, we expect that the number of transactions in which we act as a matched principal will increase.

In the process of executing matched principal transactions, miscommunications and other errors by our clients or us can arise that involve substantial risks of liability. These risks include, among others, potential liability from disputes over the terms of a trade, the settlement of the trade, or claims that we resolved an error trade dispute incorrectly or that a system malfunction or delay caused monetary loss to a client. In addition, because of the ease and speed with which trades can be executed on our electronic platforms, clients can lose substantial amounts by inadvertently entering trade instructions or by entering trade orders inaccurately. A significant error trade or a large number of error trades could result in participant dissatisfaction and a decline in participant willingness to trade on our platforms. Although we maintain error trade policies designed to protect our anonymous trading participants and enable us to manage the risks attendant in acting as a matched principal counterparty, depending on the cause, number and value of the trades that are the subject of an alleged error or dispute, such trades have the potential to have a material adverse effect on our financial condition and results of operations. In addition, if we are required to hold a securities position as a result of an error, there may also be financing costs or regulatory capital charges required to be taken by us.

We have policies, procedures and automated controls in place to identify and manage our credit risk, though there can be no assurance that they will effectively mitigate our credit risk exposure. Some of our risk management procedures are reliant upon the evaluation of information regarding the fixed-income markets, our clients or other relevant matters that are publicly available or otherwise acquired from third party sources. Such information may not be accurate, complete, up-to-date or properly assessed and interpreted by us. If our risk management procedures fail, our business, financial condition and results of operations may be adversely affected. Furthermore, our insurance policies are unlikely to provide coverage for such risks.

***Self-clearing exposes us to significant operational, liquidity, financing and regulatory risks.***

We began self-clearing substantially all of our bond transactions for our U.S. operations in the third quarter of 2020 and we may expand self-clearing to our foreign operations in the future. Self-clearing requires us to finance transactions and maintain margin deposits at clearing organizations. Self-clearing exposes our business to operational risks, including business and technology disruption; operational inefficiencies; liquidity, financing and regulatory risks; and potentially increased expenses. In connection with our conversion to self-clearing for our U.S. operations in 2020, we experienced operational inefficiencies and technology issues which, in combination with the capital and liquidity requirements that are imposed on all new self-clearing members, resulted in increased fail rates in the immediate period following the conversion. Although the initial conversion issues for our U.S. clearing operations have been resolved, in the future, we may encounter difficulties with self-clearing that lead to operating inefficiencies, technology issues, dissatisfaction amongst our client base, disruption in the infrastructure that supports the business, inadequate liquidity, increased margin requirements with clearing organizations and third-party settlement agents who provide financing with respect to transactions, reductions in available borrowing capacity and financial loss. Any such delay, disruption, expense or failure could adversely affect our ability to effect transactions and manage our exposure to risk. Moreover, any of these events could have a material adverse effect on our business, financial condition and operating results.

**Technology, IT Systems and Cybersecurity Risks**

***Rapid market or technological changes may render our technology obsolete or decrease the attractiveness of our products and services to our broker-dealer and institutional investor clients.***

We must continue to enhance and improve our electronic trading platforms. The electronic financial services industry is characterized by significant structural changes, increasingly complex systems and infrastructures, changes in clients' needs and preferences and new business models. If new industry standards and practices emerge and our competitors release new technology before us, our existing technology, systems and electronic trading platforms may become obsolete or our existing business may be harmed. Our future success will depend on our ability to:

- enhance our existing products and services;
- develop and/or license new products and technologies that address the increasingly sophisticated and varied needs of our broker-dealer and institutional investor clients and prospective clients;
- continue to attract highly-skilled technology personnel; and
- respond to technological advances and emerging industry standards and practices on a cost-effective and timely basis.

Developing our electronic trading platforms and other technology entails significant technical and business risks. We may use new technologies ineffectively or we may fail to adapt our electronic trading platforms, information databases and network infrastructure to broker-dealer or institutional investor client requirements or emerging industry standards. If we face material delays in introducing new services, products and enhancements, our broker-dealer and institutional investor clients may forego the use of our platforms and use those of our competitors.



Further, the adoption of new internet, networking, cloud, telecommunications or blockchain technologies may require us to devote substantial resources to modify and adapt our services. We cannot assure you that we will be able to successfully implement new technologies or adapt our proprietary technology and transaction-processing systems to client requirements or emerging industry standards. We cannot assure you that we will be able to respond in a timely manner to changing market conditions or client requirements.

***We depend on third-party suppliers for key products and services.***

We rely on a number of third parties to supply elements of our trading, information and other systems, as well as computers and other equipment, and related support and maintenance. We cannot assure you that any of these providers will be willing and able to continue to provide these services in an efficient, cost-effective manner, if at all, or that they will be able to adequately expand their services to meet our needs. If we are unable to make alternative arrangements for the supply of critical products or services in the event of a malfunction of a product or an interruption in or the cessation of service by an existing service provider, our business, financial condition and results of operations could be materially adversely affected.

In particular, we depend on third-party vendors for our bond reference databases, the clearing and settlement of our Open Trading transactions and to provide the technology underpinning our U.S. Treasury platform. We obtain essential reference data and information services from external sources, including data received from certain competitors, clients, self-regulatory organizations and other third-party data providers. Our reference data sources and information providers could increase the price for or withdraw their data or information services for a variety of reasons. Further, as has occurred in the past, our competitors could revise the current terms on which they provide us with data or information services or could cease providing us with data or information services altogether for a variety of reasons, including competition. Disruptions in the services provided by those third-parties to us, including as a result of their inability or unwillingness to continue to license products or provide technology services that are critical to the success of our business, could have a material adverse effect on our business, financial condition and results of operations.

We also rely, and expect in the future to continue to rely, on third parties for various computer and communications systems, such as telephone companies, online service providers, data processors, cloud computing and software and hardware vendors. Other third parties provide, for instance, our data center, telecommunications access lines and significant computer systems and software licensing, support and maintenance services. Any interruption in these or other third-party services or deterioration in their performance could impair the quality of our service. We cannot be certain of the financial viability of all of the third parties on which we rely.

We license software from third parties, much of which is integral to our electronic trading platform and our business. We also hire contractors to assist in the development, quality assurance testing and maintenance of our electronic trading platform and other systems. Continued access to these licensors and contractors on favorable contract terms or access to alternative software and information technology contractors is important to our operations. Adverse changes in any of these relationships has in the past had, and could in the future have, a material adverse effect on our business, financial condition and results of operations.

We attempt to negotiate favorable pricing, service, confidentiality and intellectual property ownership or licensing and other terms in our contracts with our third-party service providers. These contracts usually have multi-year terms. However, there is no guarantee that these contracts will not terminate and that we will be able to negotiate successor agreements or agreements with alternate service providers on competitive terms. Further, the existing agreements may bind us for a period of time to terms and technology that become obsolete as our industry and our competitors advance their own operations and use of technology.

***Our success depends on maintaining the integrity and capacity of our electronic trading platforms, systems and infrastructure.***

In order to be successful, we must provide reliable, secure, real-time access to our electronic trading platforms for our clients. If our trading platforms cannot cope, or expand to cope, with demand, or otherwise fail to perform, we could experience disruptions in service, slow delivery times and insufficient capacity. These consequences could result in our clients deciding to stop using or reduce their use of our platforms, which would have a material adverse effect on our business, financial condition and results of operations.

As our operations grow in both size and scope, we will need to continually improve and upgrade our electronic trading platforms and infrastructure to accommodate potential increases in order message volume and trading volume, the trading practices of new and existing clients, regulatory changes and the development of new and enhanced trading platform features, functionalities and ancillary products and services. The expansion of our electronic trading platforms and infrastructure has required, and will continue to require, substantial financial, operational and technical resources. These resources will typically need to be committed well in advance of any actual increase in trading volumes and order messages. We cannot assure you that our estimates of future trading volumes and order messages will be accurate or that our systems will always be able to accommodate actual trading volumes and order messages without failure or degradation of performance. Furthermore, we use new technologies to upgrade our established systems, and the development of these new technologies also entails technical, financial and business risks. We cannot assure you that we will successfully implement new technologies or adapt our existing electronic trading platforms, technology and systems to the requirements of our broker-dealer

and institutional investor clients or to emerging industry standards. The inability of our electronic trading platforms to accommodate increasing trading volume and order messages would also constrain our ability to expand our business.

***Systems failures, interruptions, delays in service, catastrophic events and resulting interruptions in the availability of our trading platforms could materially harm our business and reputation.***

Our business depends on the efficient and uninterrupted operation of our trading platforms, systems, networks and infrastructure. We cannot assure you that we, or our third-party providers, will not experience systems failures or business interruptions, as has occurred in the past. Our systems, networks, infrastructure and other operations, in particular our trading platforms, are vulnerable to impact or interruption from a wide variety of causes, including: irregular or heavy use of our trading platforms during peak trading times or at times of increased market volatility; power, internet or telecommunications failures; hardware failures or software errors; human error, acts of vandalism or sabotage; catastrophic events, such as natural disasters, extreme weather events or acts of war or terrorism; malicious cyberattacks or cyber incidents, such as unauthorized access, ransomware, loss or destruction of data, computer viruses or other malicious code; and the loss or failure of systems over which we have no control, such as loss of support services from critical third-party providers. In addition, we may also face significant increases in our use of power and data storage and may experience a shortage of capacity and/or increased costs associated with such usage.

Any failure of, or significant interruption, delay or disruption to, or security breaches affecting, our systems, networks or infrastructure has in the past, and could in the future, result in: disruption to our operations, including disruptions in service to our clients; slower response times; distribution of untimely or inaccurate market data to clients who rely on this data for their trades; delays in trade execution; incomplete or inaccurate accounting, recording or processing of trades; significant expense to repair, replace or remediate systems, networks or infrastructure; financial losses and liabilities to clients; loss of clients; legal or regulatory claims, proceedings, penalties or fines. Any system failure or significant interruption, delay or disruption in our operations, or decreases in the responsiveness of our platforms, could materially harm our reputation and business and lead our clients to decrease or cease their use of our platforms. We internally support and maintain many of our systems and networks, including those underlying our trading platforms; however, we may not have sufficient personnel to properly respond to all systems, networks or infrastructure problems. Our failure to monitor or maintain our systems, networks and infrastructure, including those maintained or supported by our third-party providers, or to find a replacement for defective or obsolete components within our systems, networks and infrastructure in a timely and cost-effective manner when necessary, would have a material adverse effect on our business, financial condition and results of operations. While we generally have disaster recovery and business continuity plans that utilize industry standards and best practices for much of our business, including redundant systems, networks, computer software and hardware and data centers to address interruption to our normal course of business, our systems, networks and infrastructure may not always be fully redundant and our disaster recovery and business continuity plans may not always be sufficient or effective. Similarly, although some contracts with our third-party providers, such as our hosting facility providers, require adequate disaster recovery or business continuity capabilities, we cannot be certain that these will be adequate or implemented properly. Our disaster recovery and business continuity plans are heavily reliant on the availability of the internet and mobile phone technology, so any disruption of those systems would likely affect our ability to recover promptly from a crisis situation. If we are unable to execute our disaster recovery and business continuity plans, or if our plans prove insufficient for a particular situation or take longer than expected to implement in a crisis situation, it could have a material adverse effect on our business, financial condition and results of operations, and our business interruption insurance may not adequately compensate us for losses that may occur.

***If we experience design defects, errors, failures or delays with our platforms, products or services, including our auto-execution technology and pricing algorithms, our business could suffer serious harm.***

Our platforms, products and services, including our auto-execution technology and pricing algorithms, may and have from time to time contained design defects and errors when first introduced or when new updates or enhancements are released. In our development of new protocols, platform features and updates and enhancements to our existing platforms, products and services, including our auto-execution technology and pricing algorithms, we may make a design error that causes the platform, protocol or feature to operate incorrectly or less effectively. Many of our protocols also rely on data and services provided by third-party providers over which we have limited or no control and may be provided to us with defects, errors or failures. Our clients may also use our platforms, products or services together with their own software, data or products from other companies. As a result, when problems occur, it might be difficult to identify the source of the problem.

If design defects, errors or failures are discovered in our current or future platforms or protocols, we may not be able to correct or work around them in a cost-effective or timely manner or at all. The existence of design defects, errors, failures or delays that are significant, or are perceived to be significant, could also result in rejection or delay in market acceptance of our platforms or protocols, damage to our reputation, loss of clients and related revenues, diversion of resources, product liability claims, regulatory actions or increases in costs, any of which could materially adversely affect our business, financial condition or results of operations.



***Malicious cyber-attacks and other adverse events affecting our operational systems or infrastructure, or those of third parties, could disrupt our businesses, result in the disclosure of confidential information, damage our reputation and cause losses or regulatory penalties.***

The operation of our electronic trading platforms relies on the secure processing, storage and transmission of a large amount of transactional data and other confidential sensitive data (including confidential client and personal information). Our computer systems, software and networks may be vulnerable to unauthorized access, loss or destruction of data (including confidential and personal customer information), unavailability or disruption of service, computer viruses, acts of vandalism, or other malicious code, cyber-attack and other adverse events that could have an adverse security impact. Despite the defensive measures we have taken, we are, and will continue to be, subject to attacks, which may come from external factors such as governments, organized crime, hackers, and other third parties such as infrastructure-support providers and application developers, or may originate internally from an employee or service provider to whom we have granted access to our computer systems. If our security measures are breached as a result of third-party action, employee error, malfeasance or otherwise, and, as a result, someone obtains unauthorized access to trading or other confidential or personal information, our reputation could be damaged, our business would suffer and we could incur material liability. Any such breach could compromise our networks and the information stored there could be accessed, publicly disclosed, lost or stolen. Because techniques used to obtain unauthorized access or to sabotage computer systems change frequently and generally are not recognized until launched against a target, we may be unable to anticipate these techniques or to implement adequate preventive measures.

Our business also depends on the efficient and uninterrupted operation of our platforms, systems, networks and infrastructure. Any failure of, or significant interruption, delay or disruption to, our systems, networks or infrastructure due to a cyber-attack could result in: disruption to our operations, including disruptions in service to our clients; slower response times; distribution of untimely or inaccurate market data to clients who rely on this data for their trades; delays in trade execution; incomplete or inaccurate accounting, recording or processing of trades; significant expense to repair, replace or remediate systems, networks or infrastructure; financial losses and liabilities to clients; loss of clients; legal or regulatory claims, proceedings, penalties or fines. We also face the risk of operational disruption, failure or capacity constraints of any of the third-party service providers that facilitate our business activities, including clients, clearing agents and trading system software, network or data providers. Such parties could also be the source of a cyber-attack on or breach of our operational systems, data or infrastructure. Any system failure or significant interruption, delay or disruption in our operations, or decreases in the responsiveness of our platforms, could materially harm our reputation and business and lead our clients to decrease or cease their use of our trading platform.

There have been an increasing number of cyber-attacks in recent years in various industries, including ours, and cybersecurity risk management has been the subject of increasing focus by our regulators. Our regulators in recent years have increased their examination and enforcement focus on matters relating to cybersecurity threats, including the assessment of firms' vulnerability to cyber-attacks. In particular, regulatory concerns have been raised about firms establishing effective cybersecurity governance and risk management policies, practices and procedures; protecting firm networks and information; identifying and addressing risks associated with clients, vendors, and other third parties; preventing and detecting unauthorized activities; adopting effective mitigation and business continuity plans to address the impact of cybersecurity breaches; and establishing protocols for reporting cybersecurity incidents. Any insurance that we may have that covers a specific cybersecurity incident would not protect us from the effects of adverse regulatory actions that may result from the incident or a finding that we had inadequate cybersecurity controls, including the reputational harm that could result from such regulatory actions.

Our remediation costs and lost revenues could be significant if we fall victim to a cyber-attack. If an actual, threatened or perceived breach of our security occurs, the market perception of the effectiveness of our security measures could be harmed and could cause our clients to reduce or stop their use of our electronic trading platforms. We may be required to expend significant resources to repair system damage, protect against the threat of future security breaches or to alleviate problems, including reputational harm, loss of clients and revenues and litigation, caused by any breaches. We may be found liable to our clients for any misappropriated confidential or personal information. Although we intend to continue to implement industry-standard security measures, we cannot assure you that those measures will be sufficient.

***Our actual or perceived failure to comply with privacy, data protection and information security laws, regulations, and obligations could harm our business.***

Data privacy is subject to frequently changing rules and regulations in countries where we do business. For example, the E.U. adopted the General Data Protection Regulations ("GDPR"), which as of May 2018 requires entities both in the European Economic Area and outside to comply with new regulations regarding the handling of personal data. Brexit has created additional uncertainty with regard to the regulation of data protection as the U.K now has its own data protection laws which are separate from the E.U. GDPR. We are also subject to certain U.S. federal and state laws governing the protection of personal data. These laws and regulations are increasing in complexity and number. In addition to the increased cost of compliance, our failure to successfully implement or comply with appropriate processes to adhere to the GDPR and other laws and regulations relating to personal data could result in substantial financial penalties for non-compliance, expose us to litigation risk and could result in significant liability, increased costs or cause our clients to lose trust in us, which could have an adverse effect on our reputation and business.

## Intellectual Property Risks

***We may not be able to protect our intellectual property rights or technology effectively, which would allow competitors to duplicate or replicate our electronic trading platforms or any of our other current or future functionalities, products or services. This could adversely affect our ability to compete.***

Intellectual property is critical to our success and ability to compete, and if we fail to protect our intellectual property rights adequately, our competitors might gain access to our technology. We rely primarily on a combination of patent, copyright, trademark and trade secret laws in the United States and other jurisdictions, as well as license agreements, third-party non-disclosure and other agreements and other contractual provisions and technical measures to protect our intellectual property rights. We attempt to negotiate beneficial intellectual property ownership provisions in our contracts and also require employees, consultants, advisors and collaborators to enter into confidentiality agreements in order to protect the confidentiality of our proprietary information. We have been issued 13 patents covering aspects of our technology and/or business, but can give no assurances that any such patents will protect our business and processes from competition or that any patents applied for in the future will be issued. Additionally, laws and our contractual terms may not be sufficient to protect our technology from use or theft by third parties. Furthermore, we cannot assure you that these protections will be adequate to prevent our competitors from independently developing technologies that are substantially equivalent or superior to our technology.

We may have legal or contractual rights that we could assert against illegal use of our intellectual property rights, but lawsuits claiming infringement or misappropriation are complex and expensive, and the outcome would not be certain. In addition, the laws of some countries in which we now or in the future provide our services may not protect software and intellectual property rights to the same extent as the laws of the United States. If our efforts to secure, protect and enforce our intellectual property rights are inadequate, or if any third party misappropriates, dilutes or infringes on our intellectual property, the value of our brand may be harmed, which could have a material adverse effect on our business.

***Defending against intellectual property infringement or other claims could be expensive and disruptive to our business. If we are found to infringe the proprietary rights of others, we could be required to redesign our technology, pay royalties or enter into license agreements with third parties.***

In the technology industry, there is frequent litigation based on allegations of infringement or other violations of intellectual property rights. As the number of participants in our market increases and the number of patents and other intellectual property registrations increases, the possibility of an intellectual property claim against us grows. Although we have never been the subject of a material intellectual property dispute, we cannot assure you that a third party will not assert in the future that our technology or the manner in which we operate our business violates its intellectual property rights. From time to time, in the ordinary course of our business, we may become subject to legal proceedings and claims relating to the intellectual property rights of others, and we expect that third parties may assert intellectual property claims against us, particularly as we expand the complexity and scope of our business, the number of electronic trading platforms increases and the functionality of these platforms further overlaps. Any claims, whether with or without merit, could be expensive and time-consuming to defend, make it more difficult to operate or prevent us from operating our business, or portions of our business, and result in significant monetary liability.

We cannot assure you that third parties will not assert infringement claims against us, as they have done in the past, with respect to our electronic trading platforms or any of our other current or future products or services or that any such assertion will not require us to cease providing such services or products, try to redesign our products or services, enter into royalty arrangements, if available, or engage in litigation that could be costly to us. Any of these events could have a material adverse effect on our business, financial condition and results of operations.

## Risks Related to Possible Transactions or Investments

***If we acquire or invest in other businesses, products or technologies, and are unable to integrate them with our business, our financial performance may be impaired or we may not realize the anticipated financial and strategic goals for any such transactions or any strategic alliances, partnerships or joint ventures, which we may enter into.***

From time to time, we may pursue acquisitions, which may not be completed or, if completed, may not be as beneficial to us as expected. We have made acquisitions in the past, including the purchases of LiquidityEdge in 2019 and the regulatory reporting business of Deutsche Borse in 2020. We also may consider potential divestitures of businesses from time to time. We routinely evaluate potential acquisition and divestiture candidates and engage in discussions and negotiations regarding potential acquisitions and divestitures on an ongoing basis; however, even if we execute a definitive agreement, there can be no assurance that we will consummate the transaction within the anticipated closing timeframe, or at all. Moreover, there is significant competition for acquisition and expansion opportunities in the electronic financial services industry.

If we do succeed in acquiring or investing in a business, product or technology, such acquisitions and investments may involve a number of risks, including:

- we may find that the acquired company or assets do not further our business strategy, or that we overpaid for the company or assets, or the economic conditions underlying our acquisition decision may change;
- we may have difficulty integrating the acquired technologies or products with our existing electronic trading platform, products and services;
- we may have difficulty integrating the operations and personnel of the acquired business, or retaining the key personnel of the acquired business;
- there may be client confusion if our services overlap with those of the acquired company and we may have difficulty retaining key customers, vendors and other business partners of the acquired business;
- our ongoing business and management's attention may be disrupted or diverted by transition or integration issues and the complexity of managing geographically or culturally diverse enterprises;
- we may enter into markets in which we have limited experience and where competitors hold stronger market positions;
- potential failure of the due diligence processes to identify significant problems, liabilities or other challenges of an acquired company or product; and
- exposure to litigation or other claims in connection with, or inheritance of claims or litigation risk as a result of, an acquisition, including but not limited to, claims from terminated employees, customers, former stockholders or other third parties.

These factors could have a material adverse effect on our business, financial condition, results of operations and cash flows, particularly in the case of a larger acquisition or multiple acquisitions in a short period of time. From time to time, we may enter into negotiations for acquisitions or investments that are not ultimately consummated. Such negotiations could result in significant diversion of management time, as well as out-of-pocket costs.

The consideration paid in connection with an investment or acquisition also affects our financial results. If we were to proceed with one or more significant acquisitions in which the consideration included cash, we could be required to use a substantial portion of our available cash to consummate any acquisition. To the extent we issue shares of capital stock or other rights to purchase capital stock, including options or other rights, existing stockholders may be diluted and earnings per share may decrease. In addition, acquisitions may result in the incurrence of debt, large one-time write-offs, such as of acquired in-process research and development costs, and restructuring charges.

We may also enter into strategic alliances, partnerships or joint ventures as a means to accelerate our entry into new markets, provide new solutions or enhance our existing capabilities. Entering into strategic alliances, partnerships and joint ventures entails risks, including: (i) difficulties in developing or expanding the business of newly formed alliances, partnerships and joint ventures; (ii) exercising influence over the activities of joint ventures in which we do not have a controlling interest; (iii) potential conflicts with or among our partners; (iv) the possibility that our partners could take action without our approval or prevent us from taking action; and (v) the possibility that our partners become bankrupt or otherwise lack the financial resources to meet their obligations.

## **Risks Related to Key Personnel and Employees**

***We are dependent on our management team, and the loss of any key member of this team may prevent us from implementing our business plan in a timely manner.***

Our success depends largely upon the continued services of our executive officers and other key personnel, particularly Richard M. McVey, Chief Executive Officer and Chairman of our Board of Directors. The terms of Mr. McVey's employment agreement with us do not require him to continue to work for us and allow him to terminate his employment at any time, subject to certain notice requirements and forfeiture of non-vested equity compensation awards. We do not maintain "key person" life insurance on any of our executive officers and other key personnel. Although we have invested in succession plans and we have short-term contingency plans in place, any loss or interruption of Mr. McVey's services or that of one or more of our other executive officers or key personnel for any reason, as well as any negative market or industry perception arising from such loss or interruption, could result in our inability to manage our operations effectively and/or pursue our business strategy.

*Because competition for our employees is intense, we may not be able to attract and retain the highly skilled employees we need to support our business.*

We strive to provide high-quality services that will allow us to establish and maintain long-term relationships with our clients. Our ability to provide these services and maintain these relationships, as well as our ability to execute our business plan generally, depends in large part upon our employees. We must attract and retain highly qualified personnel. Competition for these personnel is intense, especially for software engineers with extensive experience in designing and developing software and internet-related services, product managers and senior sales executives.

The market for qualified personnel has become increasingly competitive as an increasing number of existing and new competitors focus on the electronic trading of fixed income products. Many of these competitive ventures are interested in hiring our experienced technology personnel and our qualified sales staff. Additionally, highly innovative technology firms may offer attractive employment opportunities to our technology personnel. Many of these firms have greater resources than we have and are able to offer more lucrative compensation packages. We cannot assure you that we will be successful in our efforts to recruit and retain the required personnel. The failure to attract new personnel or to retain and motivate our current personnel may have a material adverse effect on our business, financial condition and results of operations.

## **Regulatory and Legal Risks**

*We operate in a highly regulated industry and we may face restrictions with respect to the way we conduct certain of our operations.*

Our business is subject to increasingly extensive governmental and other regulations. These regulations are designed to protect public interests generally rather than the interests of our stockholders. The SEC, FINRA, the CFTC and other agencies extensively regulate the United States financial services industry, including most of our operations in the United States. Much of our international operations are subject to similar regulations in their respective jurisdictions, including regulations overseen by the FCA in the U.K., the AFM in the Netherlands, the Swiss Financial Market Supervisory Authority in Switzerland, ASIC in Australia, the Monetary Authority of Singapore, the Hong Kong Securities and Futures Commission, the Investment Industry Regulatory Organization of Canada and provincial regulators in Canada, and the Securities and Exchange Commission and Central Bank in Brazil. In addition, our regulatory reporting business is registered as an ARM and APA with the FCA and the AFM.

As a matter of public policy, these regulatory bodies are responsible for safeguarding the integrity of the securities and other financial markets and protecting the interests of investors in those markets. These regulatory bodies have broad powers to promulgate and interpret, investigate and sanction non-compliance with their laws, rules and regulations. Most aspects of our broker-dealer and other licensed subsidiaries are highly regulated, including the way we deal with our clients; our capital requirements; our financial and regulatory reporting practices; required record-keeping and record retention procedures; the licensing of our employees; and the conduct of our directors, officers, employees and affiliates.

We cannot assure you that we and/or our directors, officers and employees will be able to fully comply with these laws, rules and regulations. If we fail to comply with any of these laws, rules or regulations, we may be subject to censure, fines, cease-and-desist orders, suspension of our business, suspensions of personnel or other sanctions, including revocation of our membership in FINRA and registration as a broker-dealer.

Certain of our regulated subsidiaries, including our registered broker-dealers and MTF, are subject to U.S. or foreign regulations which prohibit repayment of borrowings from us or our affiliates, paying cash dividends, making loans to us or our affiliates or otherwise entering into transactions that result in a significant reduction in regulatory net capital or financial resources, without prior notification to or approval from such subsidiary's principal regulator. MarketAxess SEF Corporation is registered with the CFTC as a SEF and is required, among other things, to maintain sufficient financial resources to cover operating costs for at least one year.

Our ability to operate our platforms in a jurisdiction is dependent on continued registration or authorization in that jurisdiction or the maintenance of a proper exemption from such registration or authorization. Our ability to comply with all applicable laws and rules is largely dependent on our compliance, credit approval, audit and reporting systems and procedures, as well as our ability to attract and retain qualified compliance, credit approval, audit and risk management personnel. Our systems and procedures may not be sufficiently effective to prevent a violation of all applicable rules and regulations. In addition, the growth and expansion of our business may create additional strain on our compliance systems, procedures and personnel and has resulted, and we expect will continue to result, in increased costs to maintain and improve these systems.

In addition, because our industry is heavily regulated, regulatory approval may be required in order to continue or expand our business activities and we may not be able to obtain the necessary regulatory approvals on a timely or cost-effective basis, or at all. Even if approvals are obtained, they may impose restrictions on our business or we may not be able to continue to comply with the terms of



the approvals or applicable regulations. The implementation of unfavorable regulations or unfavorable interpretations of existing regulations by courts or regulatory bodies could require us to incur significant compliance costs or cause the development or continuation of business activities in affected markets to become impractical. For a further description of the regulations which may limit our activities, see “Item 1. Business—Government Regulation.”

Some of our subsidiaries are subject to regulations regarding changes in control of their ownership. These regulations generally provide that regulatory approval must be obtained in connection with any transaction resulting in a change in control of the subsidiary, which may include changes in control of MarketAxess. As a result of these regulations, our future efforts to sell shares or raise additional capital may be delayed or prohibited in circumstances in which such a transaction would give rise to a change in control as defined by the applicable regulatory body.

***Our business and the trading businesses of many of our clients are subject to increasingly extensive government and other regulation, which may affect our trading volumes and increase our cost of doing business.***

Our business, and the business of many of our clients, is subject to extensive regulation. Governmental and regulatory authorities periodically review legislative and regulatory initiatives, and may promulgate new or revised, or adopt changes in the interpretation and enforcement of existing, rules and regulations at any time. The new administration elected in the 2020 U.S. presidential election may enact regulatory changes that may affect our business. Any such changes in laws, rules or regulations or in governmental policies could create additional regulatory exposure for our business, cause us to incur significant additional costs, require us to change or cease aspects of our business or restrict or limit our ability to grow our business, any of which could have a material adverse effect on our business, financial condition or results of operations. There have been in the past, and could be in the future, significant technological, operational and compliance costs associated with the obligations that derive from compliance with evolving laws, rules and regulations.

We cannot predict whether additional changes to the laws, rules and regulations that govern our business and operations, including changes to their interpretation, implementation or enforcement, will occur in the future or the extent to which any such changes will impact our business and operations. For example, the divergence of the U.K. from the E.U. in relation to the future development of MiFID II and other rules and regulations governing the financial markets (such as the Central Securities Depository Regulation) may adversely affect us in ways yet to be determined. In addition, we cannot predict how current proposals that have not yet been finalized and/or that remain subject to ongoing debate will be implemented or in what form. We believe that uncertainty and potential delays around the final form of such new laws, rules and regulations may negatively impact our clients and trading volumes in certain markets in which we transact. Additionally, unintended consequences of such new laws, rules and regulations may adversely affect our industry, our clients and us in ways yet to be determined. Any such legal and regulatory changes could affect us in substantial and unpredictable ways, and could have a material adverse effect on our business, financial condition and results of operations.

***The extensive regulation of our business means we have ongoing exposure to potentially significant costs and penalties.***

Our businesses are subject to regulation by governmental and self-regulatory organizations in the jurisdictions in which we operate around the world. Many of these regulators, including U.S. and non-U.S. government agencies and self-regulatory organizations, as well as state securities commissions in the U.S., are empowered to bring enforcement actions and to conduct administrative proceedings and examinations, inspections, and investigations, which may result in costs, penalties, fines, enhanced oversight, additional requirements, restrictions, or limitations, and censure, suspension, or expulsion. Self-regulatory organizations such as FINRA and the National Futures Association (“NFA”), along with statutory bodies such as the SEC, the CFTC, and the FCA, and other international regulators, require strict compliance with their rules and regulations.

Firms in the financial services industry have experienced increased scrutiny in recent years, and penalties, fines and other sanctions sought by regulatory authorities, including the SEC, the CFTC, FINRA, the NFA, state securities commissions and state attorney generals in the U.S., and the FCA in the U.K. and other international regulators, have increased accordingly. Accordingly, we face the risk of regulatory intervention, investigations and proceedings, any of which could involve extensive scrutiny of our activities and result in significant fines and liability. Any of these developments would require significant time and financial resources and could adversely affect our reputation, financial condition and operating results.

***We are subject to the risks of litigation and securities laws liability.***

Many aspects of our business, and the businesses of our clients, involve substantial risks of liability. Dissatisfied clients have in the past, and may in the future, make claims against us regarding quality of trade execution, improperly settled trades, resolution of trade error claims, system failures, failure to protect their confidential or personal information, mismanagement or even fraud. We may become subject to these claims as the result of delays, failures or malfunctions of our electronic trading platform and the services provided by us. We could incur significant legal expenses defending claims, even those without merit. An adverse resolution of any lawsuits or claims against us could have a material adverse effect on our business, financial condition and results of operations.

## Liquidity and Funding Risks

*We cannot predict our future capital needs or our ability to obtain additional financing if we need it.*

Our business is dependent upon the availability of adequate funding and regulatory capital under applicable regulatory requirements. The growth of our Open Trading protocols, in particular, is dependent on the willingness of our customers and counterparties to engage in transactions with us and any perceived issues with our capital levels or access to funding could have a material adverse effect on business. As a result of our self-clearing activities, we are also required to finance certain transactions, maintain deposits with various clearing organizations and clearing broker-dealers and maintain a special reserve bank account for the benefit of customers pursuant to SEC Rule 15c3-3. Although we believe that our available cash resources and borrowing capacity under our credit agreements are sufficient to meet our presently anticipated liquidity needs and capital expenditure requirements for at least the next 12 months, we may in the future need to raise additional funds to, among other things:

- support more rapid growth of our business;
- finance transactions and maintain margin deposits at clearing organizations;
- acquire complementary companies or technologies;
- increase the regulatory net capital necessary to support our operations; or
- respond to unanticipated or changing capital requirements.

In addition, our liquidity could be impaired due to circumstances that we may be unable to control, such as a general market disruption or an operational problem that affects our trading customers or counterparties, other third parties or us.

All or part of any debt financing could be pursuant to the terms of our credit agreements with third party lenders, which include restrictive covenants with respect to dividends, issuances of additional capital and other financial and operational matters related to our business.

In the future, we may not be able to obtain additional financing, if needed, in amounts or on terms acceptable to us, if at all. If sufficient funds are not available or are not available on terms acceptable to us, our ability to fund our expansion, finance transactions and maintain margin deposits at clearing organizations, take advantage of acquisition opportunities, develop or enhance our services or products, or otherwise respond to competitive pressures would be significantly limited. These limitations could have a material adverse effect on our business, financial condition and results of operations.

*Our credit agreement contains restrictive and financial covenants that could limit our operating flexibility, and we may incur additional debt in the future that may include similar or additional restrictions.*

We are party to a credit agreement that provides for revolving loans and letters of credit up to an aggregate of \$500.0 million. Subject to the satisfaction of certain specified conditions, we are permitted to upsize the borrowing capacity of the credit agreement by an additional \$250.0 million. Our credit agreement contains certain covenants that, among other things, may restrict our ability to take certain actions, even if we believe them to be in our best interests. These covenants may restrict or prohibit, among other things, our ability to:

- incur or guarantee additional debt;
- create or incur liens;
- change our line of business;
- sell or transfer assets;
- make certain investments or acquisitions;
- pay dividends or distributions, redeem or repurchase our equity or make certain other restricted payments;
- consummate a merger or consolidation;
- enter into certain swap, derivative or similar transactions;
- enter into certain transactions with affiliates; and
- incur restrictions on our ability to grant liens or, in the case of subsidiaries, pay dividends or other distributions.

We are also required by our credit agreement to maintain a maximum consolidated total net leverage ratio, a minimum regulatory net capital balance for certain subsidiaries and a minimum consolidated adjusted earnings before interest, taxes, depreciation, and amortization (“EBITDA”) level. We cannot assure you that we will be able to meet these requirements or satisfy these covenants in the future. A breach of any of these covenants or the inability to comply with the required financial covenants could result in an event of default under the credit agreement. If any such event of default occurs, the lenders under the credit agreement could elect to declare all amounts outstanding and accrued and unpaid interest under the credit agreement to be immediately due and payable, and could foreclose on the assets securing the credit agreement. The lenders would also have the right in these circumstances to terminate any commitments they have to provide further credit extensions. We may incur other indebtedness in the future that may contain financial or other covenants more restrictive than those applicable to the credit agreement.

**Item 1B. *Unresolved Staff Comments.***

None.

**Item 2. *Properties.***

Our corporate headquarters and principal U.S. office is located at 55 Hudson Yards in New York, New York, where we lease approximately 83,000 square feet under a lease expiring in August 2034. We also collectively lease approximately 39,000 square feet for our other office locations in the U.S., United Kingdom, Brazil, the Netherlands, Hong Kong and Singapore under various leases expiring between January 2021 and January 2027.

**Item 3. *Legal Proceedings.***

In the normal course of business, we and our subsidiaries included in the consolidated financial statements may be involved in various lawsuits, proceedings and regulatory examinations. We assess liabilities and contingencies in connection with outstanding legal proceedings, if any, utilizing the latest information available. Based on currently available information, the outcome of our outstanding matters is not expected to have a material adverse impact on our financial position. It is not presently possible to determine our ultimate exposure to these matters and there is no assurance that the resolution of the outstanding matters will not significantly exceed any reserves accrued by us. See Note 15 to the Consolidated Financial Statements for a discussion of our commitments and contingencies.

**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.

Our common stock trades on the NASDAQ Global Select Market under the symbol “MKTX”.

On February 16, 2021, the last reported closing price of our common stock on the NASDAQ Global Select Market was \$537.52.

#### Holders

There were 15 holders of record of our common stock as of February 16, 2021.

#### Recent Sales of Unregistered Securities

None.

#### Securities Authorized for Issuance Under Equity Compensation Plans

Please see the section entitled “Equity Compensation Plan Information” in Item 12.

#### Issuer Purchases of Equity Securities

During the three months ended December 31, 2020, we repurchased the following shares of common stock:

<u>Period</u>	<u>Total Number of Shares Purchased</u>	<u>Average Price Paid per Share</u>	<u>Total Number of Shares Purchased as Part of Publicly Announced Plans or Programs</u>	<u>Approximate Dollar Value of Shares That May Yet Be Purchased Under the Plans and Programs (In thousands)</u>
October 1, 2020 - October 31, 2020	2,289	\$ 485.60	1,400	\$ 71,794
November 1, 2020 - November 30, 2020	204	538.85	—	71,794
December 1, 2020 - December 31, 2020	14,182	555.52	—	71,794
	<u>16,675</u>	<u>\$ 545.71</u>	<u>1,400</u>	

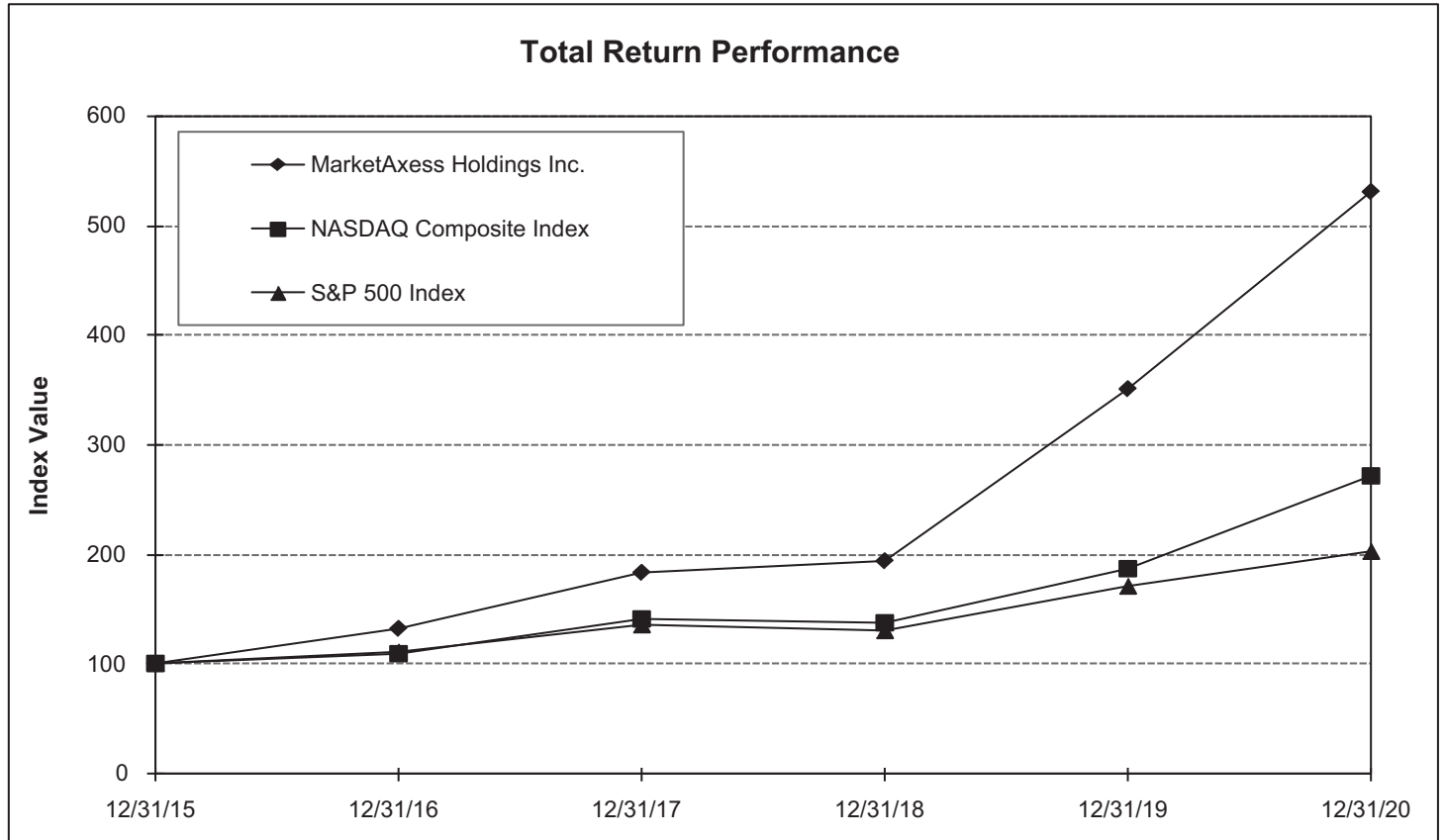
During the three months ended December 31, 2020, we repurchased 16,675 shares of common stock. The repurchases included 1,400 shares repurchased in connection with our share repurchase program and 15,275 shares surrendered by employees to us to satisfy the withholding tax obligations upon the exercise of stock options and vesting of restricted shares or stock units.

In January 2019, our Board of Directors authorized a new two-year share repurchase program for up to \$100.0 million of our common stock that commenced in April 2019 and expires in March 2021. In January 2021, our Board of Directors authorized a new share repurchase program for up to \$100.0 million. We expect repurchases under the new program to commence in April 2021 following the expiration of the current plan. Shares repurchased under each program will be held in treasury for future use.

## STOCK PERFORMANCE GRAPH

The following graph shows a comparison of the cumulative total return for (i) our common stock, (ii) the NASDAQ Composite Index and (iii) the S&P 500 Index for the past five years. The performance graph and related information shall not be deemed “soliciting material” or to be “filed” with the SEC, nor shall such information be incorporated by reference into any future filing under the Securities Act or the Exchange Act, except to the extent that we specifically incorporate it by reference into such filing.

The figures in this graph assume an initial investment of \$100 in our common stock and in each index on December 31, 2015, and that all dividends were reinvested. The returns illustrated below are based on historical results during the period indicated and should not be considered indicative of future stockholder returns.



**Item 6. Selected Financial Data.**

The selected statements of operations data for each of the years ended December 31, 2020, 2019 and 2018 and the selected balance sheet data as of December 31, 2020 and 2019 have been derived from our audited financial statements included elsewhere in this Annual Report on Form 10-K. The selected statements of operations data for the years ended December 31, 2017 and 2016, and the balance sheet data as of December 31, 2018, 2017 and 2016 have been derived from our audited financial statements not included in this Annual Report on Form 10-K.

	Year Ended December 31,				
	2020	2019	2018	2017	2016
(In thousands, except per share amounts)					
<b>Statements of Operations Data:</b>					
<b>Revenues</b>					
Commissions (1)	\$ 634,445	\$ 463,856	\$ 390,834	\$ 355,282	\$ 332,307
Information services (2)	34,341	30,730	28,227	25,806	23,269
Post-trade services (3)	19,460	15,763	15,346	11,090	10,812
Other (4)	879	1,003	1,158	1,244	1,342
<b>Total revenues</b>	<u>689,125</u>	<u>511,352</u>	<u>435,565</u>	<u>393,422</u>	<u>367,730</u>
<b>Expenses</b>					
Employee compensation and benefits	156,885	131,079	109,117	102,313	96,625
Depreciation and amortization	35,996	26,857	23,080	19,274	17,838
Technology and communications	34,092	26,792	23,866	20,048	17,275
Professional and consulting fees	32,304	25,534	21,521	19,367	17,175
Occupancy	13,425	11,639	14,176	6,125	4,681
Marketing and advertising	7,940	11,559	12,114	9,762	8,934
Clearing costs	21,058	11,314	7,754	5,797	6,060
General and administrative	12,697	15,696	11,353	11,121	9,157
<b>Total expenses</b>	<u>314,397</u>	<u>260,470</u>	<u>222,981</u>	<u>193,807</u>	<u>177,745</u>
<b>Operating income</b>	374,728	250,882	212,584	199,615	189,985
<b>Other income (expense)</b>					
Investment income	2,446	8,063	6,112	3,619	2,137
Interest expense	(1,142)	—	—	—	—
Other, net	(1,673)	(1,521)	(610)	(1,466)	(520)
<b>Total other income (expense)</b>	<u>(369)</u>	<u>6,542</u>	<u>5,502</u>	<u>2,153</u>	<u>1,617</u>
<b>Income before income taxes</b>	374,359	257,424	218,086	201,768	191,602
Provision for income taxes	74,982	52,522	45,234	53,679	65,430
<b>Net income</b>	<u>\$ 299,377</u>	<u>\$ 204,902</u>	<u>\$ 172,852</u>	<u>\$ 148,089</u>	<u>\$ 126,172</u>
Net income per common share					
Basic	\$ 8.01	\$ 5.53	\$ 4.68	\$ 4.02	\$ 3.42
Diluted	\$ 7.85	\$ 5.40	\$ 4.57	\$ 3.89	\$ 3.34
Cash dividends declared per common share					
	\$ 2.40	\$ 2.04	\$ 1.68	\$ 1.32	\$ 1.04
Weighted average number of shares of common stock outstanding:					
Basic	37,359	37,083	36,958	36,864	36,844
Diluted	38,144	37,956	37,855	38,038	37,738

	As of December 31,				
	2020	2019	2018	2017	2016
(In thousands)					
<b>Balance Sheet Data:</b>					
Cash, cash equivalents and investments	\$ 488,969	\$ 500,601	\$ 486,427	\$ 406,535	\$ 362,647
Deposits with clearing organizations and broker-dealers	97,043	4,130	1,137	1,176	1,117
Securities failed-to-deliver	180,979	—	—	—	—
Total assets	1,331,429	954,930	695,539	581,232	528,042
Securities failed-to-receive	131,701	—	—	—	—
Total equity	955,061	770,091	607,878	514,768	468,013

- (1) Commissions include monthly distribution fees and trading commissions.
- (2) Information services revenues include data licensed to our broker-dealer clients, institutional investor clients and data-only subscribers, as well as professional consulting services, technology software licenses and maintenance and support services.
- (3) Post-trade services revenues include revenue from regulatory transaction reporting, trade publication and trade matching services.
- (4) Other revenues consist primarily of telecommunications line charges to broker-dealer clients.

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

*You should read the following discussion and analysis of our financial condition and results of operations in conjunction with "Selected Financial Data" and our consolidated financial statements and related notes included elsewhere in this Annual Report on Form 10-K. In addition to historical information, this discussion and analysis contains forward-looking statements relating to future events and the future performance of MarketAxess that are based on our current expectations, assumptions, estimates and projections about us and our industry. These forward-looking statements involve risks and uncertainties. Our actual results and timing of various events could differ materially from those anticipated in such forward-looking statements as a result of a variety of factors, as more fully described in this section, in "Item 1A. Risk Factors", in "Cautionary Note Regarding Forward Looking Statements" and elsewhere in this Annual Report on Form 10-K. Except as may be required by applicable law, we undertake no obligation to update publicly any forward-looking statements for any reason, even if new information becomes available or other events occur in the future.*

*The following discussion includes a comparison of our Financial Results, Cash Flow Comparisons and Liquidity and Capital Resources for the years ended December 31, 2020 and 2019, respectively. A discussion of changes in our Financial Results and Cash Flow Comparisons from the year ended December 31, 2018 to December 31, 2019 may be found in Item 7, "Management's Discussion and Analysis of Financial Condition and Results of Operations," of Part II of our Annual Report on Form 10-K for the year ended December 31, 2019.*

### **Executive Overview**

MarketAxess operates leading electronic trading platforms delivering expanded liquidity opportunities, improved execution quality and significant cost savings across global fixed-income markets. Over 1,800 institutional investor and broker-dealer firms are active users of our patented trading technology, accessing global liquidity on our platforms in U.S. investment-grade bonds, U.S. high-yield bonds, U.S. Treasuries, emerging market debt, Eurobonds and other fixed income securities. Through our Open Trading™ protocols, we execute bond trades between and among institutional investor and broker-dealer clients in the leading all-to-all anonymous trading environment for corporate bonds. We also offer a number of trading-related products and services, including: Composite+™ pricing and other market data products to assist clients with trading decisions; auto-execution and other execution services for clients requiring specialized workflow solutions; connectivity solutions that facilitate straight-through processing; and technology services to optimize trading environments. In addition, we provide a range of pre- and post-trade services, including trade matching, trade publication, regulatory transaction reporting and market and reference data across a range of fixed-income and other products.

Our platforms' innovative technology solutions are designed to increase the number of potential trading counterparties and create a menu of solutions to address different trade sizes and bond liquidity characteristics. Our traditional request-for-quote ("RFQ") model allows our institutional investor clients to simultaneously request competing, executable bids or offers from our broker-dealer clients and execute trades with the broker-dealer of their choice from among those that choose to respond. Our Open Trading protocols complement our RFQ model by increasing the number of potential counterparties and improving liquidity by allowing all participants to interact anonymously in an all-to-all trading environment. Clients can use our auto-execution technology with both our traditional RFQ and Open Trading protocols, thereby using rules-based execution to connect to diverse sources of liquidity while reducing trading inefficiencies and human errors. Leveraging the benefits of our Open Trading marketplace, we launched Live Markets, an order book that will create a single view of two-way, actionable prices for the most active bonds, including newly issued debt, benchmark issues and news-driven securities. We expect that Open Trading participants will improve their trading capacity through the Live Markets order book, by more efficiently trading liquid names in larger size and accessing integrated real-time market data, such as Composite+.

We derive revenue from commissions for trades executed on our platform, information services, post-trade services and other revenues. Our expenses consist of employee compensation and benefits, depreciation and amortization, technology and communication expenses, professional and consulting fees, occupancy, marketing and advertising, clearing costs and other general and administrative expenses.

Our objective is to provide the leading global electronic trading platforms for fixed-income securities, connecting broker-dealers and institutional investors more easily and efficiently, while offering a broad array of trading information and technology services to market participants across the trading cycle. The key elements of our strategy are:

- to use our broad network of over 1,800 active institutional investor and broker-dealer participants to drive more clients to our platforms;
- to increase the secondary market liquidity on our trading platform by deploying innovative technology solutions, such as our Open Trading protocols, to increase the number of potential trading counterparties on our platforms and to address different trade sizes, bond liquidity characteristics and trading preferences;
- to continue to develop innovative next-generation technologies that will allow our clients to further automate and improve the performance of their trading desks through increased liquidity, enhanced trading efficiencies and the ability to identify trends within the bond market;
- to expand and strengthen our existing service, data and analytical offerings throughout the trading cycle so that we are more fully integrated into the workflow of our broker-dealer and institutional investor clients; and

- to increase and supplement our internal growth by entering into strategic alliances, or acquiring businesses or technologies that will enable us to enter new markets, provide new products or services, or otherwise enhance the value of our platform to our clients. We acquired Regulatory Services GmbH, the pan-European regulatory reporting business of Deutsche Börse Group in the fourth quarter of 2020.

## Critical Factors Affecting Our Industry and Our Company

### *Economic, Political and Market Factors*

The global fixed-income securities industry is risky and volatile and is directly affected by a number of economic, political and market factors that may result in declining trading volume. These factors could have a material adverse effect on our business, financial condition and results of operations. These factors include, among others, credit market conditions, the current interest rate environment, including the volatility of interest rates and investors' forecasts of future interest rates, economic and political conditions in the United States, Europe and elsewhere, and the consolidation or contraction of our broker-dealer and institutional investor clients.

During the first half of 2020, the global economy experienced a period of significant turmoil due to the outbreak of COVID-19 (the "Pandemic"). The Pandemic triggered a steep drop in economic activity that had an immediate and substantial impact on global credit markets. Credit yield spreads in U.S. corporate bonds, as measured by the Credit Suisse Liquid U.S. Corporate Index ("LUCI Index"), increased from 1.1% over U.S. Treasuries in December 2019 to 1.5% in March 2020 and credit spread volatility in U.S. corporate bonds, as measured by the LUCI Index, increased from 1.1% in December 2019 to 11.6% in March 2020. Drastic measures taken by central banks and governments helped restore confidence in the credit markets in the second half of 2020, which led to a tightening in credit spreads that helped stimulate record new issuance in U.S. investment-grade and high-yield corporate bonds. During the second half of 2020, the credit markets continued to improve as credit yield spreads and credit spread volatility tightened to pre-Pandemic levels. The volatile market conditions in 2020 led to an active credit trading environment as the average daily trading volume of U.S. high-grade and high-yield corporate bonds for the year ended December 31, 2020, as measured by Trade Reporting and Compliance Engine ("TRACE"), increased by 13.7% and 19.7%, respectively, compared to the year ended December 31, 2019.

As a result of the Pandemic, we have experienced significant changes in our daily operations. In mid-March 2020, we successfully implemented a global work from home mandate for all our employees and we were able to continue to provide our trading platforms and other services to our clients without interruption. In particular, we believe that Open Trading liquidity has been increasingly essential to the functioning of credit markets during the Pandemic, and MarketAxess has played a valuable role keeping our clients connected to the market as traders moved from their centralized trading floors to home offices. During the first several months of the Pandemic, we helped over 10,000 individual users connect to our trading platforms from their homes. Although we have reprioritized certain technology projects due to the changing needs of our clients in the current market environment, we have largely continued with our hiring plans, capital expenditures and the expansion of our trading platforms and services into new jurisdictions.

The global spread of the Pandemic is complex and rapidly-evolving, with authorities around the world implementing numerous measures to try to contain the coronavirus, such as travel bans and restrictions, social distancing, quarantines, stay at home orders, business limitations and, beginning in the fourth quarter of 2020, vaccinations. While we remain confident that we can continue to maintain business continuity, serve our clients and provide efficient execution in a virtual environment as necessary, we have re-opened our offices and have allowed our employees to return to work, on a voluntary basis, where local regulations permit. The re-opening of offices has created additional risks and operational challenges relating to maintaining the health and safety of our employees. We also anticipate that the full re-opening of our offices may require investments in the design, implementation and enforcement of new workplace safety protocols. These efforts may divert management attention, and the protocols may create logistical challenges for our employees which could adversely impact employee productivity and morale.

We believe that we have sufficient liquidity and flexibility to operate during any future disruptions caused by the Pandemic. While we have experienced increased market volumes and market share since the outbreak, we are cautious of the damaging impact the Pandemic may have on the global economy in the longer-term and the adverse impact that a global recession could have on liquidity and market volumes in the global credit markets.

We expect that current cash and investment balances, in combination with cash flows that are generated from operations and the ability to borrow under our Credit Agreement (as defined below), will be sufficient to meet our liquidity needs and planned capital expenditure requirements for at least the next twelve months. We have not altered our capital management programs and we have increased our dividend for the 12<sup>th</sup> consecutive year. We ended the quarter with a strong balance sheet, no borrowings under our Credit Agreement and with capital significantly in excess of our regulatory requirements.

In response to the current economic conditions, the Federal Reserve Bank of New York (the "FRBNY") established a Secondary Market Corporate Credit Facility (the "Facility") that lent money, on a recourse basis, to a special purpose vehicle ("SPV") that

purchased corporate debt issued by eligible issuers in the secondary market. The SPV purchased eligible individual corporate bonds in the secondary market, as well as eligible corporate bond portfolios in the form of exchange-traded funds (“ETFs”). In September 2020, we were designated by the FRBNY as an Eligible Seller for the Facility, which allowed us to provide end investors and broker-dealers the opportunity to use Open Trading to respond directly and anonymously to the FRBNY’s requests to purchase bonds.

### ***Competitive Landscape***

The global fixed-income securities industry generally, and the electronic financial services markets in which we engage in particular, are highly competitive, and we expect competition to intensify in the future. Sources of competition for us will continue to include, among others, bond trading conducted directly between broker-dealers and their institutional investor clients over the telephone or electronically and other multi-dealer or all-to-all trading platforms. Competitors, including companies in which some of our broker-dealer clients have invested, have developed or acquired electronic trading platforms or have announced their intention to explore the development of electronic platforms or information networks that may compete with us.

In general, we compete on the basis of a number of key factors, including, among others, the liquidity provided on our platform, the magnitude and frequency of price improvement enabled by our platform, total transaction costs and the quality and speed of execution. We believe that our ability to grow volumes and revenues will largely depend on our performance with respect to these factors.

Our competitive position is also enhanced by the familiarity and integration of our broker-dealer and institutional investor clients with our electronic trading platform and other systems. We have focused on the unique aspects of the credit markets we serve in the development of our platform, working closely with our clients to provide a system that is suited to their needs.

### ***Regulatory Environment***

Our business is subject to extensive regulations in the United States and internationally, which may expose us to significant regulatory risk and cause additional legal costs to ensure compliance. The existing legal framework that governs the financial markets is periodically reviewed and amended, resulting in the enactment and enforcement of new laws and regulations that apply to our business. For example, the new administration elected in the 2020 U.S. presidential election may enact regulatory changes that may affect our business. In 2017, the SEC established a Fixed Income Market Structure Advisory Committee in order to provide the SEC with diverse perspectives on the structure and operations of the U.S. fixed-income markets, as well as advice and recommendations on matters related to fixed-income market structure. The impact of any reform efforts on us and our operations remains uncertain.

In addition, the U.K. ceased to be a member of the E.U. on January 31, 2020, triggering a transition period in which the U.K. continued to observe applicable E.U. regulations through December 31, 2020 (commonly referred to as “Brexit”). In preparation for Brexit, we obtained authorizations from the Netherlands Authority for the Financial Markets for our subsidiaries in the Netherlands in 2019. Following Brexit, we now provide regulated services to our clients within the E.U. in reliance on the cross-border services passport held by our Dutch subsidiaries. Brexit has led to legal uncertainty and potentially divergent national laws and regulations as the U.K. determines which E.U. laws to replace or replicate, which may impact our ability to comply with the extensive government regulation to which we are subject. In addition, the cost and complexity of operating across increasingly divergent regulatory regimes is likely to increase following Brexit.

Compliance with regulations may require us to dedicate additional financial and operational resources, which may adversely affect our profitability. However, we believe new regulations may also increase demand for our platforms and we believe we are well positioned to benefit from those regulatory changes that cause market participants to seek electronic platforms that meet the various regulatory requirements and help them comply with their regulatory obligations.

On August 10, 2020, MarketAxess Corporation, our broker-dealer subsidiary, converted to self-clearing for the U.S bond trades to which MarketAxess Corporation is a counterparty via its Open Trading functionality. Previously, these bond transactions were settled through a third-party clearing broker. As a result of this conversion, MarketAxess Corporation is required to segregate funds in a special reserve bank account for the benefit of customers pursuant to Rule 15c3-3 of the Securities Exchange Act of 1934.



## ***Technology Environment***

We must continue to enhance and improve our electronic trading platform. The electronic financial services industry is characterized by increasingly complex systems and infrastructures and new business models. Our future success will depend on our ability to enhance our existing products and services, develop and/or license new products and technologies that address the increasingly sophisticated and varied needs of our existing and prospective broker-dealer and institutional investor clients and respond to technological advances and emerging industry standards and practices on a cost-effective and timely basis. We plan to continue to focus on technology infrastructure initiatives and continually improve our platforms to further enhance our leading market position. We expect that our transition to agile software development processes will help us continue to be a market leader in developing the technology solutions for our clients' trading needs.

We experience cyber-attacks and attempted security breaches. Cybersecurity incidents could impact revenue and operating income and increase costs. We therefore continue to make investments, which may result in increased costs, to strengthen our cybersecurity measures. See also Item 1A. *Risk Factors*, "Technology, IT Systems and Cybersecurity Risks - Our actual or perceived failure to comply with privacy, data protection and information security laws, regulations, and obligations could harm our business."

## **Trends in Our Business**

The majority of our revenue is derived from commissions for transactions executed on our platforms between and among our institutional investor and broker-dealer clients and monthly distribution fees. We believe that there are five key variables that impact the notional value of such transactions on our platforms and the amount of commissions and distribution fees earned by us:

- the number of participants on our platforms and their willingness to originate transactions through the platforms;
- the frequency and competitiveness of the price responses by participants on our platforms;
- the number of markets that are available for our clients to trade on our platforms;
- the overall level of activity in these markets; and
- the level of commissions that we collect for trades executed through the platforms.

We believe that overall corporate bond market trading volume is affected by various factors including the absolute levels of interest rates, the direction of interest rate movements, the level of new issues of corporate bonds and the volatility of corporate bond spreads versus U.S. Treasury securities. Because a significant percentage of our revenue is tied directly to the volume of securities traded on our platforms, it is likely that a general decline in trading volumes, regardless of the cause of such decline, would reduce our revenues and have a significant negative impact on profitability.

## ***Commission Revenue***

Commissions are recognized on a trade date basis and generally calculated as a percentage of the notional dollar volume of bonds traded on our platforms and vary based on the type, size, yield and maturity of the bond traded and individual client incentives. Bonds that are more actively traded or that have shorter maturities are generally charged lower commissions, while bonds that are less actively traded or that have longer maturities generally command higher commissions.

For Open Trading trades that we execute between and among institutional investor and broker-dealer clients on a matched principal basis by serving as counterparty to both the buyer and the seller, we earn our commission through the difference in price between the two trades. For U.S. Treasury matched principal trades, commissions are invoiced and recorded on a monthly basis.

*U.S. High-Grade Corporate Bond Commissions.* Our U.S. high-grade corporate bond fee plans generally incorporate variable transaction fees and fixed distribution fees billed to our broker-dealer clients on a monthly basis. Certain dealers participate in fee programs that do not contain monthly distribution fees and instead incorporate additional per transaction execution fees and minimum monthly fee commitments. Under these fee plans, we electronically add the transaction fee to the spread quoted by the broker-dealer client. The U.S. high-grade transaction fee is generally designated in basis points in yield and, as a result, is subject to fluctuation depending on the duration of the bond traded. The average U.S. high-grade fees per million may vary in the future due to changes in yield, years-to-maturity and nominal size of bonds traded on our platforms. Distribution fees include any unused monthly fee commitments under our variable fee plans.

*Other Credit Commissions.* Other credit includes Eurobonds, emerging markets bonds, high-yield bonds, municipal bonds and leveraged loans. Commissions for other credit products generally vary based on the type of the instrument traded using standard fee schedules. Our high-yield fee plan structure is similar to our U.S. high-grade fee plans. Certain dealers participate in a high-yield fee plan that incorporates a variable transaction fee and fixed distribution fee, while other dealers participate in a plan that does not contain monthly distribution fees and instead incorporates additional per transaction execution fees and minimum monthly fee commitments. The average other credit fees per million may vary in the future due to changes in product mix or trading protocols.

*Rates Commissions.* Rates includes U.S. Treasury, U.S. agency, European government bonds and credit derivatives. Commissions for rates products generally vary based on the type of the instrument traded. U.S. Treasury fee plans are typically volume tiered and can vary based on the trading protocol. The average rates fee per million may vary in the future due to changes in product mix or trading protocols.

We anticipate that average fees per million may change in the future. Consequently, past trends in commissions are not necessarily indicative of future commissions.

### ***Information Services***

We generate revenue from data licensed to our broker-dealer clients, institutional investor clients and data-only subscribers; professional and consulting services; technology software licenses; and maintenance and support services. These revenues are either for subscription-based services transferred over time, and may be net of volume-based discounts, or one-time services. Revenues for services transferred over time are recognized ratably over the contract period while revenues for services transferred at a point in time are recognized in the period the services are provided. Customers are generally billed monthly, quarterly, or annually; revenues billed in advance are deferred and recognized ratably over the contract period.

### ***Post-trade Services***

We generate revenue from regulatory transaction reporting, trade publication and trade matching services. Customers are generally billed monthly in arrears and revenue is recognized in the period that the transactions are processed. Revenues billed in advance are deferred and recognized ratably over the contract period. We also generate one-time implementation fees for onboarding clients which are invoiced and recognized in the period the implementation is complete.

### ***Other Revenue***

Other revenue includes revenue generated from telecommunications line charges to broker-dealer clients.

### ***Expenses***

In the normal course of business, we incur the following expenses:

*Employee Compensation and Benefits.* Employee compensation and benefits is our most significant expense and includes employee salaries, stock-based compensation costs, other incentive compensation, employee benefits and payroll taxes.

*Depreciation and Amortization.* We depreciate our computer hardware and related software, office hardware and furniture and fixtures and amortize our capitalized software development costs on a straight-line basis over three to seven years. We amortize leasehold improvements on a straight-line basis over the lesser of the life of the improvement or the remaining term of the lease. Intangible assets with definite lives, including purchased technologies, customer relationships and other intangible assets, are amortized over their estimated useful lives, which range from one to 15 years, using either a straight-line or accelerated amortization method based on the pattern of economic benefit that we expect to realize from such assets. Intangible assets are assessed for impairment when events or circumstances indicate a possible impairment.

*Technology and Communications.* Technology and communications expense consists primarily of costs relating to maintenance on software and hardware, our internal network connections, data center hosting costs, data feeds provided by outside vendors or service providers and US treasuries licensing fees. The majority of our broker-dealer clients have dedicated high-speed communication lines to our network in order to provide fast data transfer. We charge our broker-dealer clients a monthly fee for these connections, which is recovered against the relevant expenses we incur.

*Professional and Consulting Fees.* Professional and consulting fees consist primarily of accounting fees, legal fees and fees paid to information technology and other consultants for services provided for the maintenance of our trading platforms, information and post-trade services products and other services.

*Occupancy.* Occupancy costs consist primarily of office and equipment rent, utilities and commercial rent tax.

*Marketing and Advertising.* Marketing and advertising expense consists primarily of print and other advertising expenses we incur to promote our products and services. This expense also includes costs associated with attending or exhibiting at industry-sponsored seminars, conferences and conventions, and travel and entertainment expenses incurred by our sales force to promote our trading platforms, information services and post-trade services.

*Clearing Costs.* Clearing costs consist of fees that we are charged by third-party clearing brokers and depositories for the clearing and settlement of matched principal trades, regulatory reporting fees and variable transaction fees assessed by the provider of our third-party middle office system.

*General and Administrative.* General and administrative expense consists primarily of general travel and entertainment, board of directors' expenses, charitable contributions, provision for doubtful accounts and various state franchise and U.K. value-added taxes.

Expenses may grow in the future, notably in employee compensation and benefits, as we increase headcount to support investment in new products, operational support and geographic expansion, depreciation and amortization due to increased investment in new products and enhancements to our trading platforms, and technology and communication costs. Expenses may also grow due to acquisitions.

### ***Other Income (Expense)***

*Investment Income.* Investment income consists of income earned on our investments.

*Interest Expense.* Interest expense consists of financing charges incurred on short-term borrowings.

*Other, Net.* Other, net consists of unrealized gains or losses on trading security investments, realized gains or losses on investments, foreign currency transaction gains or losses, investment advisory fees, credit facility administrative fees and other miscellaneous revenues and expenses.

### **Critical Accounting Policies and Estimates**

This Management's Discussion and Analysis of Financial Condition and Results of Operations discusses our Consolidated Financial Statements, which have been prepared in accordance with accounting principles generally accepted in the United States, also referred to as U.S. GAAP. The preparation of these financial statements requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and the reported amounts of income and expenses during the reporting periods. We base our estimates and judgments on historical experience and on various other factors that we believe are reasonable under the circumstances. Actual results may differ from these estimates under varying assumptions or conditions. See Note 2 to the Consolidated Financial Statements, for a summary of the significant accounting policies and methods used in the preparation of our Consolidated Financial Statements.

### **Recent Accounting Pronouncements**

See Note 2 to the Consolidated Financial Statements for a discussion of recent accounting pronouncements.

## Segment Results

We operate electronic platforms for the trading of fixed-income securities and provide related data, analytics, compliance tools and post-trade services. We consider our operations to constitute a single business segment because of the highly integrated nature of these product and services, the financial markets in which we compete and our worldwide business activities. We believe that results by geographic region or client sector are not necessarily meaningful in understanding our business. See Note 16 to the Consolidated Financial Statements for certain geographic information about our business required by U.S. GAAP.

## Results of Operations

### *Year Ended December 31, 2020 Compared to Year Ended December 31, 2019*

The comparability of our results of operations is impacted by our acquisition of LiquidityEdge in November 2019 which enabled us to expand our trading capabilities to include U.S. Treasuries. For additional information regarding this acquisition, see Note 6 to the Consolidated Financial Statements. The following table summarizes our financial results, which includes LiquidityEdge related revenue and expenses of \$13.1 million and \$14.5 million, respectively, recognized during 2020 and \$2.5 million and \$3.8 million, respectively, recognized during 2019:

	Year Ended December 31,			
	2020	2019	\$ Change	% Change
	(\$ in thousands, except per share amounts)			
Revenues	\$ 689,125	\$ 511,352	\$ 177,773	34.8 %
Expenses	314,397	260,470	53,927	20.7
Operating income	374,728	250,882	123,846	49.4
Other income (expense)	(369)	6,542	(6,911)	(105.6)
Income before income taxes	374,359	257,424	116,935	45.4
Provision for income taxes	74,982	52,522	22,460	42.8
Net income	<u>\$ 299,377</u>	<u>\$ 204,902</u>	<u>\$ 94,475</u>	46.1 %
Net income per common share - Diluted	\$ 7.85	\$ 5.40	\$ 2.45	45.4%

### *Revenues*

Our revenues for the years ended December 31, 2020 and 2019, and the resulting dollar and percentage changes, were as follows:

	Year Ended December 31,					
	2020		2019		\$ Change	% Change
	\$	% of Revenues	\$	% of Revenues		
Commissions	\$ 634,445	92.1 %	\$ 463,856	90.7 %	\$ 170,589	36.8 %
Information services	34,341	5.0	30,730	6.0	3,611	11.8
Post-trade services	19,460	2.8	15,763	3.1	3,697	23.5
Other	879	0.1	1,003	0.2	(124)	(12.4)
Total revenues	<u>\$ 689,125</u>	100.0 %	<u>\$ 511,352</u>	100.0 %	<u>\$ 177,773</u>	34.8 %

## Commissions

Our commission revenues for the years ended December 31, 2020 and 2019, and the resulting dollar and percentage changes, were as follows:

	Year Ended December 31,			
	2020	2019	\$ Change	% Change
	(\$ in thousands)			
<b>Variable transaction fees</b>				
U.S. high-grade	\$ 253,684	\$ 173,944	\$ 79,740	45.8 %
Other credit	256,763	188,514	68,249	36.2
Total credit	510,447	362,458	147,989	40.8
Rates	15,890	4,722	11,168	236.5
Total variable transaction fees	526,337	367,180	159,157	43.3
<b>Distribution fees</b>				
U.S. high-grade	81,893	71,885	10,008	13.9
Other credit	25,834	24,347	1,487	6.1
Total credit	107,727	96,232	11,495	11.9
Rates	381	444	(63)	(14.2)
Total distribution fees	108,108	96,676	11,432	11.8
Total commissions	\$ 634,445	\$ 463,856	\$ 170,589	36.8 %

U.S. high-grade variable transaction fees increased \$79.7 million due to a 29.4% increase in trading volume and a 12.7% increase in the variable transaction fee per million. Other credit variable transaction fees increased \$68.2 million due to a 29.5% increase in trading volume and a 5.2% increase in the variable transaction fee per million. Open Trading credit volume increased by 60.8% and represented 33.2% and 27.0% of credit variable transaction fees for the years ended December 31, 2020 and 2019, respectively. The 236.5% increase in variable transaction fees for rates was attributable to the inclusion of U.S. Treasuries trading volume and commissions following the November 1, 2019 acquisition of LiquidityEdge.

Our trading volume for each of the years presented was as follows:

	Year Ended December 31,			
	2020	2019	\$ Change	% Change
	(\$ in millions)			
<b>Trading Volume Data</b>				
U.S. high-grade - fixed rate	\$1,311,512	\$ 992,844	\$ 318,668	32.1 %
U.S. high-grade - floating rate	56,786	64,980	(8,194)	(12.6)
Total U.S. high-grade	1,368,298	1,057,824	310,474	29.4
Other credit	1,262,074	974,494	287,580	29.5
Total credit	2,630,372	2,032,318	598,054	29.4
Rates	3,987,424	659,548	3,327,876	N/M
Number of U.S. Trading Days	251	250		
Number of U.K. Trading Days	254	253		

For volume reporting purposes, transactions in foreign currencies are converted to U.S. dollars at average monthly rates. The 29.4% increase in our U.S. high-grade volume was principally due to an increase in estimated overall market volume coupled with growth in our estimated market share. Our estimated market share of total U.S. high-grade corporate bond volume increased to 21.6% for the year ended December 31, 2020 from 19.0% for the year ended December 31, 2019. Estimated U.S. high-grade TRACE volume increased by 14.2% to \$6.3 trillion for the year ended December 31, 2020 from \$5.6 trillion for the year ended December 31, 2019.

Other credit volumes increased by 29.5% for the year ended December 31, 2020 compared to the year ended December 31, 2019, primarily due to increases of 68.4% in U.S. high-yield bond volume, 21.3% in Eurobond volume and 14.8% in emerging markets bond volume on a combination of higher estimated U.S. high-yield market volume and higher U.S. high-yield, emerging markets and Eurobond estimated market share. Our estimated market share of U.S. high-yield TRACE volume increased to 14.6% for the year ended December 31, 2020 from 10.4% for the year ended December 31, 2019.

The significant increase in rates volume was attributable to the inclusion of U.S. Treasuries trading volumes following the November 1, 2019 acquisition of LiquidityEdge.

Our average variable transaction fee per million for the years ended December 31, 2020 and 2019 was as follows:

	<b>Year Ended December 31,</b>	
	<b>2020</b>	<b>2019</b>
<b>Average Variable Transaction fee per million</b>		
U.S. high-grade - fixed rate	\$ 191.34	\$ 171.06
U.S. high-grade - floating rate	48.21	63.15
Total U.S. high-grade	185.40	164.44
Other credit	203.45	193.45
Total credit	194.06	178.35
<b>Rates</b>		
	3.99	7.16

The increase in U.S. high-grade average variable transaction fee per million was mainly due to an increase in the duration of bonds traded on the platforms. The increase in Other credit average variable transaction fee per million was mainly due to a larger percentage of trading volume in high-yield bonds that command higher fees per million. The significant decrease in the average variable transaction fee per million for rates products was primarily attributable to the inclusion of U.S. Treasuries trading volumes that command lower fees per million.

*Information Services.* Information services revenue increased \$3.6 million for the year ended December 31, 2020 mainly due to revenue from new data contracts.

*Post-Trade Services.* Post-trade services revenue increased \$3.7 million for the year ended December 31, 2020 principally due to additional regulatory transaction reporting revenue of \$1.3 million generated by Regulatory Reporting Hub since the November 30, 2020 acquisition date and the introduction of new SFTR reporting services of \$0.9 million.

*Other.* Other revenue was \$0.9 million and \$1.0 million for the years ended December 31, 2020 and 2019, respectively.

## Expenses

The following table summarizes our expenses for the years ended December 31, 2020 and 2019. Expenses for the year ended December 31, 2020 and 2019 include \$14.5 million and \$3.8 million, respectively, of expenses related to LiquidityEdge, including amortization of acquired intangibles expense of \$2.8 million and \$0.4 million, respectively.

Expenses	Year Ended December 31,					
	2020		2019		\$	%
	\$	% of Revenues	\$	% of Revenues		
Employee compensation and benefits	\$ 156,885	22.8 %	\$ 131,079	25.6 %	\$ 25,806	19.7 %
Depreciation and amortization	35,996	5.2	26,857	5.3	9,139	34.0
Technology and communications	34,092	4.9	26,792	5.2	7,300	27.2
Professional and consulting fees	32,304	4.7	25,534	5.0	6,770	26.5
Occupancy	13,425	1.9	11,639	2.3	1,786	15.3
Marketing and advertising	7,940	1.2	11,559	2.3	(3,619)	(31.3)
Clearing costs	21,058	3.1	11,314	2.2	9,744	86.1
General and administrative	12,697	1.8	15,696	3.1	(2,999)	(19.1)
Total expenses	<u>\$ 314,397</u>	45.6 %	<u>\$ 260,470</u>	50.9 %	<u>\$ 53,927</u>	20.7 %

Employee compensation and benefits increased by \$25.8 million primarily due increases in salaries, taxes and benefits on higher employee headcount of \$16.0 million and employee incentive compensation of \$9.1 million, which is tied to operating performance. The total number of employees increased to 606 as of December 31, 2020 from 527 as of December 31, 2019.

Depreciation and amortization increased by \$9.1 million primarily due to higher amortization of software development costs of \$5.0 million and amortization of acquired intangibles of \$3.1 million. For the years ended December 31, 2020 and 2019, \$15.0 million and \$12.3 million, respectively, of equipment purchases and leasehold improvements and \$30.6 million and \$22.4 million, respectively, of software development costs were capitalized.

Technology and communications expenses increased by \$7.3 million primarily due to higher IT license and support costs of \$3.2 million, U.S. Treasury platform licensing costs of \$2.6 million and cloud hosting costs of \$1.8 million.

Professional and consulting fees increased by \$6.8 million primarily due to higher consulting fees related to our self-clearing and settlements initiatives of \$2.5 million, audit and tax fees of \$1.2 million, recruiting fees of \$1.1 million and acquisition-related expenses of \$1.1 million.

Occupancy costs increased by \$1.8 million primarily due to rent expense associated with additional leased office space in London.

Marketing and advertising expense decreased \$3.6 million due to reduced sales-related travel and entertainment activities as a result of the Pandemic.

Clearing costs increased by \$9.7 million primarily due to a \$6.0 million increase in clearing costs associated with Open Trading matched principal credit transactions and a \$3.7 million increase in clearing costs associated with U.S. Treasuries matched principal transactions. Clearing costs as a percentage of Open Trading matched principal credit trading revenue decreased to 9.8% for the year ended December 31, 2020 from 11.0% for the year ended December 31, 2019 principally due to higher Open Trading variable transaction fee per million and transaction cost savings resulting from our conversion to self-clearing U.S. bonds, offset by certain non-recurring self-clearing conversion costs.

General and administrative expenses decreased by \$3.0 million primarily due to lower general travel and entertainment expense as a result of the Pandemic.



*Other Income (Expense)*

Our other income (expense) for the years ended December 31, 2020 and 2019, and the resulting dollar and percentage changes, were as follows:

	Year Ended December 31,					
	2020		2019		\$ Change	% Change
	\$	% of Revenues	\$	% of Revenues		
Investment income	\$ 2,446	0.4 %	\$ 8,063	1.6 %	\$ (5,617)	(69.7)%
Interest expense	(1,142)	(0.2)	—	—	(1,142)	—
Other, net	(1,673)	(0.2)	(1,521)	(0.3)	(152)	10.0
Total other income (expense)	<u>\$ (369)</u>	(0.1)%	<u>\$ 6,542</u>	1.3 %	<u>\$ (6,911)</u>	(105.6)%

Investment income decreased by \$5.6 million primarily due to lower investment balances, due in part to the cash paid for the acquisition of LiquidityEdge in November 2019 of \$104.4 million and new self-clearing related deposit, reserve and liquidity requirements, and a decrease in interest rates.

Interest expense increased by \$1.1 million due to short-term borrowing activity in 2020 to support self-clearing activity.

Other, net decreased by \$0.2 million primarily due to an increase in credit facility administration costs of \$0.8 million, offset by net realized gains on investments of \$0.5 million in 2020.

*Provision for Income Taxes.*

The provision for income taxes and effective tax rate for the years ended December 31, 2020 and 2019 were as follows:

	Year Ended December 31,			
	2020	2019	\$ Change	% Change
	(\$ in thousands)			
Provision for income taxes	\$ 74,982	\$ 52,522	\$ 22,460	42.8 %
Effective tax rate	20.0%	20.4%		

The provision for income taxes reflected \$24.1 million and \$10.6 million of excess tax benefits related to share-based compensation awards that vested or were exercised during the years ended December 31, 2020 and 2019, respectively. During the years ended December 31, 2020 and 2019, we recorded an additional provision for unrecognized tax benefits of \$9.5 million and \$2.1 million, respectively. Our consolidated effective tax rate can vary from period to period depending on the geographic mix of our earnings, changes in tax legislation and tax rates and the amount and timing of excess tax benefits related to share-based payments, among other factors.

## Quarterly Results of Operations

Our quarterly results have varied significantly as a result of:

- changes in trading volume due to market conditions, changes in the number of trading days in certain quarters, and seasonality effects caused by slow-downs in trading activity during certain periods;
- changes in the number of broker-dealers and institutional investors using our trading platform, as well as variation in usage by existing clients;
- acquisitions or the Company's expansion into new products; or
- variance in our expenses, particularly employee compensation and benefits.

The following table sets forth certain unaudited consolidated quarterly income statement data for the eight quarters ended December 31, 2020. In our opinion, this unaudited information has been prepared on a basis consistent with our annual financial statements and includes all adjustments (consisting only of normal recurring adjustments) necessary for a fair statement of the unaudited quarterly data. This information should be read in conjunction with our Consolidated Financial Statements and related Notes included in this Annual Report on Form 10-K. The results of operations for any quarter are not necessarily indicative of results that we may achieve for any subsequent periods.

### Three Months Ended

	Dec 31, 2020	Sep 30, 2020	Jun 30, 2020	Mar 31, 2020	Dec 31, 2019	Sep 30, 2019	Jun 30, 2019	Mar 31, 2019
(In thousands, except per share amounts)								
(unaudited)								
<b>Revenues</b>								
Commissions	\$ 155,813	\$ 150,586	\$ 172,092	\$ 155,954	\$ 117,103	\$ 119,869	\$ 114,124	\$ 112,760
Information services	8,771	8,501	8,427	8,642	8,515	7,693	7,156	7,366
Post-trade services	6,564	4,689	4,054	4,153	3,923	3,784	3,956	4,100
Other	198	230	222	229	233	251	254	265
<b>Total revenues</b>	<b>171,346</b>	<b>164,006</b>	<b>184,795</b>	<b>168,978</b>	<b>129,774</b>	<b>131,597</b>	<b>125,490</b>	<b>124,491</b>
<b>Expenses</b>								
Employee compensation and benefits	36,472	37,583	41,636	41,194	33,117	32,681	32,623	32,658
Depreciation and amortization	10,592	9,032	8,305	8,067	7,730	6,700	6,345	6,082
Technology and communications	8,922	8,417	8,592	8,161	7,155	7,381	6,474	5,782
Professional and consulting fees	10,295	8,269	8,065	5,675	6,389	7,018	6,296	5,831
Occupancy	3,220	3,445	3,286	3,474	3,090	2,802	2,798	2,949
Marketing and advertising	2,307	1,148	1,810	2,675	3,087	2,506	3,667	2,299
Clearing costs	4,997	4,838	5,713	5,510	3,345	2,782	2,610	2,577
General and administrative	2,844	3,467	3,253	3,133	5,010	3,762	3,800	3,124
<b>Total expenses</b>	<b>79,649</b>	<b>76,199</b>	<b>80,660</b>	<b>77,889</b>	<b>68,923</b>	<b>65,632</b>	<b>64,613</b>	<b>61,302</b>
<b>Operating income</b>	<b>91,697</b>	<b>87,807</b>	<b>104,135</b>	<b>91,089</b>	<b>60,851</b>	<b>65,965</b>	<b>60,877</b>	<b>63,189</b>
<b>Other income (expense)</b>								
Investment income	119	344	714	1,269	1,767	2,211	2,096	1,989
Interest expense	(96)	(1,046)	—	—	—	—	—	—
Other, net	(1,431)	860	(446)	(656)	(661)	(838)	(64)	42
<b>Total other income (expense)</b>	<b>(1,408)</b>	<b>158</b>	<b>268</b>	<b>613</b>	<b>1,106</b>	<b>1,373</b>	<b>2,032</b>	<b>2,031</b>
<b>Income before income taxes</b>	<b>90,289</b>	<b>87,965</b>	<b>104,403</b>	<b>91,702</b>	<b>61,957</b>	<b>67,338</b>	<b>62,909</b>	<b>65,220</b>
Provision for income taxes	17,358	20,189	20,549	16,886	11,684	13,336	14,804	12,698
<b>Net income</b>	<b>\$ 72,931</b>	<b>\$ 67,776</b>	<b>\$ 83,854</b>	<b>\$ 74,816</b>	<b>\$ 50,273</b>	<b>\$ 54,002</b>	<b>\$ 48,105</b>	<b>\$ 52,522</b>
<b>Net income per common share</b>								
Basic	\$ 1.95	\$ 1.81	\$ 2.25	\$ 2.01	\$ 1.35	\$ 1.46	\$ 1.30	\$ 1.42
Diluted	\$ 1.91	\$ 1.78	\$ 2.20	\$ 1.96	\$ 1.32	\$ 1.42	\$ 1.27	\$ 1.39

The following tables set forth trading volume and average variable transaction fee per million for the eight quarters ended December 31, 2020.

	Three Months Ended							
	Dec 31, 2020	Sep 30, 2020	Jun 30, 2020	Mar 31, 2020	Dec 31, 2019	Sep 30, 2019	Jun 30, 2019	Mar 31, 2019
<b>Trading Volume Data</b>	(In millions)							
U.S. high-grade - fixed rate	\$ 305,537	\$ 295,781	\$ 398,006	\$ 312,188	\$ 238,959	\$ 245,027	\$ 249,025	\$ 259,833
U.S. high-grade - floating rate	12,956	9,450	16,574	17,806	14,150	16,918	16,335	17,577
Total U.S. high-grade	318,493	305,231	414,580	329,994	253,109	261,945	265,360	277,410
Other credit	321,135	283,920	327,266	329,753	236,403	255,097	248,503	234,491
Total credit	639,628	589,151	741,846	659,747	489,512	517,042	513,863	511,901
Rates (1)	826,276	760,676	955,594	1,444,878	620,437	11,661	13,174	14,276

(1) Rates includes U.S. Treasury volume traded through LiquidityEdge LLC, which we acquired on November 1, 2019.

	Three Months Ended							
	Dec 31, 2020	Sep 30, 2020	Jun 30, 2020	Mar 31, 2020	Dec 31, 2019	Sep 30, 2019	Jun 30, 2019	Mar 31, 2019
<b>Average Variable Transaction Fee Per Million</b>								
U.S. high-grade - fixed rate	\$ 193.51	\$ 204.24	\$ 186.67	\$ 182.95	\$ 177.27	\$ 181.45	\$ 168.05	\$ 158.45
U.S. high-grade - floating rate	40.14	47.75	55.06	47.96	53.64	56.08	65.22	75.70
Total U.S. high-grade	187.27	199.39	181.41	175.67	170.36	173.35	161.72	153.21
Other credit	202.55	208.27	204.66	198.97	191.36	196.04	190.07	196.32
Total credit	194.94	203.67	191.66	187.31	180.50	184.55	175.43	172.95
Rates (1)	3.95	4.19	4.02	3.87	4.81	48.62	46.69	38.99
Number of U.S. trading days	62	64	63	62	62	64	63	61
Number of U.K. trading days	64	65	61	64	64	65	61	63

(1) The decrease in the average variable transaction fee per million for rates during the three months ended December 31, 2019 was attributable to the inclusion of U.S. Treasury trading volumes traded through LiquidityEdge which command lower fees per million.

## Liquidity and Capital Resources

During the past two years, we have met our funding requirements through cash on hand, internally generated funds and short-term borrowings. Cash and cash equivalents and investments totaled \$489.0 million at December 31, 2020. Our investments are generally invested in investment-grade securities. We limit the amounts that can be invested in any single issuer and invest in short- to intermediate-term instruments whose fair values are less sensitive to interest rate changes. We believe our investments as of December 31, 2020 that were in an unrealized loss position were not other-than-temporarily impaired. In addition, we believe there has not been any event after such date, including the recent developments related to the Pandemic, that would indicate any other-than-temporary impairment.

On August 19, 2020, we amended our Amended and Restated Credit Agreement (the “Prior Credit Agreement”) with JPMorgan Chase Bank, N.A. (“JPMorgan”) to, among other things, (i) permit investments of up to \$500.0 million in MarketAxess Corporation and (ii) increase the aggregate commitments of the lender under the Prior Credit Agreement from \$100.0 million to \$450.0 million, which we intend to use from time to time to make advances to our broker-dealer subsidiaries to assist with certain capital or liquidity requirements related to our self-clearing and trade settlement activities and for other general corporate purposes. The Prior Credit Agreement matured on November 13, 2020, when we entered into a new credit agreement (the “Credit Agreement”) with a syndicate of lenders and JPMorgan, as administrative agent, that provides aggregate commitments totaling \$500.0 million, consisting of a revolving credit facility and a \$5.0 million letter of credit sub-limit for standby letters of credit. The Credit Agreement will mature on November 12, 2021, with our option to request up to two additional 364-day extensions at the discretion of each lender and subject to customary conditions. As of December 31, 2020, we had \$1.0 million in letters of credit outstanding and \$499.0 million in available borrowing capacity under the Credit Agreement. See Note 13 to the Consolidated Financial Statements for a discussion of the Credit Agreement and the Prior Credit Agreement.

In connection with its self-clearing operations, MarketAxess Corporation, our broker-dealer subsidiary, entered into an agreement (the “Collateralized Agreement”) with its settlement bank to provide loans up to an aggregate of \$200.0 million on an uncommitted basis. Borrowings under the Collateralized Agreement are collateralized by securities pledged by MarketAxess Corporation to the settlement bank, subject to applicable haircuts and concentration limits. As of December 31, 2020, MarketAxess Corporation had no borrowings outstanding and \$200.0 million in available borrowing capacity under the Collateralized Agreement. See Note 13 to the Consolidated Financial Statements for a discussion of the Collateralized Agreement.

As a result of our self-clearing activities, we are required to finance certain transactions, maintain deposits with various clearing organizations and clearing broker-dealers and maintain a special reserve bank account for the benefit of customers pursuant to SEC Rule 15c3-3. As of December 31, 2020, the aggregate amount of the positions financed, deposits and customer reserve balances associated with our self-clearing activities was \$138.2 million. These requirements can fluctuate based on trading activity, market volatility or other factors which may impact our liquidity or require us to use our capital resources.

During the past two years, our cash flows were as follows:

	<b>Year Ended December 31,</b>			
	<b>2020</b>	<b>2019</b>	<b>\$</b>	<b>%</b>
	<b>Change</b>			
	<b>(\$ in thousands)</b>			
Net cash provided by operating activities	\$ 404,489	\$ 265,935	\$ 138,554	52.1 %
Net cash provided by (used in) investing activities	68,867	(122,051)	190,918	(156.4)
Net cash (used in) financing activities	(145,112)	(118,100)	(27,012)	22.9
Effect of exchange rate changes on cash and cash equivalents	5,553	1,011	4,542	449.3
Net increase for the period	<u>\$ 333,797</u>	<u>\$ 26,795</u>	<u>\$ 307,002</u>	1,145.7 %

#### ***Cash Flows for the Year Ended December 31, 2020 Compared to Year Ended December 31, 2019***

The \$138.6 million increase in net cash provided by operating activities was primarily due to increases in net income of \$94.5 million, net sales and maturities of trading investments of \$63.9 million, income and other tax liabilities of \$16.0 million, depreciation and amortization of \$9.1 million and accounts payable, accrued expenses and other liabilities of \$6.8 million. These increases in cash provided were offset by an increase of \$49.5 million in net receivables from broker-dealers, clearing organizations and customers associated with our self-clearing conversion.

The \$190.9 million net increase in net cash provided by investing activities was primarily attributable to an increase in net proceeds from sales and maturities of securities available-for-sale of \$127.7 million and lower cash used for acquisitions of \$74.1 million, offset by an increase in capital expenditures of \$10.9 million.

The \$27.0 million increase in net cash (used in) financing activities was principally due to increases in withholding tax payments on restricted stock vesting and stock option exercises of \$16.6 million and cash dividends paid on common stock of \$14.3 million, offset by an increase in exercises of stock options of \$2.8 million and a decrease in repurchases of our common stock of \$1.1 million.

Past trends of cash flows are not necessarily indicative of future cash flow levels. A decrease in cash flows may have a material adverse effect on our liquidity, business and financial condition.

#### ***Other Factors Influencing Liquidity and Capital Resources***

We believe that our current resources are adequate to meet our liquidity needs and capital expenditure requirements for at least the next 12 months. However, our future liquidity and capital requirements will depend on a number of factors, including liquidity requirements associated with our self-clearing operations and expenses associated with product development and expansion and new business opportunities that are intended to further diversify our revenue stream. We may also acquire or invest in technologies, business ventures or products that are complementary to our business. In the event we require any additional financing, it will take the form of equity or debt financing. Any additional equity offerings may result in dilution to our stockholders. Any debt financings, if available at all, may involve restrictive covenants with respect to dividends, issuances of additional capital and other financial and operational matters related to our business.

Certain of our U.S. subsidiaries are registered as a broker-dealer or a SEF and therefore are subject to the applicable rules and regulations of the SEC, FINRA and the CFTC. These rules contain minimum net capital requirements, as defined in the applicable regulations, and also may require that a significant part of the registrants' assets be kept in relatively liquid form. Certain of our foreign subsidiaries are regulated by the FCA in the U.K. or other foreign regulators and must maintain financial resources, as defined in the applicable regulations, in excess of the applicable financial resources requirement. As of December 31, 2020, each of our subsidiaries that are subject to these regulations had net capital or financial resources in excess of their minimum requirements. As of December 31, 2020, our subsidiaries maintained aggregate net capital and financial resources that were \$435.4 million in excess of the required levels of \$21.6 million.

Each of our U.S. and foreign regulated subsidiaries are subject to local regulations which generally prohibit repayment of borrowings from our affiliates, paying cash dividends, making loans to our affiliates or otherwise entering into transactions that result in a significant reduction in regulatory net capital or financial resources without prior notification to or approval from such regulated entity's principal regulator. As of December 31, 2020, the amount of unrestricted cash held by our non-U.S. subsidiaries was \$144.4 million.

We execute bond transactions between our institutional investor and broker-dealer clients on a matched principal basis by serving as counterparty to both the buyer and the seller in trades. In August 2020, one of our U.S. broker-dealer subsidiaries converted to a self-clearing model for the settlement of such transactions. Our other U.S. and U.K subsidiaries continue to settle their transactions through third-party clearing brokers. Settlement typically occurs within one to two trading days after the trade date. Cash settlement of the transaction occurs upon receipt or delivery of the underlying instrument that was traded. Under both the self-clearing and the third-party clearing broker models, we are exposed to credit risk in the event a counterparty does not fulfill its obligation to complete a transaction or if there is a miscommunication or other error in executing a matched principal transaction. Pursuant to the terms of the securities clearing agreements, each third-party clearing broker has the right to charge us for any losses they suffer resulting from a counterparty's failure on any of our trades. We did not record any liabilities or losses with regard to counterparty failures for the years ended December 31, 2020 and 2019.

In the normal course of business, we enter into contracts that contain a variety of representations, warranties and general indemnifications. Our maximum exposure from any claims under these arrangements is unknown, as this would involve claims that have not yet occurred. However, based on past experience, we expect the risk of material loss to be remote.

On November 30, 2020 we acquired Regulatory Services GmbH, the pan-European regulatory reporting business of Deutsche Börse Group. The purchase price was approximately \$22.5 million in cash paid at closing and up to \$24.6 million in contingent consideration payable within 18 months of the closing. In September 2020, we entered into an agreement to acquire MuniBrokers LLC, a central electronic venue serving municipal bond inter-dealer brokers and dealers. The acquisition is expected to close in the first half of 2021, subject to the satisfaction of customary closing conditions. The purchase price is approximately \$45.0 million in cash, plus transaction costs, with \$20.0 million paid at closing and up to \$25.0 million in contingent consideration payable within three years of the closing.

See Item 5 of this Annual Report on Form 10-K for a discussion of our repurchases of our common stock and our dividend policy.

### ***Non-GAAP Financial Measures***

In addition to reporting financial results in accordance with GAAP, we use certain non-GAAP financial measures called earnings before interest, taxes, depreciation and amortization ("EBITDA") and free cash flow ("FCF"). As a result of our conversion to self-clearing, we redefined FCF as cash flow from operating activities excluding the net change in trading investments and net change in securities failed-to-deliver and securities failed-to-receive from broker-dealers, clearing organizations and customers, less expenditures for furniture, equipment and leasehold improvements and capitalized software development costs. We believe these non-GAAP financial measures, when taken into consideration with the corresponding GAAP financial measures, are important in understanding our operating results. EBITDA and FCF are not measures of financial performance or liquidity under GAAP and therefore should not be considered an alternative to net income or cash flow from operating activities as an indicator of operating performance or liquidity. We believe that EBITDA and FCF provide useful additional information concerning profitability of our operations and business trends and the cash flow available to pay dividends, repurchase stock and meet working capital requirements.

The table set forth below presents a reconciliation of our net income to EBITDA, as defined, for the years ended December 31, 2020 and 2019:

	<b>Year Ended December 31,</b>	
	<b>2020</b>	<b>2019</b>
	<b>(In thousands)</b>	
Net income	\$ 299,377	\$ 204,902
Add back:		
Interest expense	1,142	—
Provision for income taxes	74,982	52,522
Depreciation and amortization	35,996	26,857
Earnings before interest, taxes, depreciation and amortization	<u>\$ 411,497</u>	<u>\$ 284,281</u>

The table set forth below presents a reconciliation of our net cash provided by operating activities to FCF, as defined, for the years ended December 31, 2020 and 2019:

	<b>Year Ended December 31,</b>	
	<b>2020</b>	<b>2019</b>
	<b>(In thousands)</b>	
Net cash provided by operating activities	\$ 404,489	\$ 265,935
Exclude: Net change in trading investments	(67,952)	(4,045)
Exclude: Net change in fail-to-deliver/receive from broker-dealers, clearing organizations and customers	49,278	—
Less: Purchases of furniture, equipment and leasehold improvements	(15,010)	(12,292)
Less: Capitalization of software development costs	(30,618)	(22,408)
Free cash flow	<u>\$ 340,187</u>	<u>\$ 227,190</u>

### *Effects of Inflation*

Because the majority of our assets are short-term in nature, they are not significantly affected by inflation. However, the rate of inflation may affect our expenses, such as employee compensation, office leasing costs and communications expenses, which may not be readily recoverable in the prices of our services. To the extent inflation results in rising interest rates and has other adverse effects on the securities markets, it may adversely affect our financial position and results of operations.

### **Contractual Obligations and Commitments**

As of December 31, 2020, we had the following contractual obligations and commitments:

	<b>Payments due by period</b>				
	<b>Total</b>	<b>Less than 1 year</b>	<b>1 - 3 years</b>	<b>3 - 5 years</b>	<b>More than 5 years</b>
	<b>(In thousands)</b>				
Operating leases	\$ 133,794	\$ 12,131	\$ 20,786	\$ 21,874	\$ 79,003
Foreign currency forward contract	157,862	157,862	—	—	—
Total	<u>\$ 291,656</u>	<u>\$ 169,993</u>	<u>\$ 20,786</u>	<u>\$ 21,874</u>	<u>\$ 79,003</u>

We enter into foreign currency forward contracts to hedge the net investment in our U.K. subsidiaries. As of December 31, 2020, the notional value of the foreign currency forward contract outstanding was \$157.1 million and the fair value of the liability was \$0.8 million.



## **Item 7A. *Quantitative and Qualitative Disclosures About Market Risk.***

### ***Market Risk***

Market risk is the risk of the loss resulting from adverse changes in market rates and prices, such as interest rates and foreign currency exchange rates.

The global financial services business is, by its nature, risky and volatile and is directly affected by many national and international factors that are beyond our control. Any one of these factors may cause a substantial decline in the U.S. and global financial services markets, resulting in reduced trading volume and revenues. These events could have a material adverse effect on our business, financial condition and results of operations.

As of December 31, 2020, we had \$19.2 million of investments in corporate bonds that were classified as trading securities. Adverse movements, such as a 10% decrease in the value of these securities or a downturn or disruption in the markets for these securities, could result in a substantial loss. In addition, principal gains and losses resulting from these securities could on occasion have a disproportionate effect, positive or negative, on our financial condition and results of operations for any particular reporting period.

See also Item 1A. *Risk Factors*, “Risks Related to Global Economic and Market Conditions – *Global economic, political and market factors beyond our control could reduce demand for our services, and our profitability and business could suffer.*”

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

Interest rate risk represents our exposure to interest rate changes with respect to our cash, cash equivalents and investments. As of December 31, 2020, our cash and cash equivalents and investments amounted to \$489.0 million. A hypothetical 100 basis point decrease in interest rates would decrease our annual investment income by approximately \$4.8 million, assuming no change in the amount or composition of our cash and cash equivalents.

A similar hypothetical 100 basis point increase or decrease in interest rates would decrease or increase the fair value of the trading securities portfolio by approximately \$0.2 million. The hypothetical unrealized gain (loss) of \$0.2 million would be recognized in other, net in the Consolidated Statements of Operations.

We do not maintain an inventory of bonds that are traded on our platform.

### ***Foreign Currency Exchange Rate Risk***

We conduct operations in several different countries outside of the U.S., most notably the U.K., and substantial portions of our revenues, expenses, assets and liabilities are generated and denominated in non-U.S. dollar currencies. Since our consolidated financial statements are presented in U.S. dollars, we must translate revenues, income and expenses, as well as assets and liabilities, into U.S. dollars at exchange rates in effect during or at the end of each reporting period. Accordingly, increases or decreases in the value of the U.S. dollar against the other currencies will affect our net operating revenues, operating income and the value of balance sheet items denominated in foreign currencies.

During the year ended December 31, 2020, approximately 10.8% of our revenue and 26.2% of our expenses were denominated in currencies other than the U.S. dollar, most notably the British Pound Sterling. Based on actual results over the past year, a hypothetical 10% increase or decrease in the U.S. dollar against all other currencies would have increased or decreased revenue by approximately \$7.5 million and operating expenses by approximately \$7.6 million.

### ***Derivative Risk***

Our limited derivative risk stems from our activities in the foreign currency forward contract market. We use this market to mitigate our U.S. dollar versus British Pound Sterling exposure that arises from the activities of our U.K. subsidiaries. As of December 31, 2020, the fair value of the notional amount of our foreign currency forward contract was \$157.9 million. We do not speculate in any derivative instruments.



## ***Credit Risk***

Through certain of our subsidiaries, we execute bond transactions between our institutional investor and broker-dealer clients on a matched principal basis by serving as counterparty to both the buyer and the seller in trades. In August 2020, one of our U.S. broker-dealer subsidiaries converted to a self-clearing model for the settlement of such transactions. Our other U.S. and U.K subsidiaries continue to settle their transactions through third-party clearing brokers. Settlement typically occurs within one to two trading days after the trade date. Cash settlement of the transaction occurs upon receipt or delivery of the underlying instrument that was traded.

We are exposed to credit and performance risks in our role as matched principal trading counterparty to our clients executing bond trades on our platform, including the risk that counterparties that owe us money or securities will not perform their obligations. These parties may default on their obligations to us due to bankruptcy, lack of liquidity, operational failure or other reasons. Adverse movements in the prices of securities that are the subject of these transactions can increase our risk. In connection with Open Trading or other anonymous protocols, we expect that the number of transactions in which we act as a matched principal will increase.

We have policies, procedures and automated controls in place to identify and manage our credit risk. There can be no assurance that these policies, procedures and automated controls will effectively mitigate our credit risk exposure. Some of our risk management procedures are reliant upon the evaluation of information regarding the fixed-income markets, our clients or other relevant matters that are publicly available or otherwise acquired from third party sources. Such information may not be accurate, complete, up-to-date or properly assessed and interpreted by us. If our risk management procedures fail, our business, financial condition and results of operations may be adversely affected. Furthermore, our insurance policies are unlikely to provide coverage for such risks.

Cash and cash equivalents includes cash and money market instruments that are primarily maintained at three major global banks. Given this concentration, we are exposed to certain credit risk in relation to our deposits at these banks.

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

**MARKETAXESS HOLDINGS INC.**

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*The unaudited supplementary data regarding consolidated quarterly income statement data are incorporated by reference to the information set forth in Item 7, “Management’s Discussion and Analysis of Financial Condition and Results of Operations,” in the section captioned “Quarterly Results of Operations.”*

## MANAGEMENT'S REPORT ON INTERNAL CONTROL OVER FINANCIAL REPORTING

Management of MarketAxess Holdings Inc. is responsible for establishing and maintaining adequate internal control over financial reporting as defined in Rules 13a-15(f) and 15d-15(f) under the Securities Exchange Act of 1934. The Company's internal control over financial reporting is designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with U.S. generally accepted accounting principles. The Company's internal control over financial reporting includes those policies and procedures that:

- (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the Company;
- (ii) 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
- (iii) 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.

Management assessed the effectiveness of the Company's internal control over financial reporting as of December 31, 2020. In making this assessment, management used the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission in *Internal Control — Integrated Framework (2013)*.

Based on our assessment and those criteria, management concluded that the Company maintained effective internal control over financial reporting as of December 31, 2020.

The effectiveness of our internal control over financial reporting as of December 31, 2020 has been audited by PricewaterhouseCoopers LLP, an independent registered public accounting firm, as stated in their report which appears herein.

## Report of Independent Registered Public Accounting Firm

To the Board of Directors and Stockholders of MarketAxess Holdings Inc.

### ***Opinions on the Financial Statements and Internal Control over Financial Reporting***

We have audited the accompanying consolidated statements of financial condition of MarketAxess Holdings Inc. and its subsidiaries (the “Company”) as of December 31, 2020 and 2019, and the related consolidated statements of operations, of comprehensive income, of changes in stockholders’ equity and of cash flows for each of the three years in the period ended December 31, 2020, including the related notes (collectively referred to as the “consolidated financial statements”). We also have audited 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 (COSO).

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of the Company as of December 31, 2020 and 2019, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2020 in conformity with accounting principles generally accepted in the United States of America. Also 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 COSO.

### ***Basis for Opinions***

The Company’s management is responsible for these consolidated financial statements, 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 Report on Internal Control Over Financial Reporting. Our responsibility is to express opinions on the Company’s consolidated financial statements and on the Company’s internal control over financial reporting based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (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 audits to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud, and whether effective internal control over financial reporting was maintained in all material respects.

Our audits of the consolidated financial statements 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 audits 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. 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 audits also included performing such other procedures as we considered necessary in the circumstances. We believe that our audits provide a reasonable basis for our opinions.

### ***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 (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (ii) 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 (iii) 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.

### ***Critical Audit Matters***

The critical audit matter communicated below is a matter arising from the current period audit of the consolidated financial statements that was communicated or required to be communicated to the audit committee and that (i) relates to accounts or disclosures that are material to the consolidated financial statements and (ii) 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 matter below, providing a separate opinion on the critical audit matter or on the accounts or disclosures to which it relates.

#### *Revenue Recognition - Open Trading Commissions*

As described in Note 2 to the consolidated financial statements, the Company executes trades between and among institutional investor and broker-dealer clients on a matched principal basis by serving as counterparty to both the buyer and the seller (“Open Trading”). Open Trading variable transaction fees, which represent commissions for matched principal trades, were \$170.5 million for the year ended December 31, 2020. Variable transaction fees are generally calculated as a percentage of the notional dollar volume of bonds traded on the platform and vary based on the type, size, yield, maturity of the bond traded, and individual client incentives. For Open Trading trades, the Company earns its commission through the difference in price between the two trades. As disclosed by management, commissions are determined based on the fee schedule associated with the instrument being traded.

The principal considerations for our determination that performing procedures relating to revenue recognition for Open Trading commissions is a critical audit matter are the significant audit effort in performing procedures and evaluating evidence related to this revenue type, which is calculated based on the instrument being traded, volume of the instrument being traded, and individual client incentives.

Addressing the matter involved performing procedures and evaluating audit evidence in connection with forming our overall opinion on the consolidated financial statements. These procedures included testing the effectiveness of controls relating to the completeness and accuracy of Open Trading commission. These procedures also included, among others, testing a sample of Open Trading transactions by (i) agreeing the details of the trade to underlying documentation, (ii) agreeing fees charged to the fee schedule based on the trade details, and as applicable, any individual client incentives, and (iii) recalculating the Open Trading commission variable transaction fee.

/s/ PricewaterhouseCoopers LLP  
New York, New York  
February 19, 2021

We have served as the Company’s auditor since 2000.

**MARKETAXESS HOLDINGS INC.**  
**CONSOLIDATED STATEMENTS OF FINANCIAL CONDITION**

	As of	
	December 31, 2020	December 31, 2019
(In thousands, except share and per share amounts)		
<b>ASSETS</b>		
Cash and cash equivalents	\$ 460,858	\$ 270,124
Cash segregated under federal regulations	50,059	—
Investments, at fair value	28,111	230,477
Accounts receivable, net of allowance of \$163 and \$57 as of December 31, 2020 and 2019, respectively	79,577	62,017
Receivables from broker-dealers, clearing organizations and customers	279,915	—
Goodwill	147,388	146,861
Intangible assets, net of accumulated amortization	95,354	60,986
Furniture, equipment, leasehold improvements and capitalized software, net of accumulated depreciation and amortization	85,204	71,795
Operating lease right-of-use assets	75,924	81,399
Prepaid expenses and other assets	29,039	31,271
<b>Total assets</b>	<b>\$ 1,331,429</b>	<b>\$ 954,930</b>
<b>LIABILITIES AND STOCKHOLDERS' EQUITY</b>		
<b>Liabilities</b>		
Accrued employee compensation	\$ 62,326	\$ 47,365
Payables to broker-dealers, clearing organizations and customers	133,326	—
Income and other tax liabilities	42,750	16,690
Accounts payable, accrued expenses and other liabilities	44,354	22,793
Operating lease liabilities	93,612	97,991
<b>Total liabilities</b>	<b>376,368</b>	<b>184,839</b>
Commitments and Contingencies (Note 15)		
<b>Stockholders' equity</b>		
Preferred stock, \$0.001 par value, 4,855,000 shares authorized, no shares issued and outstanding as of December 31, 2020 and 2019	—	—
Series A Preferred Stock, \$0.001 par value, 110,000 shares authorized, no shares issued and outstanding as of December 31, 2020 and 2019	—	—
Common stock voting, \$0.003 par value, 110,000,000 shares authorized, 40,851,100 shares and 40,746,593 shares issued and 38,005,330 shares and 37,935,984 shares outstanding as of December 31, 2020 and 2019, respectively	123	122
Common stock non-voting, \$0.003 par value, 10,000,000 shares authorized, no shares issued and outstanding as of December 31, 2020 and 2019	—	—
Additional paid-in capital	329,742	342,541
Treasury stock - Common stock voting, at cost, 2,845,770 and 2,810,609 shares as of December 31, 2020 and 2019, respectively	(169,523)	(153,388)
Retained earnings	799,369	591,086
Accumulated other comprehensive loss	(4,650)	(10,270)
<b>Total stockholders' equity</b>	<b>955,061</b>	<b>770,091</b>
<b>Total liabilities and stockholders' equity</b>	<b>\$ 1,331,429</b>	<b>\$ 954,930</b>

The accompanying notes are an integral part of these consolidated financial statements.

**MARKETAXESS HOLDINGS INC.**  
**CONSOLIDATED STATEMENTS OF OPERATIONS**

	Year Ended December 31,		
	2020	2019	2018
(In thousands, except per share amounts)			
<b>Revenues</b>			
Commissions	\$ 634,445	\$ 463,856	\$ 390,834
Information services	34,341	30,730	28,227
Post-trade services	19,460	15,763	15,346
Other	879	1,003	1,158
<b>Total revenues</b>	<b>689,125</b>	<b>511,352</b>	<b>435,565</b>
<b>Expenses</b>			
Employee compensation and benefits	156,885	131,079	109,117
Depreciation and amortization	35,996	26,857	23,080
Technology and communications	34,092	26,792	23,866
Professional and consulting fees	32,304	25,534	21,521
Occupancy	13,425	11,639	14,176
Marketing and advertising	7,940	11,559	12,114
Clearing costs	21,058	11,314	7,754
General and administrative	12,697	15,696	11,353
<b>Total expenses</b>	<b>314,397</b>	<b>260,470</b>	<b>222,981</b>
<b>Operating income</b>	<b>374,728</b>	<b>250,882</b>	<b>212,584</b>
<b>Other income (expense)</b>			
Investment income	2,446	8,063	6,112
Interest expense	(1,142)	—	—
Other, net	(1,673)	(1,521)	(610)
<b>Total other income (expense)</b>	<b>(369)</b>	<b>6,542</b>	<b>5,502</b>
<b>Income before income taxes</b>	<b>374,359</b>	<b>257,424</b>	<b>218,086</b>
Provision for income taxes	74,982	52,522	45,234
<b>Net income</b>	<b>\$ 299,377</b>	<b>\$ 204,902</b>	<b>\$ 172,852</b>
Net income per common share			
Basic	\$ 8.01	\$ 5.53	\$ 4.68
Diluted	\$ 7.85	\$ 5.40	\$ 4.57
Cash dividends declared per common share	\$ 2.40	\$ 2.04	\$ 1.68
Weighted average shares outstanding			
Basic	37,359	37,083	36,958
Diluted	38,144	37,956	37,855

The accompanying notes are an integral part of these consolidated financial statements.



**MARKETAXESS HOLDINGS INC.**  
**CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME**

	Year Ended December 31,		
	2020	2019	2018
	(In thousands)		
<b>Net income</b>	\$ 299,377	\$ 204,902	\$ 172,852
Net cumulative translation adjustment and foreign currency exchange hedge, net of tax of \$(1,468), \$(1,218) and \$1,290, respectively	6,164	1,128	(2,078)
Net unrealized gain (loss) on securities available-for-sale, net of tax of \$(172), \$312, and \$(23), respectively	(544)	996	(90)
<b>Comprehensive income</b>	\$ 304,997	\$ 207,026	\$ 170,684

The accompanying notes are an integral part of these consolidated financial statements.

**MARKETAXESS HOLDINGS INC.**  
**CONSOLIDATED STATEMENTS OF CHANGES IN STOCKHOLDERS' EQUITY**

	Common Stock Voting	Additional Paid-In Capital	Treasury Stock - Common Voting	Retained Earnings	Accumulated Other Comprehensive Loss	Total Stockholders' Equity
(In thousands)						
<b>Balance at December 31, 2017</b>	\$ 121	\$ 331,081	\$(159,791)	\$ 353,583	\$ (10,226)	\$ 514,768
Net income	—	—	—	172,852	—	172,852
Cumulative translation adjustment and foreign currency exchange hedge, net of tax	—	—	—	—	(2,078)	(2,078)
Unrealized net (loss) on securities available-for-sale, net of tax	—	—	—	—	(90)	(90)
Stock-based compensation	—	15,850	—	—	—	15,850
Exercise of stock options	1	2,972	—	—	—	2,973
Withholding tax payments on restricted stock vesting and stock option exercises	—	(8,043)	—	—	—	(8,043)
Repurchases of common stock	—	—	(25,171)	—	—	(25,171)
Cash dividend on common stock (\$1.68 per share)	—	—	—	(63,183)	—	(63,183)
<b>Balance at December 31, 2018</b>	122	341,860	(184,962)	463,252	(12,394)	607,878
Net income	—	—	—	204,902	—	204,902
Cumulative translation adjustment and foreign currency exchange hedge, net of tax	—	—	—	—	1,128	1,128
Unrealized net gain on securities available-for-sale, net of tax	—	—	—	—	996	996
Stock-based compensation	—	25,294	—	—	—	25,294
Exercise of stock options	—	1,207	—	—	—	1,207
Withholding tax payments on restricted stock vesting and stock option exercises	—	(25,820)	—	—	—	(25,820)
Treasury shares used for acquisition	—	—	48,830	—	—	48,830
Repurchases of common stock	—	—	(17,256)	—	—	(17,256)
Cash dividend on common stock (\$2.04 per share)	—	—	—	(77,068)	—	(77,068)
<b>Balance at December 31, 2019</b>	122	342,541	(153,388)	591,086	(10,270)	770,091
Net income	—	—	—	299,377	—	299,377
Cumulative translation adjustment and foreign currency exchange hedge, net of tax	—	—	—	—	6,164	6,164
Unrealized net (loss) on securities available-for-sale, net of tax	—	—	—	—	(544)	(544)
Stock-based compensation	—	25,613	—	—	—	25,613
Exercise of stock options	1	4,006	—	—	—	4,007
Withholding tax payments on restricted stock vesting and stock option exercises	—	(42,418)	—	—	—	(42,418)
Repurchases of common stock	—	—	(16,135)	—	—	(16,135)
Cash dividend on common stock (\$2.40 per share)	—	—	—	(91,094)	—	(91,094)
<b>Balance at December 31, 2020</b>	<u>\$ 123</u>	<u>\$ 329,742</u>	<u>\$(169,523)</u>	<u>\$ 799,369</u>	<u>\$ (4,650)</u>	<u>\$ 955,061</u>

The accompanying notes are an integral part of these consolidated financial statements.

**MARKETAXESS HOLDINGS INC.**  
**CONSOLIDATED STATEMENTS OF CASH FLOWS**

	Year Ended December 31,		
	2020	2019	2018
(In thousands)			
<b>Cash flows from operating activities</b>			
Net income	\$ 299,377	\$ 204,902	\$ 172,852
Adjustments to reconcile net income to net cash provided by operating activities:			
Depreciation and amortization	35,996	26,857	23,080
Amortization of operating lease right-of-use assets	6,842	5,795	—
Stock-based compensation expense	25,613	25,294	15,850
Deferred taxes	10,099	2,674	(1,173)
Other	(550)	(778)	2,253
Changes in operating assets and liabilities:			
(Increase) in accounts receivable	(18,015)	(2,962)	(5,117)
(Increase) in receivables from broker-dealers, clearing organizations and customers	(182,871)	—	—
(Increase) in prepaid expenses and other assets	(1,977)	(4,624)	(3,791)
Decrease in trading investments	67,952	4,045	856
(Increase) in mutual funds held in rabbi trust	(2,671)	(2,118)	(933)
Increase in accrued employee compensation	14,961	8,312	2,551
Increase in payables to broker-dealers, clearing organizations and customers	133,326	—	—
Increase in income and other tax liabilities	16,189	187	2,965
Increase (decrease) in accounts payable, accrued expenses and other liabilities	6,006	(820)	14,524
(Decrease) in operating lease liabilities	(5,788)	(829)	—
<b>Net cash provided by operating activities</b>	<b>404,489</b>	<b>265,935</b>	<b>223,917</b>
<b>Cash flows from investing activities</b>			
Acquisitions, net of cash and cash equivalents acquired	(23,297)	(97,430)	—
Available-for-sale investments			
Proceeds from maturities and sales	170,657	170,936	333,791
Purchases	(32,865)	(160,827)	(336,533)
Purchases of furniture, equipment and leasehold improvements	(15,010)	(12,292)	(35,888)
Capitalization of software development costs	(30,618)	(22,408)	(11,705)
Other	—	(30)	39
<b>Net cash provided by (used in) investing activities</b>	<b>68,867</b>	<b>(122,051)</b>	<b>(50,296)</b>
<b>Cash flows from financing activities</b>			
Cash dividend on common stock	(90,566)	(76,231)	(62,432)
Exercise of stock options	4,007	1,207	2,973
Withholding tax payments on restricted stock vesting and stock option exercises	(42,418)	(25,820)	(8,043)
Repurchases of common stock	(16,135)	(17,256)	(25,171)
Proceeds from short-term borrowings	578,356	—	—
Repayments of short-term borrowings	(578,356)	—	—
<b>Net cash (used in) financing activities</b>	<b>(145,112)</b>	<b>(118,100)</b>	<b>(92,673)</b>
<b>Effect of exchange rate changes on cash and cash equivalents</b>	<b>5,553</b>	<b>1,011</b>	<b>(1,640)</b>
<b>Cash and cash equivalents including restricted cash</b>			
Net increase for the period	333,797	26,795	79,308
Beginning of period	274,253	247,458	168,150
<b>End of period</b>	<b>\$ 608,050</b>	<b>\$ 274,253</b>	<b>\$ 247,458</b>
<b>Supplemental cash flow information:</b>			
Cash paid for income taxes	\$ 45,046	\$ 51,766	\$ 47,208
Cash paid for interest	1,142	—	—
Right-of-use assets obtained in exchange for operating lease liabilities	727	7,464	—
<b>Non-cash investing and financing activity:</b>			
Exercise of stock options - cashless	\$ 10,866	\$ 1,811	\$ —
Intangible assets acquired in exchange for contingent consideration payable	14,665	—	—
Liabilities assumed in connection with acquisition:			
Fair value of assets acquired	—	148,425	—
Cash paid for acquisition of business, net of cash and cash equivalents acquired	—	(97,430)	—
Treasury stock used for acquisition of business	—	(48,830)	—
Liabilities assumed	<u>\$ —</u>	<u>\$ 2,165</u>	<u>\$ —</u>

The accompanying notes are an integral part of these consolidated financial statements.

**MARKETAXESS HOLDINGS INC.**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**

**1. Organization and Principal Business Activity**

MarketAxess Holdings Inc. (the “Company” or “MarketAxess”) was incorporated in the State of Delaware on April 11, 2000. Through its subsidiaries, MarketAxess operates leading electronic trading platforms delivering expanded liquidity opportunities, improved execution quality and significant cost savings across global fixed-income markets. Over 1,800 institutional investor and broker-dealer firms are active users of MarketAxess’ patented trading technology, accessing global liquidity on its platforms in U.S. investment-grade bonds, U.S. high-yield bonds, U.S. Treasuries, emerging market debt, Eurobonds and other fixed income securities. Through its Open Trading™ protocols, MarketAxess executes bond trades between and among institutional investor and broker-dealer clients in the leading all-to-all anonymous trading environment for corporate bonds. MarketAxess also offers a number of trading-related products and services, including: Composite+™ pricing and other market data products to assist clients with trading decisions; auto-execution and other execution services for clients requiring specialized workflow solutions; connectivity solutions that facilitate straight-through processing; and technology services to optimize trading environments. The Company also provides a range of pre- and post-trade services, including trade matching, trade publication, regulatory transaction reporting and market and reference data across a range of fixed-income and other products.

**2. Significant Accounting Policies**

***Basis of Presentation***

The consolidated financial statements include the accounts of the Company and its subsidiaries. All intercompany transactions and balances have been eliminated. Certain reclassifications have been made to the prior periods’ consolidated financial statements in order to conform to the current period presentation. Such reclassifications are immaterial, individually and in the aggregate, to both current and all previously issued financial statements taken as a whole and have no effect on previously reported net income.

***Accounting Pronouncements, Recently Adopted***

In August 2018, the Financial Accounting Standards Board (“FASB”) issued Accounting Standards Update (“ASU”) 2018-15, “Intangibles—Goodwill and Other—Internal-Use Software: Customer’s Accounting for Implementation Costs Incurred in a Cloud Computing Arrangement That Is a Service Contract” (“ASU 2018-15”). The standard requires the capitalization of implementation costs incurred in a cloud computing arrangement to be aligned with the requirements for capitalizing costs incurred to develop or obtain internal-use software. The Company adopted ASU 2018-15 effective July 1, 2019 on a prospective basis. Adoption of this guidance did not have a material impact on the Company’s Consolidated Financial Statements.

In January 2017, the FASB issued ASU 2017-04, “Intangibles-Goodwill and Other” (“ASU 2017-04”). ASU 2017-04 simplifies the testing for goodwill impairment, which eliminates the requirement to determine the fair value of individual assets and liabilities of a reporting unit to measure goodwill impairment. Instead, goodwill impairment testing will be performed by comparing the fair value of the reporting unit with its carrying amount and recognizing impairment by which the carrying amount exceeds the reporting unit’s fair value. The Company adopted ASU 2017-04 effective January 1, 2020 on a prospective basis. Adoption of this guidance did not have a material impact on the Company’s Consolidated Financial Statements.

In June 2016, the FASB issued ASU 2016-13, “Financial Instruments - Credit Losses (Topic 326) -Measurement of Credit Losses on Financial Instruments”. This ASU amends several aspects of the measurement of credit losses on financial instruments, including replacing the existing incurred credit loss model and other models with the Current Expected Credit Losses model (“CECL”). Under CECL, the allowance for losses for financial assets that are measured at amortized cost reflects management’s estimate of credit losses over the remaining expected life of the financial assets. Expected credit losses for newly recognized financial assets, as well as changes to expected credit losses during the period, would be recognized in earnings. Expected credit losses will be measured based on historical experience, current conditions and forecasts that affect the collectability of the reported amount. The Company adopted this ASU on January 1, 2020 using the modified retrospective method of adoption. Adoption of this ASU did not have a material impact on the Company’s Consolidated Financial Statements.

**MARKETAXESS HOLDINGS INC.**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS – (Continued)**

***Accounting Pronouncements, Not Yet Adopted***

In March 2020, the FASB issued ASU 2020-04, “Reference Rate Reform (Topic 848): Facilitation of the Effects of Reference Rate Reform on Financial Reporting”, which is designed to ease the potential burden in accounting for the transition away from LIBOR. The ASU applies to contracts, hedging relationships, and other transactions that reference LIBOR or another reference rate expected to be discontinued and replaced with alternative reference rates as a result of reference rate reform. The ASU provides optional expedients and exceptions for applying U.S. GAAP to contracts, hedging relationships, and other transactions affected by reference rate reform if certain criteria are met. The ASU was effective for all entities as of March 12, 2020 and can be adopted from this date through December 31, 2022. The Company does not expect adoption of this ASU to have a material impact on its Consolidated Financial Statements.

***Cash and Cash Equivalents***

The Company defines cash equivalents as short-term interest-bearing investments with maturities at the time of purchase of three months or less.

***Investments***

The Company determines the appropriate classification of securities at the time of purchase which are recorded in the Consolidated Statements of Financial Condition on the trade date. Securities are classified as available-for-sale or trading. The Company’s available-for-sale investments are comprised of investment-grade corporate debt securities. Available-for-sale investments are carried at fair value with the unrealized gains or losses reported in accumulated other comprehensive loss in the Consolidated Statements of Financial Condition. Trading investments include investment-grade corporate debt securities and U.S. Treasuries and are carried at fair value, with realized and unrealized gains or losses included in other, net in the Consolidated Statements of Operations.

The Company assesses whether an other-than-temporary impairment loss on the available-for-sale investments has occurred due to declines in fair value or other market conditions. The portion of an other-than-temporary impairment related to credit loss is recorded as a charge in the Consolidated Statements of Operations. The remainder is recognized in accumulated other comprehensive loss if the Company does not intend to sell the security and it is more likely than not that the Company will not be required to sell the security prior to recovery. No charges for other-than-temporary losses were recorded during the years ended December 31, 2020, 2019 and 2018.

***Fair Value Financial Instruments***

Fair value is defined as “the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date.” A three-tiered hierarchy for determining fair value has been established that prioritizes inputs to valuation techniques used in fair value calculations. The three levels of inputs are defined as Level 1 (unadjusted quoted prices for identical assets or liabilities in active markets), Level 2 (inputs that are observable in the marketplace other than those inputs classified in Level 1) and Level 3 (inputs that are unobservable in the marketplace). The Company’s financial assets and liabilities measured at fair value on a recurring basis consist of its money market funds, securities available-for-sale, trading securities and foreign currency forward contracts. All other financial instruments are short-term in nature and the carrying amount is reported on the Consolidated Statements of Financial Condition at approximate fair value.

***Receivables from and Payables to Broker-dealers, Clearing Organizations and Customers***

Receivables from broker-dealers, clearing organizations and customers include amounts receivable for securities not delivered by the Company to the purchaser by the settlement date (“securities failed-to-deliver”) and cash deposits held at clearing organizations and clearing brokers to facilitate the settlement and clearance of matched principal transactions. Payables to broker-dealers, clearing organizations and customers include amounts payable for securities not received by the Company from a seller by the settlement date (“securities failed-to-receive”). Securities failed-to-deliver and securities failed-to-receive for transactions executed between and among institutional investor and broker-dealer clients on a matched principal basis where the Company’s U.S. broker-dealer subsidiary serves as a counterparty to both the buyer and the seller are recorded on a settlement date basis. The Company presents its securities failed-to-deliver and securities failed-to-receive balances on a net-by-counterparty basis within receivables from and payables to broker-dealers, clearing organizations and customers. The difference between the Company’s trade-date receivables and payables for unsettled matched principal transactions reflects commissions earned and is recorded within accounts receivable, net on a trade-date basis.

**MARKETAXESS HOLDINGS INC.**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS – (Continued)**

***Allowance for Credit Losses***

All accounts receivable have contractual maturities of less than one year and are derived from trading-related fees and commissions and revenues from products and services. The Company continually monitors collections and payments from its customers and maintains an allowance for doubtful accounts. The allowance for credit losses is based on an estimate of the amount of potential credit losses in existing accounts receivable, as determined from a review of aging schedules, past due balances, historical collection experience and other specific collection issues that have been identified. Account balances are grouped for evaluation based on various risk characteristics, including billing type, legal entity, and geographic region. Additions to the allowance for credit losses are charged to bad debt expense, which is included in general and administrative expense in the Company's Consolidated Statements of Operations. Balances that are determined to be uncollectable are written off against the allowance for credit losses.

The allowance for credit losses was \$0.2 million, \$0.1 million and \$0.1 million as of December 31, 2020, 2019 and 2018, respectively. The provision for bad debts was \$0.5 million, \$0.3 million and \$0.2 million for the years ended December 31, 2020, 2019 and 2018, respectively. Write-offs and other charges against the allowance for credit losses were \$0.1 million, \$0.1 million and \$0.2 million for the years ended December 31, 2020, 2019 and 2018, respectively.

***Depreciation and Amortization***

Fixed assets are carried at cost less accumulated depreciation. The Company uses the straight-line method of depreciation over three to seven years. The Company amortizes leasehold improvements on a straight-line basis over the lesser of the life of the improvement or the remaining term of the lease.

***Software Development Costs***

The Company capitalizes certain costs associated with the development of internal use software, including among other items, employee compensation and related benefits and third-party consulting costs at the point at which the conceptual formulation, design and testing of possible software project alternatives have been completed. Once the product is ready for its intended use, such costs are amortized on a straight-line basis over three years. The Company reviews the amounts capitalized for impairment whenever events or changes in circumstances indicate that the carrying amounts of the assets may not be recoverable.

***Cloud Computing Costs***

The Company capitalizes certain costs associated with cloud computing arrangements, including, among other items, employee compensation and related benefits and third-party consulting costs that are part of the application development stage. These costs are setup as a prepaid asset on the balance sheet and are amortized over the period of the hosting service contract. The Company reviews the amounts capitalized for impairment whenever events or changes in circumstances indicate that the carrying amounts of the assets may not be recoverable.

***Foreign Currency Translation and Forward Contracts***

Assets and liabilities denominated in foreign currencies are translated using exchange rates at the end of the period; revenues and expenses are translated at average monthly rates. Gains and losses on foreign currency translation are a component of accumulated other comprehensive loss in the Consolidated Statements of Financial Condition. Transaction gains and losses are recorded in other, net in the Consolidated Statements of Operations.

The Company enters into foreign currency forward contracts to hedge its net investment in its U.K. subsidiaries. Gains and losses on these transactions are included in accumulated other comprehensive loss in the Consolidated Statements of Financial Condition.

***Revenue Recognition***

The Company's classification of revenues in the Consolidated Statements of Operations represents revenues from contracts with customers disaggregated by type of revenue. The Company has four revenue streams as described below.

***Commission Revenue.*** The Company charges its broker-dealer clients variable transaction fees for trades executed on its platform and, under certain plans, distribution fees or monthly minimum fees to use the platform for a particular product area. Variable transaction fees are recognized on a trade date basis and generally calculated as a percentage of the notional dollar volume of bonds traded on the platforms and vary based on the type, size, yield and maturity of the bond traded and individual client incentives. Bonds that are more actively traded or that have shorter maturities generally generate lower commissions, while bonds that are less actively traded or that have longer maturities generally command higher commissions. Under the Company's disclosed trading transaction fee plans, variable transaction fees, distribution fees and unused monthly fee commitments are invoiced and recorded on a monthly basis.



**MARKETAXESS HOLDINGS INC.**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS – (Continued)**

For Open Trading trades that the Company executes between and among institutional investor and broker-dealer clients on a matched principal basis by serving as counterparty to both the buyer and the seller, the Company earns its commission through the difference in price between the two trades. The commission is collected upon settlement of the trade, which typically occurs within one to two trading days after the trade date. For U.S. Treasury matched principal trades, commissions are invoiced and recorded on a monthly basis. The following table presents commission revenue by fee type:

	Year Ended December 31,		
	2020	2019	2018
	(In thousands)		
<b>Commission revenue by fee type</b>			
<b>Variable transaction fees</b>			
Disclosed trading	\$ 343,427	\$ 266,916	\$ 228,004
Open Trading - matched principal trading	170,537	98,080	65,932
U.S. Treasuries - matched principal trading	12,372	2,184	—
Total variable transaction fees	526,337	367,180	293,936
Distribution fees and unused minimum fees	108,108	96,676	96,898
Total commissions	\$ 634,445	\$ 463,856	\$ 390,834

*Information services* – Information services includes data licensed to the Company’s broker-dealer clients, institutional investor clients and data-only subscribers; professional and consulting services; technology software licenses; and maintenance and support services. The nature and timing of each performance obligation may vary as these contracts are either subscription-based services transferred over time, and may be net of volume-based discounts, or one-time services that are transferred at a point in time. Revenues for services transferred over time are recognized ratably over the contract period as the Company’s performance obligation is met whereas revenues for services transferred at a point in time are recognized in the period the services are provided. Customers are generally billed monthly, quarterly, or annually; revenues billed in advance are deferred and recognized ratably over the contract period. The following table presents information services revenue by timing of recognition:

	Year Ended December 31,		
	2020	2019	2018
	(In thousands)		
<b>Information services revenue by timing of recognition</b>			
Services transferred over time	\$ 32,425	\$ 29,619	\$ 27,475
Services transferred at a point in time	1,916	1,111	752
Total information services revenues	\$ 34,341	\$ 30,730	\$ 28,227

*Post-trade services* – Post-trade services revenue is generated from regulatory transaction reporting, trade publication and trade matching services. Customers are generally billed monthly in arrears and revenue is recognized in the period transactions are processed. Revenues billed in advance are deferred and recognized ratably over the contract period. The Company also generates one-time implementation fees for onboarding clients which are invoiced and recognized in the period the implementation is completed. The following table presents post-trade services revenue by timing of recognition:

	Year Ended December 31,		
	2020	2019	2018
	(In thousands)		
<b>Post-trade services revenue by timing of recognition</b>			
Services transferred over time	\$ 19,158	\$ 15,669	\$ 15,013
Services transferred at a point in time	302	94	333
Total post-trade services revenues	\$ 19,460	\$ 15,763	\$ 15,346



**MARKETAXESS HOLDINGS INC.**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS – (Continued)**

*Other revenues* – Other revenues primarily includes revenue from telecommunications line charges to broker-dealer clients.

Contract liabilities consist of deferred revenues that the Company records when cash payments are received or due in advance of services to be performed. The revenue recognized from contract liabilities and the remaining balance is shown below:

	December 31, 2019	Payments received in advance of services to be performed	Revenue recognized for services performed during the period	Foreign Currency Translation	December 31, 2020
	(In thousands)				
Information services	\$ 2,138	\$ 9,593	\$ (8,528)	\$ —	\$ 3,203
Post-trade services	1,361	15,496	(15,862)	50	1,045
Total deferred revenue	<u>\$ 3,499</u>	<u>\$ 25,089</u>	<u>\$ (24,390)</u>	<u>\$ 50</u>	<u>\$ 4,248</u>

The majority of the Company's contracts are short-term in nature with durations of less than one-year. For contracts with original durations extending beyond one year, the aggregate amount of the transaction price allocated to remaining performance obligations was \$21.1 million as of December 31, 2020. The Company expects to recognize revenue associated with the remaining performance obligations over the next 33 months.

***Stock-Based Compensation***

The Company measures and recognizes compensation expense for all share-based payment awards based on their estimated fair values measured as of the grant date. These costs are recognized as an expense in the Consolidated Statements of Operations over the requisite service period, which is typically the vesting period, with an offsetting increase to additional paid-in capital. Forfeitures are recognized as they occur.

***Income Taxes***

Income taxes are accounted for using the asset and liability method. Deferred income taxes reflect the net tax effects of temporary differences between the financial reporting and tax bases of assets and liabilities and are measured using the enacted tax rates and laws that will be in effect when such differences are expected to reverse. The effect on deferred tax assets and liabilities of a change in tax rates is recognized in income in the period that includes the enactment date. A valuation allowance is recognized against deferred tax assets if it is more likely than not that such assets will not be realized in future years. The Company recognizes interest and penalties related to unrecognized tax benefits in the provision for income taxes in the Consolidated Statements of Operations. All tax effects related to share-based payments are recorded in the provision for income taxes in the periods during which the awards are exercised or vest.

***Business Combinations, Goodwill and Intangible Assets***

Business combinations are accounted for under the purchase method of accounting. The total cost of an acquisition is allocated to the underlying net assets based on their respective estimated fair values. The excess of the purchase price over the estimated fair values of the net assets acquired is recorded as goodwill. Determining the fair value of certain assets acquired and liabilities assumed is judgmental in nature and often involves the use of significant estimates and assumptions, including assumptions with respect to future cash flows, discount rates, growth rates, customer attrition rates and asset lives.

The Company operates as a single reporting unit. Following an acquisition, goodwill no longer retains its identification with a particular acquisition, but instead becomes identifiable with the entire reporting unit. As a result, all of the fair value of the Company is available to support the value of goodwill. An impairment review of goodwill is performed on an annual basis, at year-end, or more frequently if circumstances change. Intangible assets with definite lives, including purchased technologies, customer relationships and other intangible assets, are amortized over their estimated useful lives which range from one to 15 years using either a straight-line or accelerated amortization method based on the pattern of economic benefit the Company expects to realize from such assets. Intangible assets are assessed for impairment when events or circumstances indicate the existence of a possible impairment.

**MARKETAXESS HOLDINGS INC.**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS – (Continued)**

***Earnings Per Share***

Basic earnings per share is computed by dividing the net income attributable to common stock by the weighted-average number of shares of common stock outstanding during the period. For purposes of computing diluted earnings per share, the weighted-average shares outstanding of common stock reflects the dilutive effect that could occur if convertible securities or other contracts to issue common stock were converted into or exercised for common stock.

***Use of Estimates***

The preparation of financial statements in conformity with U.S. generally accepted accounting principles requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure 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 from those estimates.

**3. Regulatory Capital Requirements**

Certain U.S. subsidiaries of the Company are registered as a broker-dealer or swap execution facility and therefore are subject to the applicable rules and regulations of the Securities and Exchange Commission (“SEC”) and the Commodity Futures Trading Commission. These rules contain minimum net capital requirements, as defined in the applicable regulations, and also may require a significant part of the registrants’ assets be kept in relatively liquid form. Certain of the Company’s foreign subsidiaries are regulated by the Financial Conduct Authority in the U.K. or other foreign regulators and must maintain financial resources, as defined in the applicable regulations, in excess of the applicable financial resources requirement. As of December 31, 2020, each of the Company’s subsidiaries that are subject to these regulations had net capital or financial resources in excess of their minimum requirements. As of December 31, 2020, the Company’s subsidiaries maintained aggregate net capital and financial resources that were \$435.4 million in excess of the required levels of \$21.6 million.

In August 2020, one of the Company’s U.S. broker-dealer subsidiaries converted to a self-clearing model for the U.S. bond trades to which it is a counterparty via its Open Trading functionality. Previously, these bond transactions were settled through a third-party clearing broker. As a result of this conversion, the broker-dealer subsidiary is required to segregate funds in a special reserve bank account for the benefit of customers pursuant to Rule 15c3-3 of the Securities Exchange Act of 1934. As of December 31, 2020, the broker-dealer subsidiary had a balance of \$50.1 million in its special reserve bank account.

Each of the Company’s U.S. and foreign regulated subsidiaries are subject to local regulations which generally prohibit repayment of borrowings from the Company or affiliates, paying cash dividends, making loans to the Company or affiliates or otherwise entering into transactions that result in a significant reduction in regulatory net capital or financial resources without prior notification to or approval from such regulated entity’s principal regulator.

**4. Fair Value Measurements**

The following table summarizes the valuation of the Company’s assets and liabilities measured at fair value as categorized based on the hierarchy described in Note 2:

**MARKETAXESS HOLDINGS INC.**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS – (Continued)**

	Level 1	Level 2	Level 3	Total
	(In thousands)			
<b>As of December 31, 2020</b>				
Money market funds	\$ 20,856	\$ —	\$ —	\$ 20,856
Trading securities				
Corporate debt	—	19,222	—	19,222
Mutual funds held in rabbi trust	—	8,889	—	8,889
Foreign currency forward position	—	(805)	—	(805)
Total	<u>\$ 20,856</u>	<u>\$ 27,306</u>	<u>\$ —</u>	<u>\$ 48,162</u>
<b>As of December 31, 2019</b>				
Money market funds	\$ 99,755	\$ —	\$ —	\$ 99,755
Securities available-for-sale				
Corporate debt	—	137,835	—	137,835
Trading securities				
Corporate debt	—	31,120	—	31,120
U.S. Treasuries	—	55,305	—	55,305
Mutual funds held in rabbi trust	—	6,217	—	6,217
Foreign currency forward position	—	(2,772)	—	(2,772)
Total	<u>\$ 99,755</u>	<u>\$ 227,705</u>	<u>\$ —</u>	<u>\$ 327,460</u>

Securities classified within Level 2 were valued using a market approach utilizing prices and other relevant information generated by market transactions involving comparable assets. The foreign currency forward contracts are classified within Level 2 as the valuation inputs are based on quoted market prices. The mutual funds held in a rabbi trust represent investments associated with the Company's deferred cash incentive plan. There were no financial assets classified within Level 3 during the years ended December 31, 2020 and 2019.

The table below presents the carrying value, fair value and fair value hierarchy category of the Company's financial assets and liabilities that are not measured at fair value on the Consolidated Statement of Financial Condition. The carrying values of the Company's financial assets and liabilities not measured at fair value categorized in the fair value hierarchy as Level 1 and Level 2 approximate fair value due to the short-term nature of the underlying assets and liabilities.

	Carrying Value	Fair Value	Level 1	Level 2	Level 3	Total
	(In thousands)					
<b>As of December 31, 2020</b>						
Financial assets not measured at fair value:						
Cash and cash equivalents	\$ 460,858	\$ 460,858	\$ 460,858	\$ —	\$ —	\$ 460,858
Cash segregated under federal regulations	50,059	50,059	50,059	—	—	50,059
Accounts receivable, net of allowance	79,577	79,577	—	79,577	—	79,577
Receivables from broker-dealers, clearing organizations and customers	279,915	279,915	97,043	182,872	—	279,915
Total	<u>\$ 870,409</u>	<u>\$ 870,409</u>	<u>\$ 607,960</u>	<u>\$ 262,449</u>	<u>\$ —</u>	<u>\$ 870,409</u>
Financial liabilities not measured at fair value:						
Payables to broker-dealers, clearing organizations and customers	<u>\$ 133,326</u>	<u>\$ 133,326</u>	<u>\$ —</u>	<u>\$ 133,326</u>	<u>\$ —</u>	<u>\$ 133,326</u>
<b>As of December 31, 2019</b>						
Financial assets not measured at fair value:						
Cash and cash equivalents	\$ 270,124	\$ 270,124	\$ 270,124	\$ —	\$ —	\$ 270,124
Accounts receivable, net of allowance	62,017	62,017	—	62,017	—	62,017
Total	<u>\$ 332,141</u>	<u>\$ 332,141</u>	<u>\$ 270,124</u>	<u>\$ 62,017</u>	<u>\$ —</u>	<u>\$ 332,141</u>

**MARKETAXESS HOLDINGS INC.**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS – (Continued)**

The Company enters into foreign currency forward contracts to hedge the net investment in the Company's U.K. subsidiaries. The Company designates each foreign currency forward contract as a hedge and assesses the risk management objective and strategy, including identification of the hedging instrument, the hedged item and the risk exposure and how effectiveness is to be assessed prospectively and retrospectively. These hedges are for a one-month period and are used to limit exposure to foreign currency exchange rate fluctuations. The fair value of the asset is included in prepaid expenses and other assets and the fair value of the liability is included in accounts payable, accrued expenses and other liabilities in the Consolidated Statements of Financial Condition. Gains or losses on foreign currency forward contracts designated as hedges are included in accumulated other comprehensive loss in the Consolidated Statements of Financial Condition. A summary of the foreign currency forward position is as follows:

	<u>As of December 31,</u>	
	<u>2020</u>	<u>2019</u>
	(In thousands)	
Notional value	\$ 157,057	\$ 155,885
Fair value of notional	157,862	158,657
Fair value of the (liability)	<u>\$ (805)</u>	<u>\$ (2,772)</u>

The following is a summary of the Company's investments:

	<u>Amortized cost</u>	<u>Gross unrealized gains</u>	<u>Gross unrealized losses</u>	<u>Estimated fair value</u>
	(In thousands)			
<b><u>As of December 31, 2020</u></b>				
Trading securities				
Corporate debt	\$ 19,081	\$ 141	\$ —	\$ 19,222
Mutual funds held in rabbi trust	7,680	1,209	—	8,889
Total investments	<u>\$ 26,761</u>	<u>\$ 1,350</u>	<u>\$ —</u>	<u>\$ 28,111</u>
<b><u>As of December 31, 2019</u></b>				
Securities available-for-sale				
Corporate debt	\$ 137,119	\$ 721	\$ (5)	\$ 137,835
Trading securities				
Corporate debt	31,120	14	(14)	31,120
U.S. Treasuries	54,738	567	—	55,305
Mutual funds held in rabbi trust	5,173	1,044	—	6,217
Total trading securities	91,031	1,625	(14)	92,642
Total investments	<u>\$ 228,150</u>	<u>\$ 2,346</u>	<u>\$ (19)</u>	<u>\$ 230,477</u>

The following table summarizes the fair value of the investments based upon the contractual maturities:

	<u>As of December 31,</u>	
	<u>2020</u>	<u>2019</u>
	(In thousands)	
Less than one year	\$ 18,290	\$ 120,850
Due in 1 - 5 years	9,821	109,627
Total	<u>\$ 28,111</u>	<u>\$ 230,477</u>

Proceeds from the sales and maturities of investments during the years ended December 31, 2020, 2019 and 2018 were \$261.6 million, \$262.1 million and \$409.3 million, respectively. Net unrealized losses and gains on trading securities were \$0.4 million and \$0.8 million for the year ended December 31, 2020 and 2019 and were immaterial for the years ended December 31, 2018. Net realized gains were \$1.7 million for the year ended December 31, 2020, and were immaterial for the years ended December 31, 2019 and 2018.

**MARKETAXESS HOLDINGS INC.**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS – (Continued)**

The following table provides fair values and unrealized losses on corporate debt investments and by the aging of the securities' continuous unrealized loss position as of December 31, 2020 and 2019 respectively:

	<u>Less than Twelve Months</u>		<u>Twelve Months or More</u>		<u>Total</u>	
	<u>Fair value</u>	<u>Gross unrealized losses</u>	<u>Fair value</u>	<u>Gross unrealized losses</u>	<u>Fair value</u>	<u>Gross unrealized losses</u>
<b>(In thousands)</b>						
<b>As of December 31, 2020</b>						
Corporate debt	\$ 1,369	\$ —	\$ —	\$ —	\$ —	\$ —
<b>As of December 31, 2019</b>						
Corporate debt	\$ 27,999	\$ (18)	\$ 4,406	\$ (1)	\$ 32,405	\$ (19)

**5. Receivables from and Payables to Broker-dealers, Clearing Organizations and Customers**

As of December 31, 2020, receivables from and payables to broker-dealers, clearing organizations and customers consisted of the following:

	<u>December 31, 2020</u>
	<u>(In thousands)</u>
Receivables from broker-dealers, clearing organizations and customers:	
Securities failed-to-deliver - broker-dealers	\$ 93,294
Securities failed-to-deliver - customers	87,685
Deposits with clearing organizations and broker-dealers	97,043
Other	1,893
Total	<u>\$ 279,915</u>
Payables to broker-dealers, clearing organizations and customers:	
Securities failed-to-receive - broker-dealers	70,917
Securities failed-to-receive - customers	60,784
Other	1,625
Total	<u>\$ 133,326</u>

**6. Acquisitions**

On November 1, 2019, the Company and one of its subsidiaries completed their acquisition of all of the outstanding equity interests of LiquidityEdge LLC (“LiquidityEdge” and such acquisition the “LiquidityEdge Acquisition”) pursuant to the terms and conditions of a Unit Purchase Agreement entered into among the Company, LiquidityEdge, the holders of all the outstanding equity interests in LiquidityEdge and certain other persons named therein on August 12, 2019 (as amended, the “Agreement”). The aggregate consideration for the LiquidityEdge Acquisition was \$153.2 million, comprised of approximately \$104.4 million in cash and 146,450 shares of common stock of the Company (valued at approximately \$48.8 million as of the closing date of the LiquidityEdge Acquisition, as described below). A portion of the stock consideration, amounting to 43,937 shares of common stock, was placed in escrow for up to 18 months to secure the sellers’ indemnification obligations under the Agreement. In addition, under the Agreement, the sellers were prohibited from transferring any of the Company common stock received in the LiquidityEdge Acquisition for a period of six months following the November 1, 2019 closing date. The value ascribed to the shares by the Company was discounted from the market value on the date of closing to reflect the non-marketability of such shares during the restriction period.

LiquidityEdge is a limited liability company organized in the state of Delaware and is a broker-dealer registered with the SEC and the Financial Industry Regulatory Authority. LiquidityEdge offers an electronic trading platform for U.S. Treasuries.

The Company has completed an allocation of the purchase price to the fair value of assets acquired and liabilities assumed at the date of acquisition. The Company utilized an independent third-party to determine the fair value of the acquired intangible assets. The purchase price allocation is as follows (in thousands):

**MARKETAXESS HOLDINGS INC.**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS – (Continued)**

Purchase price	\$	153,210
Less: acquired cash		(2,935)
Purchase price, net of acquired cash		<u>150,275</u>
Accounts receivable		(1,811)
Intangible assets		(58,780)
Prepaid expenses and other assets		(4,168)
Accounts payable, accrued expenses and other liabilities		<u>2,165</u>
Goodwill	\$	<u><u>87,681</u></u>

The acquired intangible assets and useful lives are as follows (\$ in thousands):

	<b>Costs</b>	<b>Useful Lives</b>
Customer relationships	\$ 58,690	15 years
Tradename - finite life	90	1 year
Total	<u>\$ 58,780</u>	

On November 30, 2020 the Company acquired Regulatory Services GmbH, the pan-European regulatory reporting business of Deutsche Börse Group. The purchase price consists of \$22.5 million in cash paid at closing and up to \$24.6 million in contingent consideration payable in cash within 18 months of the closing. The Company is accounting for the transaction as a purchase of assets and recorded \$37.4 million in amortizable intangible assets as of the acquisition date. In September 2020, the Company entered into an agreement to acquire MuniBrokers LLC, a central electronic venue serving municipal bond inter-dealer brokers and dealers. The acquisition is expected to close in the first half of 2021, subject to the satisfaction of customary closing conditions. The purchase price is approximately \$45.0 million in cash, plus transaction costs, with \$20.0 million paid at closing and up to \$25.0 million in contingent consideration payable within three years of the closing.

## 7. Goodwill and Intangible Assets

Goodwill and intangible assets with indefinite lives was \$147.4 and \$146.9 million as of December 31, 2020 and December 31, 2019. Intangible assets that are subject to amortization, including the related accumulated amortization, are comprised of the following:

	<b>December 31, 2020</b>			<b>December 31, 2019</b>		
	<b>Cost</b>	<b>Accumulated amortization</b>	<b>Net carrying amount</b>	<b>Cost</b>	<b>Accumulated amortization</b>	<b>Net carrying amount</b>
	<b>(In thousands)</b>					
Technology	\$ 5,770	\$ (5,770)	\$ —	\$ 5,770	\$ (5,770)	\$ —
Customer relationships	102,696	(7,369)	95,327	64,332	(3,451)	60,881
Non-competition agreements	380	(380)	—	380	(380)	—
Tradenames and patents	400	(373)	27	490	(385)	105
Total	<u>\$ 109,246</u>	<u>\$ (13,892)</u>	<u>\$ 95,354</u>	<u>\$ 70,972</u>	<u>\$ (9,986)</u>	<u>\$ 60,986</u>

Amortization expense associated with identifiable intangible assets was \$3.9 million, \$0.8 million and \$0.4 million for the years ended December 31, 2020, 2019 and 2018, respectively. Annual estimated total amortization expense is \$5.7 million, \$6.9 million, \$7.9 million, \$6.7 million and \$5.7 million for 2021 through 2025.

**MARKETAXESS HOLDINGS INC.**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS – (Continued)**

**8. Capitalized Software, Furniture, Equipment and Leasehold Improvements**

Capitalized software development costs, furniture, equipment and leasehold improvements, net of accumulated depreciation and amortization, are comprised of the following:

	As of December 31,	
	2020	2019
(In thousands)		
Software development costs	\$ 151,139	\$ 119,911
Computer hardware and related software	52,696	48,379
Office hardware	8,782	5,725
Furniture and fixtures	7,078	5,000
Leasehold improvements	29,064	27,966
	248,759	206,981
Accumulated depreciation and amortization	(163,555)	(135,186)
Total	<u>\$ 85,204</u>	<u>\$ 71,795</u>

During the years ended December 31, 2020 and 2019, software development costs totaling \$30.6 million and \$22.4 million, respectively, were capitalized. Non-capitalized software costs and routine maintenance costs are expensed as incurred and are included in employee compensation and benefits and professional and consulting fees in the Consolidated Statements of Operations.

**9. Income Taxes**

The provision for income taxes consists of the following:

	Year Ended December 31,		
	2020	2019	2018
(In thousands)			
<b>Current:</b>			
Federal	\$ 30,215	\$ 28,928	\$ 31,617
State and local	19,130	7,686	5,928
Foreign	15,538	13,234	8,862
Total current provision	<u>64,883</u>	<u>49,848</u>	<u>46,407</u>
<b>Deferred:</b>			
Federal	7,474	2,579	(1,416)
State and local	1,439	403	(272)
Foreign	1,186	(308)	515
Total deferred provision	<u>10,099</u>	<u>2,674</u>	<u>(1,173)</u>
Provision for income taxes	<u>\$ 74,982</u>	<u>\$ 52,522</u>	<u>\$ 45,234</u>

Pre-tax income from U.S. operations was \$288.3 million, \$190.4 million and \$168.5 million for the years ended December 31, 2020, 2019 and 2018, respectively. Pre-tax income from foreign operations was \$86.1 million, \$67.0 million and \$49.6 million for the years ended December 31, 2020, 2019 and 2018, respectively.



**MARKETAXESS HOLDINGS INC.**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS – (Continued)**

The difference between the Company's reported provision for income taxes and the U.S. federal statutory rate of 21% is as follows:

	<b>Year Ended December 31,</b>		
	<b>2020</b>	<b>2019</b>	<b>2018</b>
U.S. federal tax at statutory rate	21.0 %	21.0 %	21.0 %
State and local taxes - net of federal benefit	4.4	2.5	2.0
Credits and deductions related to research activities	(0.3)	(0.3)	(0.3)
Foreign rate differential benefit	(0.4)	(0.5)	(0.5)
Excess tax benefit from stock-based compensation	(5.4)	(3.5)	(2.1)
Other, net	0.7	1.2	0.6
Provision for income taxes	<u>20.0 %</u>	<u>20.4 %</u>	<u>20.7 %</u>

The following is a summary of the Company's net deferred tax assets:

	<b>As of December 31,</b>	
	<b>2020</b>	<b>2019</b>
<b>(In thousands)</b>		
<b>Deferred tax assets:</b>		
Stock compensation expense	\$ 3,682	\$ 4,926
Operating lease liabilities	19,339	20,227
Other	1,968	892
Total deferred tax assets	<u>24,989</u>	<u>26,045</u>
Valuation allowance	—	—
Net deferred tax assets	<u>24,989</u>	<u>26,045</u>
<b>Deferred tax liabilities:</b>		
Depreciation and amortization	(9,729)	(4,085)
Capitalized software development costs	(7,828)	(5,306)
Goodwill and intangible assets	(2,852)	(1,120)
Operating lease right-of-use assets	(15,600)	(16,515)
Deferred tax (liability) asset, net	<u>\$ (11,020)</u>	<u>\$ (981)</u>

The Company or one of its subsidiaries files U.S. federal, state and foreign income tax returns. The Company is currently under a New York State income tax examination for tax years 2010 through 2017 and a New York City income tax examination for the tax years 2016 through 2018. At this time, the Company cannot estimate when the examinations will conclude or the impact such examinations will have on the Company's Consolidated Financial Statements, if any. Generally, other than New York City and State, the Company is no longer subject to tax examinations by tax authorities for years prior to 2017.

**MARKETAXESS HOLDINGS INC.**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS – (Continued)**

A reconciliation of the unrecognized tax benefits is as follows:

	Year Ended December 31,		
	2020	2019	2018
	(In thousands)		
Balance at beginning of year	\$ 6,831	\$ 4,718	\$ 2,650
Additions attributable to state and local tax apportionment	9,486	2,113	2,068
Balance at end of year	<u>\$ 16,317</u>	<u>\$ 6,831</u>	<u>\$ 4,718</u>

As of December 31, 2020, the Company recorded \$16.3 million of unrecognized tax benefits which, if recognized, would affect the Company's effective tax rate. Due to the uncertainty related to the timing and potential outcome of audits, the Company cannot reasonably estimate the amount of the unrecognized tax benefit that could be adjusted in the next 12 months. During the years ended December 31, 2020, 2019 and 2018, the Company recognized \$3.7 million, \$0.6 million and \$0.4 million, respectively, in penalties and interest. The Company had \$4.9 million and \$1.2 million accrued for the payment of interest and penalties at December 31, 2020 and 2019, respectively.

## 10. Stockholders' Equity

### *Common Stock*

As of December 31, 2020 and 2019, the Company had 110,000,000 authorized shares of voting common stock and 10,000,000 authorized shares of non-voting common stock. Voting common stock entitles the holder to one vote per share of common stock held.

The following is a summary of the change in the Company's outstanding shares of voting common stock:

	Year Ended December 31,		
	2020	2019	2018
	(In thousands)		
Outstanding shares of voting common stock at the beginning of year	37,936	37,640	37,621
Exercise of stock options	177	147	121
Issuance of restricted stock, net of cancellations	56	161	67
Shares withheld for withholding tax payments	(125)	(98)	(45)
Treasury shares used for acquisition	—	146	—
Repurchases	(39)	(60)	(124)
Outstanding shares of voting common stock at the end of year	<u>38,005</u>	<u>37,936</u>	<u>37,640</u>

In September 2017, the Board of Directors authorized a fifteen-month share repurchase program for up to \$100.0 million that commenced in October 2017. The expiration date of this program was subsequently extended to March 31, 2019. In January 2019, the Board of Directors authorized a new two-year share repurchase program for up to \$100.0 million, which commenced in April 2019 and expires in March 2021. In January 2021, the Board of Directors authorized a new share repurchase program for up to \$100 million. The Company expects repurchases under the new program to commence in April 2021 following the expiration of the current plan. Shares repurchased under each program will be held in treasury for future use.

### *Dividends*

During 2020, 2019 and 2018, the Company paid quarterly cash dividends of \$0.60 per share, \$0.51 per share and \$0.42 per share, respectively. Any future declaration and payment of dividends will be at the sole discretion of the Company's Board of Directors. The Board of Directors may take into account such matters as general business conditions, the Company's financial results, capital requirements, contractual obligations, legal, and regulatory restrictions on the payment of dividends to the Company's stockholders or by the Company's subsidiaries to their respective parent entities, and any such other factors as the Board of Directors may deem relevant.

**MARKETAXESS HOLDINGS INC.**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS – (Continued)**

**11. Stock-Based Compensation Plans**

The Company maintains stock incentive plans which provide for the grant of stock options, stock appreciation rights, restricted stock, restricted stock units, performance shares, performance units, or other stock-based awards as incentives and rewards to encourage employees, consultants and non-employee directors to participate in the long-term success of the Company. As of December 31, 2020, there were 2,531,199 shares available for grant under the stock incentive plans.

Total stock-based compensation expense was as follows:

	Year Ended December 31,		
	2020	2019	2018
(In thousands)			
<b>Employees:</b>			
Restricted stock and performance shares	\$ 21,310	\$ 20,182	\$ 12,559
Stock options	3,100	4,032	2,193
	<u>24,410</u>	<u>24,214</u>	<u>14,752</u>
<b>Non-employee directors:</b>			
Restricted stock	1,203	1,080	1,098
<b>Total stock-based compensation</b>	<u>\$ 25,613</u>	<u>\$ 25,294</u>	<u>\$ 15,850</u>

The Company records stock-based compensation expense for employees in employee compensation and benefits and for non-employee directors in general and administrative expenses in the Consolidated Statements of Operations.

***Stock Options***

The exercise price of each option granted is equal to the market price of the Company's common stock on the date of grant. Generally, option grants have provided for vesting over a three or five-year period. Options generally expire in six or ten years from the date of grant. The fair value of each option award is estimated on the date of grant using the Black-Scholes option-pricing model. The determination of fair value of share-based payment awards on the date of grant using an option-pricing model is affected by the Company's stock price as well as assumptions regarding a number of highly complex and subjective variables, including the expected stock price volatility over the term of the awards, the risk-free interest rate, the expected dividend yield rate and the expected term. Expected volatilities are based on historical volatility of the Company's stock. The risk-free interest rate is based on U.S. Treasury securities with a maturity value approximating the expected term of the option. The dividend yield rate is based on the expected annual dividends to be paid divided by the expected stock price. The expected term represents the period of time that options granted are expected to be outstanding based on actual and projected employee stock option exercise behavior.

The weighted-average fair value for options granted during 2020, 2019 and 2018 was \$91.43, \$58.37 and \$56.11, respectively. The following table represents the assumptions used for the Black-Scholes option-pricing model to determine the per share weighted-average fair value for options granted, excluding the two awards discussed below:

	Year Ended December 31,		
	2020	2019	2018
Expected life (years)	5.0	5.0	5.0
Risk-free interest rate	1.6%	2.6%	2.2%
Expected volatility	26.8%	25.9%	26.9%
Expected dividend yield	0.6%	0.8%	0.8%

**MARKETAXESS HOLDINGS INC.**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS – (Continued)**

In addition to the option grants above, 76,868 stock options were granted to the Company’s President and Chief Operating Officer in January 2019 with an aggregate grant date fair value of \$2.9 million as determined by an independent third party using a Monte Carlo simulation model. The exercise price is \$272.88 for 35,679 of the stock options and \$294.71 for the remaining 41,189 stock options, which is equal to 125% and 135%, respectively, of the fair market value of the Company’s common stock on the grant date. Subject to the grantee’s continued service with the Company, the options will vest and become exercisable on January 22, 2024. The options expire on July 22, 2024. Key assumptions used for the Monte Carlo model included a risk-free interest rate of 2.6%, volatility of 25.8% and a dividend yield of 0.8%.

In November 2018, 148,524 stock options were granted to the Company’s Chief Executive Officer with a grant date fair value of \$5.5 million as determined by an independent third party using a Monte Carlo simulation model. The exercise price is \$257.78 for 69,113 of the stock options and \$278.40 for the remaining 79,411 stock options, which is equal to 125% and 135%, respectively, of the fair market value of the Company’s stock on the grant date. Subject to the grantee’s continued service with the Company, the options will vest and become exercisable on November 8, 2023. The options expire on May 8, 2024. Key assumptions used for the Monte Carlo model included a risk-free interest rate of 3.1%, volatility of 25.9% and a dividend yield of 0.8%.

The following table reports stock option activity during the three years ended December 31, 2020 and the intrinsic value as of December 31, 2020:

	<u>Number of Shares</u>	<u>Weighted- Average Exercise Price (\$)</u>	<u>Remaining Contractual Term</u>	<u>Intrinsic Value (\$)</u> <u>(In thousands)</u>
Outstanding at December 31, 2017	529,611	67.60		
Granted	168,217	261.19		
Canceled	(1,676)	142.69		
Exercised	(120,588)	24.66		
Outstanding at December 31, 2018	575,564	132.93		
Granted	82,474	279.57		
Canceled	(548)	198.67		
Exercised	(106,899)	28.24		
Outstanding at December 31, 2019	550,591	175.16		
Granted	13,900	368.10		
Canceled	(218)	307.52		
Exercised	(176,901)	84.07		76,709
Outstanding at December 31, 2020	<u>387,372</u>	223.60	2.8	134,401
Exercisable at December 31, 2020	<u>99,415</u>	137.78	1.7	43,025

The intrinsic value is the amount by which the closing price of the Company’s common stock on December 31, 2020 of \$570.56 or the price on the day of exercise exceeds the exercise price of the stock options multiplied by the number of shares. As of December 31, 2020, there was \$5.9 million of total unrecognized compensation cost related to non-vested stock options. That cost is expected to be recognized over a weighted-average period of 2.4 years.

**MARKETAXESS HOLDINGS INC.**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS – (Continued)**

***Restricted Stock and Performance Shares***

Restricted stock generally vests over a three or five-year period. Compensation expense is measured at the grant date and recognized ratably over the vesting period.

Prior to 2020, performance shares were generally granted with a performance period of one year, whereby each performance share award was earned or forfeited based on the level of achievement by the Company of pre-tax operating income, as defined in the year following the grant. The pay-out ranged from zero to 150% of the performance share award. For each performance share earned, a participant was awarded an equal number of shares of restricted stock. Subject to the grantee's continued service, any restricted stock awarded to a participant vested in two equal installments on each of the second and third anniversaries of the date of grant of the applicable performance share award. Compensation expense for one-year performance shares was measured at the grant date and recognized on a graded basis over the vesting period.

The following table reports performance share activity for the one-year performance awards for the two years ended December 31, 2019:

Performance year:	2019	2018
Target share pay-out	16,716	10,479
Actual share pay-out (paid in following year)	19,401	10,479
Weighted average fair value per share on grant date	\$ 223.81	\$ 202.04

Beginning in 2020, performance shares were granted with a three-year performance period, whereby each performance share award will be earned or forfeited based on the level of achievement by the Company of certain operating metrics over the three-year period following the grant. The pay-out will range from zero to 150% of the performance share award. For each performance share earned, a participant is awarded an equal number of shares of restricted stock. Subject to the grantee's continued service, any restricted stock awarded to a participant will vest on the three year anniversary of the grant date. Compensation expense for the three-year performance shares is measured at the grant date with performance target achievement assessed at the end of each reporting period. The grant date value of the number of shares deemed probable to vest is recognized ratably over the vesting period. A total of 13,295 performance shares were awarded in January 2020 under the three-year program with a grant date fair value of \$368.10. As of December 31, 2020, 15,319 shares have been deemed probable to vest.

In addition to the grants above, 18,914 performance shares were granted to the Company's President and Chief Operating Officer in January 2019 with an aggregate fair value of \$2.9 million as determined by an independent third party using a Monte Carlo simulation model. The performance share award provides that the number of shares earned will be based on the Company's achievement of certain share price levels during the five-year performance period. The performance level is \$272.88 for 8,969 of the performance shares and \$294.71 for the remaining 9,945 performance shares, which is equal to 125% and 135%, respectively, of the fair market value of the Company's common stock on the grant date. Each of the performance levels have been achieved. Subject to the grantee's continued service with the Company, earned shares will vest on January 22, 2024. Key assumptions used for the Monte Carlo simulation included a risk-free interest rate of 2.6%, volatility of 25.9% and a dividend yield of 0.8%.

In November 2018, 37,742 performance shares were granted to the Company's Chief Executive Officer with a grant date fair value of \$5.5 million as determined by an independent third party using a Monte Carlo simulation model. The performance share award provides that the number of shares earned will be based on the Company's achievement of certain share price levels during the five-year performance period. The performance level is \$257.78 for 17,942 of the performance shares and \$278.40 for the remaining 19,800 performance shares, which is equal to 125% and 135%, respectively, of the fair market value of the Company's stock on the grant date. Each of the performance levels have been achieved. Subject to the grantee's continued service with the Company, earned shares will vest on November 8, 2023. Key assumptions used for the Monte Carlo model included a risk-free interest rate of 3.1%, volatility of 26.1% and a dividend yield of 0.8%.

**MARKETAXESS HOLDINGS INC.**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS – (Continued)**

The following table reports restricted stock and performance share activity during the three years ended December 31, 2020:

	<u>Number of Restricted Shares</u>	<u>Weighted-Average Grant Date Fair Value</u>
Outstanding at December 31, 2017	319,599	\$ 88.77
Granted	59,179	
Performance share pay-out	8,094	
Canceled	(4,046)	
Vested	(110,956)	
Outstanding at December 31, 2018	271,870	\$ 112.47
Granted	118,632	
Performance share pay-out	87,163	
Canceled	(2,321)	
Vested	(129,312)	
Outstanding at December 31, 2019	346,032	\$ 154.27
Granted	38,907	
Performance share pay-out	19,401	
Canceled	(3,480)	
Vested	(170,213)	
Outstanding at December 31, 2020	<u>230,647</u>	\$ 224.63

As of December 31, 2020, there was \$27.0 million of total unrecognized compensation expense related to non-vested restricted stock and performance shares. That cost is expected to be recognized over a weighted-average period of 1.5 years.

***Employee Stock Purchase Plan***

The Company offers a non-qualified employee stock purchase plan for non-executive employees. Under the plan, participants are granted the right to purchase shares of common stock based on the fair market value on the last day of the six-month offering period. On the purchase date, the Company grants to the participants a number of shares of common stock equal to 20% of the aggregate shares purchased by the participant. These matching shares vest over a one-year period. The Company issued 729, 617 and 989 matching shares in connection with the plan for the years ended December 31, 2020, 2019, and 2018, respectively.

**12. Earnings Per Share**

The following table sets forth basic and diluted weighted average shares outstanding used to compute earnings per share:

	<u>Year Ended December 31,</u>		
	<u>2020</u>	<u>2019</u>	<u>2018</u>
	<b>(In thousands, except per share amounts)</b>		
Basic weighted average shares outstanding	37,359	37,083	36,958
Dilutive effect of stock options and restricted stock	785	873	897
Diluted weighted average shares outstanding	<u>38,144</u>	<u>37,956</u>	<u>37,855</u>
Basic earnings per share	\$ 8.01	\$ 5.53	\$ 4.68
Diluted earnings per share	\$ 7.85	\$ 5.40	\$ 4.57

**MARKETAXESS HOLDINGS INC.**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS – (Continued)**

Stock options and restricted stock totaling 21,127 shares, 146,822 shares and 83,718 shares for the years ended December 31, 2020, 2019 and 2018, respectively, were excluded from the computation of diluted earnings per share because their effect would have been antidilutive. The computation of diluted shares can vary among periods due, in part, to the change in the average price of the Company's common stock.

### **13. Credit Agreements**

#### *Revolving Credit Agreement*

In October 2015, the Company entered into a two-year amended and restated credit agreement (the "Prior Credit Agreement") that provided for revolving loans and letters of credit up to an aggregate of \$100.0 million. The maturity date of the Prior Credit Agreement was subsequently extended to November 2020. On August 19, 2020, the Company amended the Prior Credit Agreement to, among other things, (i) permit investments of up to \$500 million in MarketAxess Corporation and (ii) increase the aggregate commitments of the lender under the Credit Agreement from \$100 million to \$450 million. The Prior Credit Agreement matured on November 13, 2020, when the Company entered into a new one-year credit agreement. Borrowings under the Prior Credit Agreement bore interest at a rate per annum equal to the base rate or adjusted LIBOR plus an applicable margin that varied with the Company's consolidated total leverage ratio.

In November 2020, the Company entered into a credit agreement (the "Credit Agreement") with a syndicate of lenders and JPMorgan Chase Bank, N.A., as administrative agent, that provides aggregate commitments totaling \$500 million, consisting of a revolving credit facility and a \$5 million letter of credit sub-limit for standby letters of credit. The Credit Agreement replaced the Prior Credit Agreement and will mature on November 12, 2021, with the Company's option to request up to two additional 364-day extensions at the discretion of each lender and subject to customary conditions. Subject to satisfaction of certain specified conditions, the Company is permitted to upsize the Credit Agreement by up to \$250 million in total. As of December 31, 2020, the Company had \$1.0 million in letters of credit outstanding and \$499.0 million in available borrowing capacity under the Credit Agreement.

Borrowings under the Credit Agreement will bear interest at a rate per annum equal to the base rate or adjusted LIBOR plus an applicable margin that varies with the Company's consolidated total leverage ratio. The Credit Agreement requires that the Company satisfy certain covenants, which include leverage ratios and minimum earnings before interest, tax, and depreciation and amortization ("EBITDA") requirements. The Company was in compliance with all applicable covenants at December 31, 2020. The Company incurred an aggregate of \$0.8 million of interest expense on borrowings under the Credit Agreement and the Prior Credit Agreement for the year ended December 31, 2020.

#### *Collateralized Agreement*

In connection with its self-clearing operations, one of the Company's broker-dealer subsidiaries entered into an agreement (the "Collateralized Agreement") with its settlement bank to provide loans to the subsidiary in amounts up to an aggregate of \$200.0 million on an uncommitted basis. Borrowings under the Collateralized Agreement are collateralized by securities pledged by the Company's broker-dealer subsidiary to the settlement bank, subject to applicable haircuts and concentration limits. Borrowings under the Collateralized Agreement will bear interest at a rate per annum equal to the Federal Funds Rate plus 1.00%. The Company incurred \$0.1 million of interest expense on borrowings under the Collateralized Agreement during the year ended December 31, 2020. As of December 31, 2020, the Company had no borrowings outstanding and \$200.0 million in available borrowing capacity under the Collateralized Agreement.



**MARKETAXESS HOLDINGS INC.**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS – (Continued)**

**14. Leases**

The Company has operating leases for corporate offices with initial lease terms ranging from one-year to 15 years. Certain leases contain options to extend the initial term at the Company's discretion. The Company accounts for the option to extend when it is reasonably certain of being exercised. The Company's lease agreements do not contain any material residual value guarantees, restrictions or covenants.

The following table presents the components of occupancy expense for the years ended December 31, 2020 and 2019:

Lease cost:	Classification	As of December 31,	
		2020	2019
		(In thousands)	
Operating lease cost	Occupancy	\$ 13,455	\$ 10,875
Operating lease cost for subleased/assigned properties	Other, net	2,404	2,422
Variable lease costs	Occupancy	26	169
Sublease income for subleased/assigned properties	Other, net	(2,420)	(2,422)
Net lease cost		<u>\$ 13,465</u>	<u>\$ 11,044</u>

The Company determines whether an arrangement is, or includes, a lease at contract inception. Operating lease right-of-use assets and liabilities are recognized at commencement date and are initially measured based on the present value of lease payments over the defined lease term. As the Company's leases do not provide an implicit rate, the Company used its incremental borrowing rate based on the information available at the adoption date in determining the present value of lease payments.

The weighted average remaining lease term and weighted average discount rate are as follows:

Lease Term and Discount Rate	As of December 31,	
	2020	2019
Weighted average remaining lease term (in years)	12.3	13.3
Weighted average discount rate	5.9 %	5.9 %

The following table presents the maturity of lease liabilities as of December 31, 2020:

	(In thousands)	
2021	\$	12,131
2022		10,516
2023		10,270
2024		10,937
2025		10,937
2026 and thereafter		79,003
Total lease payments		133,794
Less: interest		40,182
Present value of lease liabilities	<u>\$</u>	<u>93,612</u>

The Company has entered into agreements to sublease or assign the Company's lease obligations on two properties to third parties and is contingently liable should the third parties default on future lease obligations through the lease termination dates of February 2022 and May 2022. The aggregate amount of the future lease obligations under these arrangements is \$2.1 million as of December 31, 2020.

**MARKETAXESS HOLDINGS INC.**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS – (Continued)**

**15. Commitments and Contingencies**

*Legal*

In the normal course of business, the Company and its subsidiaries included in the consolidated financial statements may be involved in various lawsuits, proceedings and regulatory examinations. The Company assesses its liabilities and contingencies in connection with outstanding legal proceedings, if any, utilizing the latest information available. For matters where it is probable that the Company will incur a material loss and the amount can be reasonably estimated, the Company would establish an accrual for the loss. Once established, the accrual would be adjusted to reflect any relevant developments. When a loss contingency is not both probable and estimable, the Company does not establish an accrual.

Based on currently available information, the outcome of the Company's outstanding matters is not expected to have a material adverse impact on the Company's financial position. It is not presently possible to determine the ultimate exposure to these matters and there is no assurance that the resolution of the outstanding matters will not significantly exceed any reserves accrued by the Company.

*Other*

The Company, through certain of its subsidiaries, executes bond transactions between its institutional investor and broker-dealer clients on a matched principal basis by serving as counterparty to both the buyer and the seller in trades. In August 2020, one of the Company's U.S. broker-dealer subsidiaries converted to a self-clearing model for the settlement of such transactions. The Company's other U.S. and U.K subsidiaries continue to settle their transactions through third-party clearing brokers. Settlement typically occurs within one to two trading days after the trade date. Cash settlement of the transaction occurs upon receipt or delivery of the underlying instrument that was traded. Under both the self-clearing and the third-party clearing broker models, the Company is exposed to credit risk in the event a counterparty does not fulfill its obligation to complete a transaction or if there is a miscommunication or other error in executing a matched principal transaction. Pursuant to the terms of the securities clearing agreements, each third-party clearing broker has the right to charge the Company for any losses they suffer resulting from a counterparty's failure on any of the Company's trades. The Company did not record any liabilities or losses with regard to counterparty failures for the three years ended December 31, 2020.

In the normal course of business, the Company enters into contracts that contain a variety of representations, warranties and general indemnifications. The Company's maximum exposure under these arrangements is unknown, as this would involve future claims that may be made against the Company that have not yet occurred. However, based on experience, the Company expects the risk of loss to be remote.

**16. Segment and Geographic Information**

The Company operates an electronic multi-party platform for the trading of fixed-income securities and provides related data, analytics, compliance tools and post-trade services. The Company's operations constitute a single business segment because of the highly integrated nature of these products and services, of the financial markets in which the Company competes and of the Company's worldwide business activities. The Company believes that results by geographic region or client sector are not necessarily meaningful in understanding its business.

For the years ended December 31, 2020, 2019 and 2018, the U.K. was the only individual foreign country in which the Company had a subsidiary that accounted for 10% or more of the total revenues or total long-lived assets. Revenues and long-lived assets are attributed to geographic area based on the location of the particular subsidiary. Long-lived assets are defined as furniture, equipment, leasehold improvements and capitalized software. Revenues for the three years ended December 31, 2020, 2019 and 2018 and long-lived assets as of December 31, 2020 and 2019 were as follows:

	Year Ended December 31,		
	2020	2019	2018
	(In thousands)		
Revenues			
Americas	\$ 583,164	\$ 427,276	\$ 369,324
Europe	89,751	74,511	59,943
Asia	16,210	9,565	6,298
Total	<u>\$ 689,125</u>	<u>\$ 511,352</u>	<u>\$ 435,565</u>

**MARKETAXESS HOLDINGS INC.**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS – (Continued)**

	As of December 31,	
	2020	2019
	(In thousands)	
Long-lived assets, as defined		
Americas	\$ 68,707	\$ 62,376
Europe	16,491	9,410
Asia	6	9
Total	\$ 85,204	\$ 71,795

**17. Retirement and Deferred Compensation Plans**

The Company, through its U.S. and U.K. subsidiaries, offers its employees the opportunity to invest in defined contribution plans. For the years ended December 31, 2020, 2019 and 2018, the Company contributed \$4.0 million, \$3.3 million and \$2.6 million, respectively, to the plans.

The Company offers a non-qualified deferred cash incentive plan to certain officers and other employees. Under the plan, eligible employees may defer up to 100% of their annual cash incentive pay. The Company has elected to fund its deferred compensation obligations through a rabbi trust. The rabbi trust is subject to creditor claims in the event of insolvency but such assets are not available for general corporate purposes. Assets held in the rabbi trust are invested in mutual funds, as selected by the participants, which are designated as trading securities and carried at fair value. As of December 31, 2020 and 2019, the fair value of the mutual fund investments and deferred compensation obligations were \$8.9 million and \$6.2 million, respectively. Changes in the fair value of securities held in the rabbi trust and offsetting increases or decreases in the deferred compensation obligation are recognized in other, net in the Company's Consolidated Statements of Operations.

**18. Cash and Cash Equivalents and Restricted Cash**

The following table provides a reconciliation of cash and cash equivalents together with restricted or segregated cash as reported within the Consolidated Statements of Financial Condition to the sum of the same such amounts shown in the Consolidated Statements of Cash Flows:

	Statement of Financial Condition Location	December 31, 2020	December 31, 2019
		(In thousands)	
Cash and cash equivalents	Cash and cash equivalents	\$ 460,858	\$ 270,124
Cash segregated for regulatory purposes	Cash segregated under federal regulations	50,059	—
Deposits with clearing organizations and broker-dealers	Receivables from broker-dealers, clearing organizations and customers	97,043	—
Other deposits	Prepaid expenses and other assets	90	4,129
Total		\$ 608,050	\$ 274,253

**19. Parent Company Information**

The following tables present Parent Company-only financial information and should be read in conjunction with the consolidated financial statements of the Company.

**MARKETAXESS HOLDINGS INC.**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS – (Continued)**

**MarketAxess Holdings Inc.**  
**(Parent Company Only)**  
**Condensed Statements of Financial Condition**

	As of	
	December 31, 2020	December 31, 2019
	(In thousands)	
<b>ASSETS</b>		
Cash and cash equivalents	\$ 55,747	\$ 48,241
Investments, at fair value	4,811	141,318
Accounts receivable	178	63
Receivable from subsidiaries	41,986	5,997
Intangible assets, net of accumulated amortization	27	30
Furniture, equipment, leasehold improvements and capitalized software, net of accumulated depreciation and amortization	23,518	25,247
Operating lease right-of-use assets	64,460	68,559
Investments in subsidiaries	853,626	570,145
Prepaid expenses and other assets	4,591	6,978
Income and other tax receivable	9,028	3,219
<b>Total assets</b>	<b>\$ 1,057,972</b>	<b>\$ 869,797</b>
<b>LIABILITIES AND STOCKHOLDERS' EQUITY</b>		
<b>Liabilities</b>		
Accrued employee compensation	\$ 10,241	\$ 6,543
Income and other tax liabilities	3,457	—
Accounts payable, accrued expenses and other liabilities	9,341	9,254
Operating lease liabilities	79,872	83,909
<b>Total liabilities</b>	<b>102,911</b>	<b>99,706</b>
<b>Stockholders' equity</b>		
Preferred stock	—	—
Series A Preferred Stock	—	—
Common stock voting	123	122
Common stock non-voting	—	—
Additional paid-in capital	329,742	342,541
Treasury stock	(169,523)	(153,388)
Retained earnings	799,369	591,086
Accumulated other comprehensive loss	(4,650)	(10,270)
<b>Total stockholders' equity</b>	<b>955,061</b>	<b>770,091</b>
<b>Total liabilities and stockholders' equity</b>	<b>\$ 1,057,972</b>	<b>\$ 869,797</b>

**MARKETAXESS HOLDINGS INC.**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS – (Continued)**

**MarketAxess Holdings Inc.**  
**(Parent Company Only)**  
**Condensed Statements of Operations and Comprehensive Income**

	Year Ended December 31,		
	2020	2019	2018
	(In thousands)		
<b>Dividends from subsidiary</b>	\$ 30,000	\$ 165,000	\$ 130,000
<b>Expenses</b>			
Employee compensation and benefits	19,710	16,100	10,785
Depreciation and amortization	2,068	1,919	1,760
Technology and communications	10	13	43
Professional and consulting fees	7,332	6,523	4,932
Occupancy	162	850	7,381
General and administrative	2,551	2,252	1,513
<b>Total expenses</b>	31,833	27,657	26,414
<b>Operating (loss) income</b>	(1,833)	137,343	103,586
<b>Other income (expense)</b>			
Investment income	2,799	5,305	3,835
Interest expense	(805)	—	—
Other, net	(318)	(1,344)	(711)
<b>Total other income</b>	1,676	3,961	3,124
<b>(Loss) income before income taxes and equity in undistributed earnings of subsidiaries</b>	(157)	141,304	106,710
Provision for income taxes	(23,444)	(9,442)	(7,350)
Income before equity in undistributed income of subsidiaries	23,287	150,746	114,060
Equity in undistributed income of subsidiaries	276,090	54,156	58,792
<b>Net income</b>	299,377	204,902	172,852
Other comprehensive income (loss), net	5,620	2,124	(2,168)
<b>Comprehensive income</b>	<u>\$ 304,997</u>	<u>\$ 207,026</u>	<u>\$ 170,684</u>

**MARKETAXESS HOLDINGS INC.**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS – (Continued)**

**MarketAxess Holdings Inc.**  
**(Parent Company Only)**  
**Condensed Statements of Cash Flows**

	Year Ended December 31,		
	2020	2019	2018
	(In thousands)		
<b>Cash flows from operating activities</b>			
Net income	\$ 299,377	\$ 204,902	\$ 172,852
Adjustments to reconcile net income to net cash provided by operating activities:			
Depreciation and amortization	2,068	1,919	1,760
Amortization of operating lease right-of-use assets	4,117	4,027	—
Stock-based compensation expense	10,834	10,547	5,801
Deferred taxes	3,644	1,255	(2,515)
Equity in undistributed income of subsidiaries	(276,090)	(54,156)	(58,792)
Other	(671)	328	710
Changes in operating assets and liabilities:			
(Increase) in accounts receivable	(115)	(4)	(14)
(Increase) decrease in receivable from subsidiaries	(25,049)	5,253	15,985
(Increase) decrease in prepaid expenses and other assets	(1,085)	933	(782)
(Increase) in mutual funds held in rabbi trust	(1,328)	(1,183)	(470)
Increase in accrued employee compensation	3,698	876	567
(Increase) in income and other tax receivable	(1,240)	(3,219)	—
Increase (decrease) in income and other tax liabilities	6,676	(2,612)	469
(Decrease) increase in accounts payable, accrued expenses and other liabilities	(442)	(2,039)	13,619
(Decrease) increase in operating lease liabilities	(4,055)	1,191	—
<b>Net cash provided by operating activities</b>	<u>20,339</u>	<u>168,018</u>	<u>149,190</u>
<b>Cash flows from investing activities</b>			
Acquisition of business, net of cash and cash equivalents acquired	—	(102,320)	—
Available-for-sale investments			
Proceeds from maturities and sales	170,657	170,936	333,791
Purchases	(32,865)	(160,827)	(336,533)
Purchases of furniture, equipment and leasehold improvements	(337)	(1,424)	(24,786)
Purchase of intangible asset	—	(30)	—
<b>Net cash provided by (used in) investing activities</b>	<u>137,455</u>	<u>(93,665)</u>	<u>(27,528)</u>
<b>Cash flows from financing activities</b>			
Cash dividend on common stock	(90,566)	(76,231)	(62,432)
Exercise of stock options	4,007	1,207	2,973
Withholding tax payments on restricted stock vesting and stock option exercises	(42,418)	(25,820)	(8,043)
Repurchases of common stock	(16,135)	(17,256)	(25,171)
Proceeds from short-term borrowings	348,000	—	—
Repayments of short-term borrowings	(348,000)	—	—
<b>Net cash (used in) financing activities</b>	<u>(145,112)</u>	<u>(118,100)</u>	<u>(92,673)</u>
<b>Effect of exchange rate changes on investments</b>	<u>(5,176)</u>	<u>(3,852)</u>	<u>4,129</u>
<b>Cash and cash equivalents including restricted cash</b>			
Net increase (decrease) for the period	7,506	(47,599)	33,118
Beginning of period	48,241	95,840	62,722
<b>End of period</b>	<u>\$ 55,747</u>	<u>\$ 48,241</u>	<u>\$ 95,840</u>
<b>Supplemental cash flow information:</b>			
Cash paid for income taxes	\$ 32,674	\$ 41,025	\$ 37,721
Cash paid for interest	805	—	—
<b>Non-cash investing and financing activity:</b>			
Exercise of stock options - cashless	\$ 10,866	\$ 1,811	\$ —
Treasury stock used for acquisition of business	—	(48,830)	—

**Item 9. Changes in and Disagreements with Accountants on Accounting and Financial Disclosure.**

None.

**Item 9A. Controls and Procedures.**

Our management, including the Chief Executive Officer and Chief Financial Officer, evaluated the effectiveness of our “disclosure controls and procedures,” as that term is defined in Rule 13a-15(e) and Rule 15d-15(e) promulgated under the Securities Exchange Act of 1934, as amended (the “Exchange Act”), as of December 31, 2020. Based on that evaluation, the Chief Executive Officer and Chief Financial Officer concluded that the disclosure controls and procedures are effective to ensure that information required to be disclosed by MarketAxess in the reports that we file or submit under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the Securities and Exchange Commission’s rules and forms, and to ensure that information is accumulated and communicated to our management, including the Chief Executive Officer and Chief Financial Officer, as appropriate to allow timely decisions regarding required disclosure.

As a result of the Pandemic, our global workforce rapidly shifted to a work-from-home environment beginning in mid-March 2020. We have concluded that the changes to the working environment as a result of this shift did not have a material effect on our internal control over financial reporting during the fourth quarter.

There were no other changes in our internal control over financial reporting (as defined in Rule 13a-15(f) and Rule 15d-15(f) under the Exchange Act) during the quarter ended December 31, 2020 identified in connection with the evaluation thereof by our management, including the Chief Executive Officer and Chief Financial Officer, that materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Management’s annual report on internal control over financial reporting and the report of our independent registered public accounting firm appears in Part II, Item 8. *Financial Statements and Supplementary Data* of this Annual Report on Form 10-K.

**Item 9B. Other Information.**

None.



## PART III

### Item 10. *Directors, Executive Officers and Corporate Governance.*

The information required by this item is incorporated herein by reference to the sections entitled “Proposal 1 — Election of Directors,” “Corporate Governance and Board Matters,” and “Executive Officers” in our definitive Proxy Statement (the “Proxy Statement”) for the Annual Meeting of Stockholders to be held in the second quarter of 2021. We intend to file the Proxy Statement within 120 days after the end of our fiscal year (i.e., on or before April 30, 2021). Our Code of Conduct applicable to directors and all employees, including senior financial officers, is available on our website at [www.marketaxess.com](http://www.marketaxess.com). If we make any amendments to our Code of Conduct that are required to be disclosed pursuant to the Exchange Act, we will make such disclosures on our website.

### Item 11. *Executive Compensation.*

The information required by this item is incorporated herein by reference to the sections entitled “Compensation Discussion and Analysis,” “Report of the Compensation and Talent Committee of the Board of Directors,” “Executive Compensation” and “Corporate Governance and Board Matters – Directors’ compensation” in our Proxy Statement.

### Item 12. *Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters.*

The information required by this item with respect to the security ownership of certain beneficial owners and management is incorporated herein by reference to the section entitled “Security Ownership of Certain Beneficial Owners and Management” in our Proxy Statement.

### Equity Compensation Plan Information

The following table provides certain information regarding common stock authorized for issuance under our incentive plans as of December 31, 2020:

Plan Category	Number of Securities to be Issued Upon Exercise of Outstanding Options, Warrants and Rights (a)	Weighted-Average Exercise Price of Outstanding Options, Warrants and Rights (b)	Number of Securities Remaining Available for Future Issuance under Equity Compensation Plans (Excluding Securities Reflected in Column (a)) (c)
Equity compensation plans approved by stockholders	387,372	\$ 223.60	2,531,199

### Item 13. *Certain Relationships and Related Transactions, and Director Independence.*

The information required by this item is incorporated herein by reference to the section entitled “Certain Relationships and Related Party Transactions” in our Proxy Statement.

### Item 14. *Principal Accounting Fees and Services.*

The information required by this item is incorporated herein by reference to the section entitled “Proposal 2 – Ratification of Selection of Independent Registered Public Accounting Firm – Audit and other fees” in our Proxy Statement.

## PART IV

### Item 15. Exhibits and Financial Statement Schedules.

#### (a) Financial Statements and Schedules

The financial statements are set forth under Item 8 of this Annual Report on Form 10-K. Financial statement schedules have been omitted since they are either not required, not applicable, or the information is otherwise included.

#### (b) Exhibit Listing

Number	Description
2.1	Unit Purchase Agreement, dated as of August 12, 2019, by and among MarketAxess Holdings Inc., LiquidityEdge LLC, each of the Sellers identified therein, RF7 LLC (as the Sellers' Representative) and David Rutter (solely for purposes of Section 6.7 thereof) (incorporated by reference to Exhibit 2.1 to the registrant's Quarterly Report on Form 10-Q dated October 25, 2019)
2.1(a)	Amendment No. 1 to Unit Purchase Agreement, dated as of November 1, 2019, by and between MarketAxess Holdings Inc. and RF7 LLC (as the Sellers' Representative) (incorporated by reference to Exhibit 2.1(a) to the registrant's Annual Report on Form 10-K for the year ended December 31, 2019)
3.1(a)	Amended and Restated Certificate of Incorporation (incorporated by reference to Exhibit 3.2 to Amendment No.2 to the registrant's Registration Statement on Form S-1 dated May 7, 2004 (Registration No. 333-112718))
3.1(b)	Form of Certificate of Designation of Series A Preferred Stock of MarketAxess Holdings Inc. (incorporated by reference to Exhibit 3.1 to the registrant's Registration Statement on Form 8-A dated June 3, 2008)
3.2(a)	Amended and Restated Bylaws (incorporated by reference to Exhibit 3.4 to Amendment No.2 to the registrant's Registration Statement on Form S-1 dated May 7, 2004 (Registration No. 333-112718))
3.2(b)	Amendment No. 1 to the Amended and Restated Bylaws (incorporated by reference to Exhibit 3.1 to the registrant's Current Report on Form 8-K dated January 25, 2013)
4.1	Specimen Common Stock certificate (incorporated by reference to Exhibit 4.1 to Amendment No. 2 to the registrant's Registration Statement on Form S-1 dated May 7, 2004 (Registration No. 333-112718))
4.2(a)	See Exhibits 3.1 for provisions defining the rights of holders of common stock and non-voting common stock of the registrant
4.2(b)	See Exhibits 3.2 for provisions defining the rights of holders of common stock and non-voting common stock of the registrant
4.3	Description of registrant's securities (incorporated by reference to Exhibit 4.3 to the registrant's Annual Report on Form 10-K for the year ended December 31, 2019)
10.1	MarketAxess Holdings Inc. 2020 Equity Incentive Plan (incorporated by reference to Exhibit 99.1 to the registrant's Registration Statement on Form S-8 filed on June 10, 2020)#
10.2(a)	MarketAxess Holdings Inc. 2012 Incentive Plan as Amended and Restated Effective June 7, 2016 (incorporated by reference to Appendix A to the registrant's Proxy Statement for its Annual Meeting for Stockholders held on June 7, 2016, filed on April 25, 2016)#
10.2(b)	Amendment Number One to the MarketAxess Holdings Inc. 2012 Incentive Plan as Amended and Restated Effective June 7, 2016 (incorporated by reference to Exhibit 10.1 to the registrant's Current Report on Form 8-K dated April 21, 2017)#
10.2(c)	Amendment to the MarketAxess Holdings Inc. 2012 Incentive Plan (Amended and Restated Effective June 7, 2016), as amended (incorporated by reference to Appendix A to the registrant's Proxy Statement for its Annual Meeting of Stockholders held on June 7, 2018, filed April 25, 2018)#

Number	Description
10.3	MarketAxess Holdings Inc. 2004 Annual Performance Incentive Plan (incorporated by reference to Exhibit 10.11 to Amendment No. 2 to the registrant's Registration Statement on Form S-1 dated May 7, 2004 (Registration No. 333-112718))#
10.4*	MarketAxess Holdings Inc. Employee Stock Purchase Plan#
10.5	Form of Indemnification Agreement for Directors (incorporated by reference to Exhibit 10.2 to the registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 2017)#
10.6	Form of Restricted Stock Agreement for Employees other than Richard M. McVey pursuant to the MarketAxess Holdings Inc. 2012 Incentive Plan (incorporated by reference to Exhibit 10.3 to the registrant's Current Report on Form 8-K dated January 15, 2008)#
10.7(a)	Form of Restricted Stock Unit Agreement for executive officers other than Richard M. McVey pursuant to the MarketAxess Holdings Inc. 2012 Incentive Plan (incorporated by reference to Exhibit 10.2 to the registrant's Current Report on Form 8-K dated January 22, 2016)#
10.7(b)	Form of Restricted Stock Unit Agreement (annual vesting) for Christopher R. Concannon pursuant to the MarketAxess Holdings Inc. 2012 Incentive Plan (incorporated by reference to Exhibit 10.4 to the registrant's Current Report on Form 8-K dated January 4, 2019)#
10.7(c)	Form of Restricted Stock Unit Agreement (cliff vesting) for Christopher R. Concannon pursuant to the MarketAxess Holdings Inc. 2012 Incentive Plan (incorporated by reference to Exhibit 10.5 to the registrant's Current Report on Form 8-K dated January 4, 2019)#
10.7(d)	Guidelines for Restricted Stock Units granted under the MarketAxess Holdings Inc. 2012 Incentive Plan (incorporated by reference to Exhibit 10.1 to the registrant's Current Report on Form 8-K dated January 19, 2011)#
10.8	Form of Performance Share Award Agreement for Christopher R. Concannon pursuant to the MarketAxess Holdings Inc. 2012 Incentive Plan (incorporated by reference to Exhibit 10.3 to the registrant's Current Report on Form 8-K dated January 4, 2019)#
10.9(a)	Form of Incentive Stock Option Agreement for Employees other than Richard M. McVey pursuant to the MarketAxess Holdings Inc. 2012 Incentive Plan (incorporated by reference to Exhibit 10.4 to the registrant's Current Report on Form 8-K dated January 15, 2008)#
10.9(b)	Form of Incentive Stock Option Agreement pursuant to the MarketAxess Holdings Inc. 2012 Incentive Plan (incorporated by reference to Exhibit 10.3 to the registrant's Current Report on Form 8-K dated January 22, 2016)#
10.9(c)	Form of Incentive Stock Option Agreement for Christopher R. Concannon pursuant to the MarketAxess Holdings Inc. 2012 Incentive Plan (incorporated by reference to Exhibit 10.2 to the registrant's Current Report on Form 8-K dated January 4, 2019)#
10.10(a)	Employment Letter Agreement, dated as of January 15, 2015, by and between MarketAxess Holdings Inc. and Richard M. McVey (incorporated by reference to Exhibit 10.1 to the registrant's Current Report on Form 8-K dated January 15, 2015)#
10.10(b)	Amendment to Richard M. McVey Employment Agreement, dated as of January 12, 2017, by and between MarketAxess Holdings Inc. and Richard M. McVey (incorporated by reference to Exhibit 10.1 to the registrant's Current Report on Form 8-K dated January 6, 2017)#
10.10(c)	Second Amendment to Richard M. McVey Employment Agreement, dated as of November 6, 2018, by and between MarketAxess Holdings Inc. and Richard M. McVey (incorporated by reference to Exhibit 10.1 to the registrant's Current Report on Form 8-K dated November 6, 2018)#

Number	Description
10.10(d)	Incentive Stock Option Agreement, dated as of November 8, 2018, by and between MarketAxess Holdings Inc. and Richard M. McVey (incorporated by reference to Exhibit 10.2 to the registrant's Current Report on Form 8-K dated November 6, 2018)#
10.10(e)	Incentive Stock Option Agreement, dated as of November 8, 2018, by and between MarketAxess Holdings Inc. and Richard M. McVey (incorporated by reference to Exhibit 10.3 to the registrant's Current Report on Form 8-K dated November 6, 2018)#
10.10(f)	Performance Award Agreement, dated as of November 8, 2018, by and between MarketAxess Holdings Inc. and Richard M. McVey (incorporated by reference to Exhibit 10.4 to the registrant's Current Report on Form 8-K dated November 6, 2018)#
10.10(g)	Performance Award Agreement, dated as of November 8, 2018, by and between MarketAxess Holdings Inc. and Richard M. McVey (incorporated by reference to Exhibit 10.5 to the registrant's Current Report on Form 8-K November 6, 2018)#
10.11(a)	Contract of Employment, dated March 15, 2017, between MarketAxess Europe Limited and Christophe Roupie (incorporated by reference to Exhibit 10.4 to the registrant's Quarterly Report on Form 10-Q for the quarter ended March 31, 2017)#
10.11(b)	Restricted Stock Agreement Pursuant to the MarketAxess Holdings Inc. 2012 Incentive Plan, dated as of April 1, 2017, by and between MarketAxess Holdings, Inc. and Christophe Roupie (incorporated by reference to Exhibit 10.11(b) to the registrant's Annual Report on Form 10-K for the year ended December 31, 2019)#
10.11(c)	Amendment, dated as of August 14, 2017, to the Restricted Stock Agreement, dated April 1, 2017, between MarketAxess Holdings Inc. and Christophe Roupie (incorporated by reference to Exhibit 10.1 to the registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 2017)#
10.12	Employment Letter Agreement, dated as of January 7, 2019, by and between MarketAxess Holdings Inc. and Christopher R. Concannon (incorporated by reference to Exhibit 10.1 to the registrant's Current Report on Form 8-K dated January 4, 2019)#
10.13*	Form of Restricted Stock Unit Agreement (Deferred) for U.S. based Executive Officers pursuant to the MarketAxess Holdings Inc. 2020 Equity Incentive Plan#
10.14*	Form of Restricted Stock Unit Agreement (Non-Deferred) for U.S. based Executive Officers pursuant to the MarketAxess Holdings Inc. 2020 Equity Incentive Plan#
10.15*	Guidelines for Restricted Stock Units granted under the MarketAxess Holdings Inc. 2020 Equity Incentive Plan#
10.16*	Form of Performance Stock Unit Agreement for U.S. based Executive Officers pursuant to the MarketAxess Holdings Inc. 2020 Equity Incentive Plan#
10.17*	Form of Incentive Stock Option Agreement U.S. based Executive Officers pursuant to the MarketAxess Holdings Inc. 2012 Incentive Plan#
10.18*	Form of Restricted Stock Agreement for U.K. based Executive Officers pursuant to the MarketAxess Holdings Inc. 2020 Equity Incentive Plan#
10.19*	Form of Restricted Stock Agreement (Performance) for U.K. based Executive Officers pursuant to the MarketAxess Holdings Inc. 2020 Equity Incentive Plan#
10.20*	Form of Restricted Stock Agreement for Directors pursuant to the MarketAxess Holdings Inc. 2020 Equity Incentive Plan#
10.21*	Form of Restricted Stock Unit Agreement for Directors pursuant to the MarketAxess Holdings Inc. 2020 Equity Incentive Plan#

Number	Description
10.22	Severance Protection Agreement, dated as of July 31, 2020, by and between MarketAxess and Antonio DeLise (incorporated by reference to Exhibit 10.1 to the registrant's Current Report on Form 8-K dated July 31, 2020)#
10.23	Severance Protection Agreement, dated as of July 31, 2020, by and between MarketAxess and Scott Pintoff (incorporated by reference to Exhibit 10.2 to the registrant's Current Report on Form 8-K dated July 31, 2020)#
10.24	Severance Protection Agreement, dated as of July 31, 2020, by and between MarketAxess and Kevin McPherson (incorporated by reference to Exhibit 10.3 to the registrant's Current Report on Form 8-K dated July 31, 2020)#
10.25	Severance Protection Agreement, dated as of July 31, 2020, by and between MarketAxess and Nick Themelis (incorporated by reference to Exhibit 10.4 to the registrant's Current Report on Form 8-K dated July 31, 2020)#
10.26	MarketAxess Europe Limited Severance Protection Agreement, dated as of July 31, 2020, by and between MarketAxess Europe and Christophe Roupie (incorporated by reference to Exhibit 10.5 to the registrant's Current Report on Form 8-K dated July 31, 2020)#
10.27*	Form of Amendment of Severance Protection Agreement for U.S. based Executive Officers#
10.28*	Form of Amendment of Severance Protection Agreement for U.K. based Executive Officers#
10.29(a)	Amended and Restated Credit Agreement, dated as of October 30, 2015, among MarketAxess Holdings Inc., a Delaware corporation, the lenders party thereto and JPMorgan Chase Bank, N.A., as administrative agent (incorporated by reference to Exhibit 10.1 to the registrant's Current Report on Form 8-K dated November 3, 2015)
10.29(b)	Amended and Restated Guarantee Agreement, dated as of October 30, 2015, by and among MarketAxess Technologies Inc., as initial guarantor, and JPMorgan Chase Bank, N.A., as administrative agent (incorporated by reference to Exhibit 10.2 to the registrant's Current Report on Form 8-K dated November 3, 2015)
10.29(c)	Amended and Restated Pledge and Security Agreement, dated as of October 30, 2015, by and between MarketAxess Holdings Inc., a Delaware corporation, as borrower, MarketAxess Technologies Inc., as guarantor, and JPMorgan Chase Bank, N.A., as administrative agent (incorporated by reference to Exhibit 10.3 to the registrant's Current Report on Form 8-K dated November 3, 2015)
10.29(d)	Omnibus Amendment, dated October 19, 2017, by and among MarketAxess Holdings Inc., the other loan parties party hereto, the lenders party hereto and JPMorgan Chase Bank, N.A. (incorporated by reference to Exhibit 10.1 to the registrant's Current Report on Form 8-K dated October 18, 2017)
10.29(e)	Second Amendment, dated October 14, 2019, to Amended and Restated Credit Agreement by and among MarketAxess Holdings Inc., the other loan parties party thereto, the lenders party thereto and JPMorgan Chase Bank, N.A., as administrative agent (incorporated by reference to Exhibit 10.1 to the registrant's Current Report on Form 8-K dated October 17, 2019)
10.29(f)	Third Amendment, dated as of August 19, 2020, to Amended and Restated Credit Agreement by and among MarketAxess Holdings., the other loan parties party thereto, the lenders party thereto and JPMorgan Chase Bank, N.A. as administrative agent (incorporated by reference to Exhibit 10.6 to the registrant's Quarterly Report on Form 10-Q dated October 30, 2020)
10.29(g)	Fourth Amendment, dated October 8, 2020, to Amended and Restated Credit Agreement by and among MarketAxess Holdings Inc., the other loan parties party thereto, the lenders party thereto and JPMorgan Chase Bank, N.A. as administrative agent (incorporated by reference to Exhibit 10.7 to the registrant's Quarterly Report on Form 10-Q dated October 30, 2020)
10.30	Credit Agreement, dated as of November 13, 2020, among MarketAxess Holdings Inc., a Delaware corporation, the lenders party thereto and JPMorgan Chase Bank, N.A., as administrative agent (incorporated by reference to Exhibit 10.1 to the registrant's Current Report on Form 8-K dated November 18, 2020)
21.1*	Subsidiaries of the Registrant

Number	Description
23.1*	Consent of PricewaterhouseCoopers LLP
31.1*	Certification by Chief Executive Officer pursuant to Exchange Act Rule 13a-14(a), as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
31.2*	Certification by Chief Financial Officer pursuant to Exchange Act Rule 13a-14(a), as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
32.1*	Certification by Chief Executive Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002
32.2*	Certification by Chief Financial Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002
101.INS	Inline XBRL Instance Document – the instance document does not appear in the Interactive Data File because its XBRL tags are embedded within the Inline XBRL document.
101.SCH	Inline XBRL Taxonomy Extension Schema Document
101.CAL	Inline XBRL Taxonomy Extension Calculation Linkbase Document
101.LAB	Inline XBRL Taxonomy Extension Label Linkbase Document
101.PRE	Inline XBRL Taxonomy Extension Presentation Linkbase Document
101.DEF	Inline XBRL Taxonomy Extension Definition Linkbase Document
104	The cover page from the Company’s Annual Report on Form 10-K for the year ended December 31, 2020 has been formatted in Inline XBRL and is included in Exhibits 101.

\* Filed herewith.

# Management contract or compensatory plan or arrangement.

**Item 16. Form 10-K Summary**

None.



## SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

MARKETAXESS HOLDINGS INC.

By: /s/ RICHARD M. MCVEY

Richard M. McVey  
Chief Executive Officer

Date: February 19, 2021

## SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed by the following persons on behalf of the registrant and in the capacities and on the dates indicated:

Signature	Title(s)	Date
<u>/s/ RICHARD M. MCVEY</u> Richard M. McVey	Chief Executive Officer and Chairman of the Board of Directors (principal executive officer)	February 19, 2021
<u>/s/ ANTONIO L. DELISE</u> Antonio L. DeLise	Chief Financial Officer (principal financial and accounting officer)	February 19, 2021
<u>/s/ CHRISTOPHER R. CONCANNON</u> Christopher R. Concannon	Director, President and Chief Operating Officer	February 19, 2021
<u>/s/ NANCY ALTOBELLO</u> Nancy Altobello	Director	February 19, 2021
<u>/s/ STEVEN L. BEGLEITER</u> Steven L. Begleiter	Director	February 19, 2021
<u>/s/ STEPHEN P. CASPER</u> Stephen P. Casper	Director	February 19, 2021
<u>/s/ JANE CHWICK</u> Jane Chwick	Director	February 19, 2021
<u>/s/ WILLIAM CRUGER</u> William Cruger	Director	February 19, 2021
<u>/s/ KOURTNEY GIBSON</u> Kourtney Gibson	Director	February 19, 2021
<u>/s/ JUSTIN GMELICH</u> Justin Gmelich	Director	February 19, 2021
<u>/s/ RICHARD G. KETCHUM</u> Richard G. Ketchum	Director	February 19, 2021
<u>/s/ EMILY PORTNEY</u> Emily Portney	Director	February 19, 2021
<u>/s/ RICHARD PRAGER</u> Richard Prager	Director	February 19, 2021
<u>/s/ JOHN STEINHARDT</u> John Steinhardt	Director	February 19, 2021

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