
UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM 10-Q

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

For the quarterly period ended **June 30, 2022**

OR

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

For the transition period from _____ to _____

Commission file number: **001-38855**

Nasdaq, Inc.

(Exact name of registrant as specified in its charter)

Delaware

(State or Other Jurisdiction of Incorporation or Organization)

52-1165937

(I.R.S. Employer Identification No.)

151 W. 42nd Street, New York, New York 10036

(Address of Principal Executive Offices) (Zip Code)

Registrant's telephone number, including area code: +1 212 401 8700

No Changes

(Former name, former address and former fiscal year, if changed since last report)

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

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Common Stock, \$0.01 par value per share	NDAQ	The Nasdaq Stock Market
0.900% Senior Notes due 2033	NDAQ33	The Nasdaq Stock Market
0.875% Senior Notes due 2030	NDAQ30	The Nasdaq Stock Market
1.75% Senior Notes due 2029	NDAQ29	The Nasdaq Stock Market

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, a smaller reporting company, or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company" and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer	<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 is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes No

Indicate the number of shares outstanding of each of the issuer's classes of common stock, as of the latest practicable date.

<u>Class</u>	<u>Outstanding at July 26, 2022</u>
Common Stock, \$0.01 par value per share	163,742,074 shares

Part I. FINANCIAL INFORMATION

Item 1.	Financial Statements	1
	Condensed Consolidated Balance Sheets - June 30, 2022 (unaudited) and December 31, 2021	1
	Condensed Consolidated Statements of Income - Three and Six Months Ended June 30, 2022 and 2021 (unaudited)	2
	Condensed Consolidated Statements of Comprehensive Income - Three and Six Months Ended June 30, 2022 and 2021 (unaudited)	3
	Condensed Consolidated Statements of Changes in Stockholders' Equity - Three and Six Months Ended June 30, 2022 and 2021 (unaudited)	4
	Condensed Consolidated Statements of Cash Flows - Six Months Ended June 30, 2022 and 2021 (unaudited)	5
	Notes to Condensed Consolidated Financial Statements (unaudited)	6
Item 2.	Management's Discussion and Analysis of Financial Condition and Results of Operations	32
Item 3.	Quantitative and Qualitative Disclosures About Market Risk	49
Item 4.	Controls and Procedures	51

Part II. OTHER INFORMATION

Item 1.	Legal Proceedings	52
Item 1A.	Risk Factors	52
Item 2.	Unregistered Sales of Equity Securities and Use of Proceeds	52
Item 3.	Defaults Upon Senior Securities	52
Item 4.	Mine Safety Disclosures	52
Item 5.	Other Information	52
Item 6.	Exhibits	53

SIGNATURES	53
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About this Form 10-Q

Throughout this Form 10-Q, unless otherwise specified:

- “Nasdaq,” “we,” “us” and “our” refer to Nasdaq, Inc.
- “Nasdaq Baltic” refers to collectively, Nasdaq Tallinn AS, Nasdaq Riga, AS, and AB Nasdaq Vilnius.
- “Nasdaq BX” refers to the cash equity exchange operated by Nasdaq BX, Inc.
- “Nasdaq BX Options” refers to the options exchange operated by Nasdaq BX, Inc.
- “Nasdaq Clearing” refers to the clearing operations conducted by Nasdaq Clearing AB.
- “Nasdaq CXC” and “Nasdaq CX2” refer to the Canadian cash equity trading books operated by Nasdaq CXC Limited.
- “Nasdaq First North” refers to our alternative marketplaces for smaller companies and growth companies in the Nordic and Baltic regions.
- “Nasdaq GEMX” refers to the options exchange operated by Nasdaq GEMX, LLC.
- “Nasdaq ISE” refers to the options exchange operated by Nasdaq ISE, LLC.
- “Nasdaq MRX” refers to the options exchange operated by Nasdaq MRX, LLC.
- “Nasdaq Nordic” refers to collectively, Nasdaq Clearing AB, Nasdaq Stockholm AB, Nasdaq Copenhagen A/S, Nasdaq Helsinki Ltd, and Nasdaq Iceland hf.
- “Nasdaq PHLX” refers to the options exchange operated by Nasdaq PHLX LLC.
- “Nasdaq PSX” refers to the cash equity exchange operated by Nasdaq PHLX LLC.
- “The Nasdaq Options Market” refers to the options exchange operated by The Nasdaq Stock Market LLC.
- “The Nasdaq Stock Market” refers to the cash equity exchange and listing venue operated by The Nasdaq Stock Market LLC.

Nasdaq also provides as a tool for the reader the following list of abbreviations and acronyms that are used throughout this Quarterly Report on Form 10-Q.

401(k) Plan: Voluntary Defined Contribution Savings Plan

2020 Credit Facility: \$1.25 billion senior unsecured revolving credit facility, which matures on December 22, 2025

2022 Notes: \$600 million aggregate principal amount of 0.445% senior unsecured notes due December 21, 2022

2024 Notes: \$500 million aggregate principal amount of 4.25% senior unsecured notes, repaid in full and terminated in April 2022

2026 Notes: \$500 million aggregate principal amount of 3.85% senior unsecured notes due June 30, 2026

2029 Notes: €600 million aggregate principal amount of 1.75% senior unsecured notes due March 28, 2029

2030 Notes: €600 million aggregate principal amount of 0.875% senior unsecured notes due February 13, 2030

2031 Notes: \$650 million aggregate principal amount of 1.650% senior unsecured notes due January 15, 2031

2033 Notes: €615 million aggregate principal amount of 0.900% senior unsecured notes due July 30, 2033

2040 Notes: \$650 million aggregate principal amount of 2.500% senior unsecured notes due December 21, 2040

2050 Notes: \$500 million aggregate principal amount of 3.25% senior unsecured notes due April 28, 2050

2052 Notes: \$550 million aggregate principal amount of 3.950% senior unsecured notes due March 7, 2052

ARR: Annualized Recurring Revenue

ASR: Accelerated Share Repurchase

AUM: Assets Under Management

CCP: Central Counterparty

CFTC: Commodity Futures Trading Commission

EMIR: European Market Infrastructure Regulation

Equity Plan: Nasdaq Equity Incentive Plan

ESG: Environmental, Social and Governance

ESPP: Nasdaq Employee Stock Purchase Plan

ETF: Exchange Traded Fund

ETP: Exchange Traded Product

Exchange Act: Securities Exchange Act of 1934, as amended

FICC: Fixed Income and Commodities Trading and Clearing

FINRA: Financial Industry Regulatory Authority

IPO: Initial Public Offering

LIBOR: London Interbank Offered Rate

NFF: Nasdaq Financial Framework; Nasdaq's end-to-end technology solutions for market infrastructure operators, buy-side firms, sell-side firms and other non-financial markets

NPM: The NASDAQ Private Market, LLC

NSCC: National Securities Clearing Corporation

OCC: The Options Clearing Corporation

OTC: Over-the-Counter

PSU: Performance Share Unit

Reg NMS: Regulation National Market System

SaaS: Software as a Service

SEC: U.S. Securities and Exchange Commission

SERP: Supplemental Executive Retirement Plan

SFSA: Swedish Financial Supervisory Authority

S&P: Standard & Poor's

S&P 500: S&P 500 Stock Index

SPAC: Special Purpose Acquisition Company

TSR: Total Shareholder Return

U.S. GAAP: U.S. Generally Accepted Accounting Principles

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This Quarterly Report on Form 10-Q includes market share and industry data that we obtained from industry publications and surveys, reports of governmental agencies and internal company surveys. Industry publications and surveys generally state that the information they contain has been obtained from sources believed to be reliable, but we cannot assure you that this information is accurate or complete. We have not independently verified any of the data from third-party sources nor have we ascertained the underlying economic assumptions relied upon therein. Statements as to

our market position are based on the most currently available market data. For market comparison purposes, The Nasdaq Stock Market data in this Quarterly Report on Form 10-Q for IPOs is based on data generated internally by us; therefore, the data may not be comparable to other publicly-available IPO data. Data in this Quarterly Report on Form 10-Q for new listings of equity securities on The Nasdaq Stock Market is based on data generated internally by us, which includes issuers that switched from other listing venues, closed-end funds and ETPs. Data in this Quarterly Report on Form 10-Q for IPOs and new listings of equity securities on the Nasdaq Nordic and Nasdaq Baltic exchanges and Nasdaq First North also is based on data generated internally by us. IPOs and new listings data is presented as of period end. While we are not aware of any misstatements regarding industry data presented herein, our estimates involve risks and uncertainties and are subject to change based on various factors. We refer you to the "Risk Factors" section in our Quarterly Report on Form 10-Q for the quarter ended March 31, 2022 that was filed with the SEC on May 4, 2022 and the "Risk Factors" section in our Form 10-K for the fiscal year ended December 31, 2021 that was filed with the SEC on February 23, 2022.

Nasdaq intends to use its website, ir.nasdaq.com, as a means for disclosing material non-public information and for complying with SEC Regulation FD and other disclosure obligations.

Forward-Looking Statements

The SEC encourages companies to disclose forward-looking information so that investors can better understand a company's future prospects and make informed investment decisions. This Quarterly Report on Form 10-Q contains these types of statements. Words such as "may," "will," "could," "should," "anticipates," "envisions," "estimates," "expects," "projects," "intends," "plans," "believes" and words or terms of similar substance used in connection with any discussion of future expectations as to industry and regulatory developments or business initiatives and strategies, future operating results or financial performance, and other future developments are intended to identify forward-looking statements. These include, among others, statements relating to:

- our strategic direction;
- the integration of acquired businesses, including accounting decisions relating thereto;
- the scope, nature or impact of acquisitions, divestitures, investments, joint ventures or other transactional activities;
- the effective dates for, and expected benefits of, ongoing initiatives, including transactional activities and other strategic, restructuring, technology, de-leveraging and capital return initiatives, including our stock split;
- our products and services;
- the impact of pricing changes;
- tax matters;
- the cost and availability of liquidity and capital;
- any litigation, or any regulatory or government investigation or action, to which we are or could become a party or which may affect us; and
- the ongoing impact of the COVID-19 pandemic on our business, operations, results of operations, financial condition and workforce.

Forward-looking statements involve risks and uncertainties. Factors that could cause actual results to differ materially from those contemplated by the forward-looking statements include, among others, the following:

- our operating results may be lower than expected;
- our ability to successfully integrate acquired businesses or divest sold businesses or assets, including the fact that any integration or transition may be more difficult, time consuming or costly than expected, and we may be unable to realize synergies from business combinations, acquisitions, divestitures or other transactional activities;
- loss of significant trading and clearing volumes or values, fees, market share, listed companies, market data customers or other customers;
- our ability to develop and grow our non-trading businesses, including our technology and analytics offerings;
- our ability to keep up with rapid technological advances and adequately address cybersecurity risks;

- economic, political and market conditions and fluctuations, including inflation, interest rate and foreign currency risk, inherent in U.S. and international operations, and geopolitical instability arising from the Russian invasion of Ukraine;
- the performance and reliability of our technology and technology of third parties on which we rely;
- any significant error in our operational processes;
- our ability to continue to generate cash and manage our indebtedness; and
- adverse changes that may occur in the litigation or regulatory areas, or in the securities markets generally, or increased regulatory oversight domestically or internationally.

Most of these factors are difficult to predict accurately and are generally beyond our control. You should consider the uncertainty and any risk related to forward-looking statements that we make. These risk factors are more fully described in our "Risk Factors" section in our Form 10-K that was filed with the SEC on February 23, 2022, and supplemented in the "Risk Factors" section in our Quarterly Report on Form 10-Q for the quarter ended March 31, 2022 that was filed with the SEC on May 4, 2022. You are cautioned not to place undue reliance on these forward-looking statements, which speak only as of the date of this report. You should carefully read this entire Quarterly Report on Form 10-Q, including "Part I, Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations" and the condensed consolidated financial statements and the related notes. Except as required by the federal securities laws, we undertake no obligation to update any forward-looking statement, release publicly any revisions to any forward-looking statements or report the occurrence of unanticipated events. For any forward-looking statements contained in any document, we claim the protection of the safe harbor for forward-looking statements contained in the Private Securities Litigation Reform Act of 1995.

PART I - FINANCIAL INFORMATION
Item 1. Financial Statements
Nasdaq, Inc.
Condensed Consolidated Balance Sheets
(in millions, except share and par value amounts)

	June 30, 2022	December 31, 2021
	(unaudited)	
Assets		
Current assets:		
Cash and cash equivalents	\$ 454	\$ 393
Restricted cash and cash equivalents	30	29
Default funds and margin deposits (including restricted cash and cash equivalents of \$7,769 and \$5,074, respectively)	8,688	5,911
Financial investments	161	208
Receivables, net	652	588
Other current assets	233	294
Total current assets	10,218	7,423
Property and equipment, net	514	509
Goodwill	8,151	8,433
Intangible assets, net	2,670	2,813
Operating lease assets	462	366
Other non-current assets	581	571
Total assets	\$ 22,596	\$ 20,115
Liabilities		
Current liabilities:		
Accounts payable and accrued expenses	\$ 175	\$ 185
Section 31 fees payable to SEC	175	62
Accrued personnel costs	161	252
Deferred revenue	512	329
Other current liabilities	140	115
Default funds and margin deposits	8,688	5,911
Short-term debt	1,020	1,018
Total current liabilities	10,871	7,872
Long-term debt	4,696	4,812
Deferred tax liabilities, net	464	406
Operating lease liabilities	470	386
Other non-current liabilities	244	234
Total liabilities	16,745	13,710
Commitments and contingencies		
Equity		
Nasdaq stockholders' equity:		
Common stock, \$0.01 par value, 300,000,000 shares authorized, shares issued: 170,888,738 at June 30, 2022 and 173,418,939 at December 31, 2021; shares outstanding: 163,734,534 at June 30, 2022 and 166,679,635 at December 31, 2021	2	2
Additional paid-in capital	1,385	1,952
Common stock in treasury, at cost: 7,154,204 shares at June 30, 2022 and 6,739,304 shares at December 31, 2021	(509)	(437)
Accumulated other comprehensive loss	(1,905)	(1,587)
Retained earnings	6,869	6,465
Total Nasdaq stockholders' equity	5,842	6,395
Noncontrolling interests	9	10
Total equity	5,851	6,405
Total liabilities and equity	\$ 22,596	\$ 20,115

See accompanying notes to condensed consolidated financial statements.

Nasdaq, Inc.
Condensed Consolidated Statements of Income
(Unaudited)
(in millions, except per share amounts)

	Three Months Ended June 30,		Six Months Ended June 30,	
	2022	2021	2022	2021
Revenues:				
Market Technology	\$ 131	\$ 117	\$ 255	\$ 217
Investment Intelligence	283	261	567	516
Corporate Platforms	168	149	336	296
Market Services	969	874	1,927	2,010
Other revenues	1	11	2	24
Total revenues	1,552	1,412	3,087	3,063
Transaction-based expenses:				
Transaction rebates	(529)	(517)	(1,111)	(1,170)
Brokerage, clearance and exchange fees	(130)	(49)	(191)	(196)
Revenues less transaction-based expenses	893	846	1,785	1,697
Operating expenses:				
Compensation and benefits	247	231	501	470
Professional and contract services	29	38	64	65
Computer operations and data communications	50	46	101	90
Occupancy	25	26	52	55
General, administrative and other	34	12	55	24
Marketing and advertising	11	9	21	19
Depreciation and amortization	65	68	132	131
Regulatory	8	7	15	14
Merger and strategic initiatives	12	12	27	57
Restructuring charges	—	21	—	31
Total operating expenses	481	470	968	956
Operating income	412	376	817	741
Interest income	—	—	1	1
Interest expense	(32)	(33)	(64)	(62)
Net gain on divestiture of business	—	84	—	84
Other income	8	—	2	1
Net income from unconsolidated investees	9	27	15	84
Income before income taxes	397	454	771	849
Income tax provision	90	113	182	210
Net income	307	341	589	639
Net loss attributable to noncontrolling interests	—	—	1	—
Net income attributable to Nasdaq	\$ 307	\$ 341	\$ 590	\$ 639
Per share information:				
Basic earnings per share	\$ 1.87	\$ 2.08	\$ 3.59	\$ 3.89
Diluted earnings per share	\$ 1.85	\$ 2.05	\$ 3.55	\$ 3.83
Cash dividends declared per common share	\$ 0.60	\$ 0.54	\$ 1.14	\$ 1.03

See accompanying notes to condensed consolidated financial statements.

Nasdaq, Inc.
Condensed Consolidated Statements of Comprehensive Income
(Unaudited)
(in millions)

	Three Months Ended June 30,		Six Months Ended June 30,	
	2022	2021	2022	2021
Net income	\$ 307	\$ 341	\$ 589	\$ 639
Other comprehensive income (loss):				
Foreign currency translation gains (losses)	(206)	47	(273)	(67)
Income tax benefit (expense) ⁽¹⁾	(29)	6	(45)	(17)
Foreign currency translation, net	(235)	53	(318)	(84)
Comprehensive income	<u>72</u>	<u>394</u>	<u>271</u>	<u>555</u>
Comprehensive loss attributable to noncontrolling interests	—	—	1	—
Comprehensive income attributable to Nasdaq	<u>\$ 72</u>	<u>\$ 394</u>	<u>\$ 272</u>	<u>\$ 555</u>

⁽¹⁾ Primarily relates to the tax effect of unrealized gains and losses on Euro denominated notes.

See accompanying notes to condensed consolidated financial statements.

Nasdaq, Inc.
Condensed Consolidated Statements of Changes in Stockholders' Equity
(Unaudited)
(in millions)

	Three Months Ended June 30,				Six Months Ended June 30,			
	2022		2021		2022		2021	
	Shares	\$	Shares	\$	Shares	\$	Shares	\$
Common stock	165	2	164	2	167	2	165	2
Additional paid-in capital								
Beginning balance		1,510		2,405		1,952		2,547
Share repurchase program	(1)	(166)	(2)	(248)	(2)	(308)	(3)	(410)
ASR agreement ⁽¹⁾	—	—	—	—	(2)	(325)	—	—
Share-based compensation	—	25	1	24	1	49	1	43
Stock option exercises, net	—	—	—	—	—	—	—	1
Other issuances of common stock, net ⁽²⁾	—	16	6	254	—	17	6	254
Ending balance		1,385		2,435		1,385		2,435
Common stock in treasury, at cost								
Beginning balance		(489)		(415)		(437)		(376)
Other employee stock activity	—	(20)	—	(8)	—	(72)	—	(47)
Ending balance		(509)		(423)		(509)		(423)
Accumulated other comprehensive loss								
Beginning balance		(1,670)		(1,505)		(1,587)		(1,368)
Other comprehensive income (loss)		(235)		53		(318)		(84)
Ending balance		(1,905)		(1,452)		(1,905)		(1,452)
Retained earnings								
Beginning balance		6,660		5,845		6,465		5,628
Net income attributable to Nasdaq		307		341		590		639
Cash dividends declared per common share		(98)		(88)		(186)		(169)
Ending balance		6,869		6,098		6,869		6,098
Total Nasdaq stockholders' equity		5,842		6,660		5,842		6,660
Noncontrolling interests								
Beginning balance		9		2		10		3
Net activity related to noncontrolling interests		—		9		(1)		8
Ending balance		9		11		9		11
Total Equity	164	\$ 5,851	169	\$ 6,671	164	\$ 5,851	169	\$ 6,671

⁽¹⁾ See "ASR Agreement," of Note 11, "Nasdaq Stockholders' Equity," for further discussion.

⁽²⁾ In 2021, other issuances of common stock primarily related to shares accelerated and issued upon the sale of our U.S. Fixed Income business.

See accompanying notes to condensed consolidated financial statements.

Nasdaq, Inc.
Condensed Consolidated Statements of Cash Flows
(Unaudited)
(in millions)

	Six Months Ended June 30,	
	2022	2021
Cash flows from operating activities:		
Net income	\$ 589	\$ 639
Adjustments to reconcile net income to net cash provided by operating activities:		
Depreciation and amortization	132	131
Share-based compensation	49	43
Deferred income taxes	35	55
Extinguishment of debt	16	—
Net gain on divestiture of business	—	(84)
Net income from unconsolidated investees	(15)	(84)
Other reconciling items included in net income	4	10
Net change in operating assets and liabilities, net of effects of acquisitions:		
Receivables, net	(75)	24
Other assets	25	(87)
Accounts payable and accrued expenses	6	(9)
Section 31 fees payable to SEC	113	(52)
Accrued personnel costs	(83)	(56)
Deferred revenue	195	195
Other liabilities ⁽¹⁾	(11)	(258)
Net cash provided by operating activities	980	467
Cash flows from investing activities:		
Purchases of securities	(201)	(207)
Proceeds from sales and redemptions of securities	222	160
Proceeds from divestiture of business, net of cash divested	—	190
Acquisition of businesses, net of cash and cash equivalents acquired	(41)	(2,430)
Purchases of property and equipment	(77)	(81)
Investments related to default funds and margin deposits, net ⁽²⁾	(202)	(90)
Other investing activities	55	(67)
Net cash used in investing activities	(244)	(2,525)
Cash flows from financing activities:		
Proceeds from (repayments of) commercial paper, net	(1)	221
Repayments of borrowings under our credit commitment	(499)	(100)
Payment of debt extinguishment cost	(16)	—
Proceeds from issuances of debt, net of issuance costs and utilization of credit commitment	541	100
Repurchases of common stock	(308)	(410)
ASR agreement	(325)	—
Dividends paid	(186)	(169)
Proceeds received from employee stock activity and other issuances	17	17
Payments related to employee shares withheld for taxes	(72)	(47)
Default funds and margin deposits	3,554	(229)
Other financing activities	(2)	8
Net cash provided by (used in) financing activities	2,703	(609)
Effect of exchange rate changes on cash and cash equivalents and restricted cash and cash equivalents	(682)	(108)
Net increase (decrease) in cash and cash equivalents and restricted cash and cash equivalents	2,757	(2,775)
Cash and cash equivalents, restricted cash and cash equivalents at beginning of period	5,496	5,979
Cash and cash equivalents, restricted cash and cash equivalents at end of period	\$ 8,253	\$ 3,204
Reconciliation of Cash, Cash Equivalents and Restricted Cash and Cash Equivalents		
Cash and cash equivalents	\$ 454	\$ 390
Restricted cash and cash equivalents	30	40
Restricted cash and cash equivalents (default funds and margin deposits)	7,769	2,774
Total	\$ 8,253	\$ 3,204
Supplemental Disclosure Cash Flow Information		
Interest paid	\$ 60	\$ 70
Income taxes paid, net of refund ⁽¹⁾	\$ 133	\$ 393

⁽¹⁾ Includes payment of an acquired tax liability in the second quarter of 2021 related to the Verafin acquisition. See "2021 Acquisition," of Note 4, "Acquisitions and Divestiture," for further discussion.

⁽²⁾ Includes purchases and proceeds from sales and redemptions related to the default funds and margin deposits of our clearing operations. For further information, see "Default Fund Contributions and Margin Deposits," within Note 14, "Clearing Operations."

See accompanying notes to condensed consolidated financial statements.

Nasdaq, Inc.

Notes to Condensed Consolidated Financial Statements

(Unaudited)

1. ORGANIZATION AND NATURE OF OPERATIONS

Nasdaq is a global technology company serving the capital markets and other industries. Our diverse offerings of data, analytics, software and services enable clients to optimize and execute their business vision with confidence.

We manage, operate and provide our products and services in four business segments: Market Technology, Investment Intelligence, Corporate Platforms, and Market Services.

Market Technology

Our Market Technology segment is a leading global technology solutions provider and partner to exchanges, clearing organizations, central securities depositories, regulators, banks, brokers, buy-side firms and corporate businesses. Our solutions are utilized by leading markets in the U.S., Europe and Asia as well as emerging markets in the Middle East, Latin America, and Africa. The Market Technology segment includes our Anti Financial Crime Technology business and our Marketplace Infrastructure Technology business.

Our Anti Financial Crime Technology business includes Nasdaq Trade Surveillance, a SaaS solution designed for brokers and other market participants, and Market Surveillance, a solution for market infrastructure operators. Both solutions are designed to assist in complying with market rules, regulations and internal market surveillance policies. Our Verafin business is a SaaS anti-financial crime management solution that offers a cloud-based platform to help detect, investigate, and report money laundering and fraud. Verafin also has targeted sanctions screening solutions that help banks manage sanctions, including those imposed against Russia. Verafin is further expanding this product to detect new means of evasion-based typologies. In the first quarter of 2022, we reclassified Nasdaq Risk Platform revenues from Anti Financial Crime Technology to Marketplace Infrastructure Technology. Total Market Technology segment revenues were unchanged.

Our Marketplace Infrastructure Technology business powers market infrastructure operators and new market clients globally and handles a wide array of assets, including but not limited to cash equities, equity derivatives, currencies, various interest-bearing securities, commodities, energy products and digital currencies. Our solutions can also be used in the creation of new asset classes, and non-capital markets customers, including those in insurance liabilities securitization, cryptocurrencies and sports wagering.

Investment Intelligence

Our Investment Intelligence segment includes our Market Data, Index and Analytics businesses.

Our Market Data business sells and distributes historical and real-time market data to the sell-side, the institutional investing community, retail online brokers, proprietary trading shops, other venues, internet portals and data distributors. Our market data products can enhance transparency of market activity within our exchanges and provide critical information to professional and non-professional investors globally. Additionally, our Nasdaq Cloud Data Service provided on our Data Link data dissemination platform provides a flexible and efficient method of delivery for real-time exchange data and other financial information.

Our Index business develops and licenses Nasdaq-branded indexes. We also license cash-settled options, futures and options on futures on our indexes. As of June 30, 2022, 374 ETPs listed on 29 exchanges in over 20 countries tracked a Nasdaq index and accounted for \$321 billion in AUM.

Our Analytics business provides asset managers, investment consultants and institutional asset owners with information and analytics to make data-driven investment decisions and deploy their resources more productively. We also provide liquidity solutions for private funds. Through our eVestment offerings, we provide a suite of cloud-based solutions that help institutional investors and consultants conduct pre-investment due diligence, and monitor their portfolios post-investment. The eVestment platform also enables asset managers to efficiently distribute information about their firms and funds to asset owners and consultants worldwide. Through the Solovis platform, endowments, foundations, pensions and family offices transform how they collect and aggregate investment data, analyze portfolio performance, model and predict future outcomes, and share meaningful portfolio insights with key stakeholders. The Nasdaq Fund Network and Nasdaq Data Link are additional platforms in our suite of investment data analytics offerings and data management tools. The Nasdaq Fund Network offers fund data services that deliver transparency to investable products through the collection and dissemination of performance, net asset value, valuation, and strategy-level reference data. Nasdaq Data Link strengthens our position as a leading source for financial, economic, and alternative datasets. For investment management firms, investment banks and other investors, the platform powers data-driven decision-making for users across the globe via universal application programming interfaces, and provides for highly efficient data discovery and delivery.

Corporate Platforms

Our Corporate Platforms segment includes our Listing Services and IR & ESG Services businesses. These businesses deliver critical capital market and ESG solutions across the lifecycle of public and private companies.

Our Listing Services business includes our U.S. and European Listing Services businesses. We operate a variety of listing platforms around the world to provide multiple global capital raising solutions for public companies. Our main listing markets are The Nasdaq Stock Market and the Nasdaq Nordic and Nasdaq Baltic exchanges. Through Nasdaq First North, our Nordic and Baltic operations also offer alternative marketplaces for smaller companies and growth companies. In July 2021, we contributed our NPM business, which was included in our Listing Services business, to a standalone, independent company, of which we own the largest minority interest, together with a consortium of third-party financial institutions. The NPM business provides liquidity solutions for private companies to enable employees, investors, and companies to execute transactions.

As of June 30, 2022, there were 4,269 total listings on The Nasdaq Stock Market, including 465 ETPs. The combined market capitalization was approximately \$20.3 trillion. In Europe, the Nasdaq Nordic and Nasdaq Baltic exchanges, together with Nasdaq First North, were home to 1,260 listed companies with a combined market capitalization of approximately \$1.8 trillion.

We also operate a U.S. Corporate Bond exchange for the listing of corporate bonds. This exchange operates pursuant to The Nasdaq Stock Market exchange license and is powered by the NFF. As of June 30, 2022, 102 corporate bonds were listed on the Corporate Bond exchange. We continue to develop the Nasdaq Sustainable Bond Network, a platform for increased transparency in the global sustainable bond markets.

Our IR & ESG Services include our portfolio of products and services that support corporations' investor relations and ESG functions. Our clients include both public and private companies and organizations. Our public company clients can be companies listed on our exchanges or other U.S. and global exchanges. Our private company clients include a diverse group of organizations ranging from family owned companies, government organizations, law firms, privately held entities, various non-profit organizations to hospitals and health care systems. We help organizations enhance their ability to understand and expand their global shareholder base, improve corporate governance, and navigate the evolving ESG landscape through our suite of advanced technology, analytics, reporting and consultative services. In June 2022, we acquired Metrio Software Inc., or Metrio, a provider of ESG data collection, analytics and reporting services based in Montreal, Canada. We plan to integrate Metrio's SaaS platform into our suite of ESG solutions.

Market Services

Our Market Services segment includes our Equity Derivative Trading and Clearing, Cash Equity Trading, FICC and Trade Management Services businesses. We operate multiple exchanges and other marketplace facilities across several asset classes, including derivatives, commodities, cash equity, debt, structured products and ETPs. In addition, in certain countries where we operate exchanges, we also provide clearing, settlement and central depository services. In June 2022, we completed the wind-down of our Nordic broker services business.

Our transaction-based platforms provide market participants with the ability to access, process, display and integrate orders and quotes. The platforms allow the routing and execution of buy and sell orders as well as the reporting of transactions, providing fee-based revenues.

In the U.S., we operate six options exchanges and three cash equity exchanges. The Nasdaq Stock Market, the largest of our cash equities exchanges, is the largest single venue of liquidity for trading U.S.-listed cash equities.

In Canada, we operate an exchange with three independent markets for the trading of Canadian-listed securities: Nasdaq Canada CXC, Nasdaq Canada CX2 and Nasdaq Canada CXD.

In Europe, we operate exchanges in Stockholm (Sweden), Copenhagen (Denmark), Helsinki (Finland), and Reykjavik (Iceland), as well as the clearing operations of Nasdaq Clearing, as Nasdaq Nordic. We also operate exchanges in Tallinn (Estonia), Riga (Latvia) and Vilnius (Lithuania) as Nasdaq Baltic. Collectively, Nasdaq Nordic and Nasdaq Baltic offer trading in cash equities, depository receipts, warrants, convertibles, rights, fund units and ETFs, as well as trading and clearing of equity derivatives, fixed income and commodity products. We also own a majority stake in Puro.earth, a Finnish-based leading marketplace for carbon removal.

Nasdaq Fixed Income provides a wide range of products and services, such as trading and clearing, for fixed income products in Sweden, Denmark, Finland, Iceland, Estonia, Lithuania and Latvia.

Nasdaq Commodities is the brand name for Nasdaq's European commodity-related products and services. Nasdaq Commodities' offerings include derivatives in power, natural gas and carbon emission markets, seafood, electricity certificates and clearing services. These products are listed on Nasdaq Oslo ASA, except for seafood, which is listed on Fishpool, a third-party platform.

In June 2021, we sold our U.S. Fixed Income business, which included an electronic platform for the trading of U.S. Treasuries. See "2021 Divestiture" of Note 4, "Acquisitions and Divestiture," for further discussion.

Through our Trade Management Services business, we provide market participants with a wide variety of alternatives for connecting to and accessing our markets. Our marketplaces may be accessed via a number of different protocols used for quoting, order entry, trade reporting, and connectivity to various data feeds. In 2021, we launched WorkX, an upgraded version of Nasdaq Workstation, a browser-based, front-end interface that allows market participants to report OTC transactions, monitor trade compliance and clear securities subject to Reg NMS. WorkX enables a seamless workflow and enhanced trade intelligence. In the Nordics we provide a similar browser based trading application called Nasdaq Nordic Trader. In addition, we offer a variety of add-on compliance tools to help firms comply with regulatory requirements.

We provide colocation services to market participants, whereby we offer firms cabinet space and power to house their own equipment and servers within our data centers. Additionally, we offer a number of wireless connectivity offerings between select data centers using millimeter wave and microwave technology.

2. BASIS OF PRESENTATION AND PRINCIPLES OF CONSOLIDATION

The condensed consolidated financial statements are prepared in accordance with U.S. GAAP and include the accounts of Nasdaq, its wholly-owned subsidiaries and other entities in which Nasdaq has a controlling financial interest. When we do not have a controlling interest in an entity, but exercise significant influence over the entity's operating and financial policies, such investment is accounted for under the equity method of accounting. We recognize our share of earnings or losses of an equity method investee based on our ownership percentage. See "Equity Method Investments," of Note 6, "Investments," for further discussion of our equity method investments.

The accompanying condensed consolidated financial statements reflect all adjustments which are, in the opinion of management, necessary for a fair statement of the results. These adjustments are of a normal recurring nature. All significant intercompany accounts and transactions have been eliminated in consolidation.

As permitted under U.S. GAAP, certain footnotes or other financial information can be condensed or omitted in the interim condensed consolidated financial statements. The information included in this Quarterly Report on Form 10-Q should be read in conjunction with the consolidated financial statements and accompanying notes included in Nasdaq's Form 10-K. The year-end condensed balance sheet data was derived from the audited financial statements, but does not include all disclosures required by U.S. GAAP.

Certain prior year amounts have been reclassified to conform to the current year presentation.

During the fourth quarter of 2021, we began adjusting the presentation of cash and cash equivalents held within default funds and margin deposits on the condensed consolidated statement of cash flows from operating activities, to present them as restricted cash and cash equivalents with the associated changes being included within cash flows from investing and financing activities. These balances cannot be used to satisfy operating or other liabilities. See Note 14, "Clearing Operations," for further discussion of the default funds and margin deposits.

Prior period amounts have also been adjusted to conform to current period presentation. This immaterial adjustment had no impact on our previously reported Condensed Consolidated Balance Sheets, Condensed Consolidated Statements of Income, or Condensed Consolidated Statements of Comprehensive Income. The table below presents a summary of the as reported and adjusted amounts relating to the Condensed Consolidated Statement of Cash Flows for the six months ended June 30, 2021.

	Six Months Ended June 30, 2021		
	As Reported	Adjustment	Adjusted
	(in millions)		
Net cash provided by operating activities	\$ 467	\$ —	\$ 467
Net cash used in investing activities	(2,435)	(90)	(2,525)
Net cash used in financing activities	(380)	(229)	(609)
Effect of exchange rate changes on cash, cash equivalents, restricted cash and cash equivalents	(4)	(104)	(108)
Net decrease in cash, cash equivalents, restricted cash and cash equivalents	(2,352)	(423)	(2,775)
Cash, cash equivalents, restricted cash and cash equivalents at beginning of period	2,782	3,197	5,979
Cash, cash equivalents, restricted cash and cash equivalents at end of period	\$ 430	\$ 2,774	\$ 3,204
Reconciliation of Cash, Cash Equivalents and Restricted Cash and Cash Equivalents			
Cash and cash equivalents	\$ 390	\$ —	\$ 390
Restricted cash and cash equivalents	40	—	40
Restricted cash and cash equivalents (Default funds and margin deposits)	—	2,774	2,774
Total	\$ 430	\$ 2,774	\$ 3,204

Accounting Estimates

In preparing our condensed consolidated financial statements, we make assumptions, judgments and estimates that can have a significant impact on our revenue, operating income and net income, as well as on the value of certain assets and liabilities in our condensed consolidated balance sheets. At least quarterly, we evaluate our assumptions, judgments and estimates, and make changes as deemed necessary.

Subsequent Event

We have evaluated subsequent events through the issuance date of this Quarterly Report on Form 10-Q. In July 2022, we amended and restated our certificate of incorporation to increase our authorized shares to 930,000,000, consisting of 30,000,000 shares of preferred stock, par value \$0.01 per share and 900,000,000 shares of common stock, par value \$0.01 per share, in order to effect a stock split in the form of a stock dividend. For discussion of our 3-for-1 stock split in the form of a stock dividend, see "Stock Split," of Note 11, "Nasdaq Stockholders' Equity."

3. REVENUE FROM CONTRACTS WITH CUSTOMERS

Disaggregation of Revenue

The following tables summarize the disaggregation of revenue by major product and service and by segment for the three and six months ended June 30, 2022 and 2021:

	Three Months Ended June 30,	
	2022	2021
	(in millions)	
Market Technology		
Anti Financial Crime Technology	\$ 75	\$ 58
Marketplace Infrastructure Technology	56	59
Investment Intelligence		
Market data	105	104
Index	124	107
Analytics	54	50
Corporate Platforms		
Listing services	107	93
IR & ESG Services	61	56
Market Services		
Transaction-based trading and clearing, net	223	227
Trade management services	87	81
Other revenues	1	11
Revenues less transaction-based expenses	<u>\$ 893</u>	<u>\$ 846</u>

Substantially all revenues from the Market Technology, Investment Intelligence and Corporate Platforms segments were recognized over time for the three months ended June 30, 2022 and 2021. For the three months ended June 30, 2022 and 2021 approximately 69.2% and 70.8%, respectively, of Market Services revenues were recognized at a point in time and 30.8% and 29.2%, respectively, were recognized over time.

	Six Months Ended June 30,	
	2022	2021

	(in millions)	
Market Technology		
Anti Financial Crime Technology	\$ 147	\$ 101
Marketplace Infrastructure Technology	108	116
Investment Intelligence		
Market data	213	209
Index	246	209
Analytics	108	98
Corporate Platforms		
Listing services	214	184
IR & ESG Services	122	112
Market Services		
Transaction-based trading and clearing, net	454	483
Trade management services	171	161
Other revenues	2	24
Revenues less transaction-based expenses	<u>\$ 1,785</u>	<u>\$ 1,697</u>

Substantially all revenues from the Market Technology, Investment Intelligence and Corporate Platforms segments were recognized over time for the six months ended June 30, 2022 and 2021. For the six months ended June 30, 2022 and 2021 approximately 69.8% and 72.0%, respectively, of Market Services revenues were recognized at a point in time and 30.2% and 28.0%, respectively, were recognized over time.

Contract Balances

Substantially all of our revenues are considered to be revenues from contracts with customers. The related accounts receivable balances are recorded in our Condensed Consolidated Balance Sheets as receivables, which are net of allowance for doubtful accounts of \$15 million as of June 30, 2022 and \$17 million as of December 31, 2021. The changes in the balance between periods were immaterial. We do not have obligations for warranties, returns or refunds to customers.

For the majority of our contracts with customers, except for our marketplace infrastructure technology and listings services contracts, our performance obligations range from three months to three years and there is no significant variable consideration.

Deferred revenue is the only significant contract asset or liability as of June 30, 2022. Deferred revenue represents consideration received that is yet to be recognized as revenue for unsatisfied performance obligations. Deferred revenue primarily represents our contract liabilities related to our fees for Market Technology, Investment Intelligence, Annual and Initial Listings, and IR & ESG Services contracts. See Note 7, "Deferred Revenue," for our discussion on deferred revenue balances, activity, and expected timing of recognition.

We do not have a material amount of revenue recognized from performance obligations that were satisfied in prior periods. We do not provide disclosures about transaction price allocated to unsatisfied performance obligations if contract durations are less than one year. For our initial listings the transaction price allocated to remaining performance obligations is included in deferred revenue. For our Market Technology, Analytics, and IR & ESG contracts, the portion of transaction price allocated to unsatisfied performance obligations is presented in the table below. To the extent consideration has been received, unsatisfied performance obligations would be included in the table below as well as deferred revenue.

The following table summarizes the amount of the transaction price allocated to performance obligations that are unsatisfied, for contract durations greater than one year, as of June 30, 2022:

	Market Technology	Analytics	IR & ESG Services	Total
	(in millions)			
Remainder of 2022	\$ 269	\$ 34	\$ 35	\$ 338
2023	461	52	47	560
2024	218	27	17	262
2025	137	10	3	150
2026	84	7	—	91
2027+	137	5	—	142
Total	\$ 1,306	\$ 135	\$ 102	\$ 1,543

4. ACQUISITIONS AND DIVESTITURE

We completed the following acquisitions and divestiture in 2022 and 2021. Financial results of each transaction are included in our condensed consolidated financial statements from the date of each acquisition.

2022 Acquisition

In June 2022, we acquired Metrio, a provider of ESG data collection, analytics and reporting services based in Montreal, Canada. We plan to integrate Metrio's SaaS platform into our suite of ESG solutions. Metrio is part of our IR & ESG business in our Corporate Platforms segment.

2021 Divestiture

In June 2021, we sold our U.S. Fixed Income business, which was part of our FICC business within our Market Services segment, to Tradeweb Markets Inc. We recognized a pre-tax gain on the sale of \$84 million, net of disposal costs. The pre-tax gain was included in net gain on divestiture of business in the Condensed Consolidated Statements of Income.

In connection with this sale, we issued approximately 6.2 million shares of Nasdaq common stock. Nasdaq used the proceeds from the sale, available tax benefits and working and clearing capital of this business, as well as other sources of cash, to repurchase shares of Nasdaq common stock to reduce the impact on earnings per share dilution from the sale. To facilitate these repurchases, in June 2021, the board of directors authorized an increase to the share repurchase program. These repurchases were completed during the second quarter of 2022. See "Share Repurchase Program," of Note 11, "Nasdaq Stockholders' Equity," for further discussion.

2021 Acquisition

Acquisition of Verafin

In February 2021, we completed the acquisition of Verafin, a SaaS technology provider of anti-financial crime management solutions that provides a cloud-based platform to help detect, investigate, and report money laundering and fraud, for an aggregate purchase price of \$2.75 billion, subject to certain adjustments. The \$2.75 billion purchase price includes a cash payment of \$102 million, reflected in cash from operating activities in our Condensed Consolidated Statements of Cash Flows, the release of which is subject to certain employment-related conditions over three years following the closing of the transaction. This payment was recorded as a prepaid expense and is recorded in other current and non-current assets in our Condensed Consolidated Balance Sheets and will be amortized to merger and strategic initiatives expense on a straight-line basis over a three-year period. Verafin is part of our Market Technology segment.

The amounts in the table below represent the final allocation of the purchase price. The allocation of the purchase price was subject to revision during the measurement period, a period not to exceed 12 months from the acquisition date. Adjustments to the provisional values, which may include tax and other estimates, during the measurement period are recorded in the reporting period in which the adjustment amounts are determined. In 2021, we recorded a measurement period adjustment of \$9 million. This adjustment resulted in an increase to both total net liabilities acquired and goodwill. This adjustment did not result in an impact to our Condensed Consolidated Statements of Income. The allocation of the purchase price for Verafin was finalized in the first quarter of 2022.

	(in millions)
Goodwill	\$ 1,882
Acquired Intangible Assets	815
Total Net Liabilities Acquired	(46)
Purchase Consideration	\$ 2,651

Intangible Assets

The following table presents the details of acquired intangible assets for Verafin at the date of acquisition. Acquired intangible assets with finite lives are amortized using the straight-line method.

	<u>Customer Relationships</u>	<u>Technology</u>	<u>Trade Name</u>	<u>Total Acquired Intangible Assets</u>
Intangible asset value (in millions)	\$ 532	\$ 246	\$ 37	\$ 815
Discount rate used	7.5 %	7.5 %	7.5 %	
Estimated average useful life	22 years	7 years	20 years	

Customer Relationships

Customer relationships represent the non-contractual and contractual relationships with customers.

Methodology

Customer relationships were valued using the income approach, specifically an excess earnings method. The excess earnings method examines the economic returns contributed by the identified tangible and intangible assets of a company, and then isolates the excess return that is attributable to the intangible asset being valued.

Discount Rate

The discount rate used reflects the amount of risk associated with the hypothetical cash flows for the customer relationships relative to the overall business. In developing a discount rate for the customer relationships, we estimated a weighted-average cost of capital for the overall business and we utilized this rate as an input when discounting the cash flows. The resulting discounted cash flows were then tax-effected at the applicable statutory rate.

For our acquisition of Verafin, a discounted tax amortization benefit was added to the fair value of the assets under the assumption that the customer relationships would be amortized for tax purposes over a period of 20 years.

Estimated Useful Life

We estimate the useful life based on the historical behavior of the customers and a parallel analysis of the customers using the excess earnings method.

Technology

As part of our acquisition of Verafin, we acquired developed technology.

Methodology

The developed technology was valued using the income approach, specifically the relief-from-royalty method, or RFRM. The RFRM is used to estimate the cost savings that accrue to the owner of an intangible asset who would otherwise have to pay royalties or license fees on revenues earned through the use of the asset. The royalty rate is applied to the projected revenue over the expected remaining life of the intangible asset to estimate royalty savings. The net after-tax royalty savings are calculated for each year in the remaining economic life of the technology and discounted to present value.

Discount Rate

The discount rates used reflect the amount of risk associated with the hypothetical cash flows for the developed technology relative to the overall business as discussed above in "Customer Relationships."

Estimated Useful Life

We have estimated the useful life of the Verafin technology to be 7 years.

Trade Name

As part of our acquisition of Verafin, we acquired a trade name. The trade name is recognized in the industry and carries a reputation for quality. As such, the reputation and positive recognition embodied in the trade name is a valuable asset to Nasdaq.

Methodology

The Verafin trade name was valued using the income approach, specifically the RFRM as discussed above in "Technology."

Discount Rate

The discount rate used reflects the amount of risk associated with the hypothetical cash flows for the trade name relative to the overall business as discussed above in "Customer Relationships."

Estimated Useful Life

We have estimated the useful life of the Verafin trade name to be 20 years and our intention is to continue to use it in the branding of products.

Pro Forma Results and Acquisition-Related Costs

The condensed consolidated financial statements for the three and six months ended June 30, 2022 and 2021 include the financial results of the above acquisitions from the date of the acquisitions. Pro forma financial results have not been presented since these acquisitions were not material to our financial results.

Acquisition-related costs for the transactions described above were expensed as incurred and are included in merger and strategic initiatives expense in the Condensed Consolidated Statements of Income.

5. GOODWILL AND ACQUIRED INTANGIBLE ASSETS

Goodwill

The following table presents the changes in goodwill by business segment during the six months ended June 30, 2022:

	(in millions)
Market Technology	
Balance at December 31, 2021	\$ 2,171
Foreign currency translation adjustments	(28)
Balance at June 30, 2022	\$ 2,143
Investment Intelligence	
Balance at December 31, 2021	\$ 2,428
Foreign currency translation adjustments	(107)
Balance at June 30, 2022	\$ 2,321
Corporate Platforms	
Balance at December 31, 2021	\$ 469
Goodwill acquired	40
Foreign currency translation adjustments	(22)
Balance at June 30, 2022	\$ 487
Market Services	
Balance at December 31, 2021	\$ 3,365
Foreign currency translation adjustments	(165)
Balance at June 30, 2022	\$ 3,200
Total	
Balance at December 31, 2021	\$ 8,433
Goodwill acquired	40
Foreign currency translation adjustments	(322)
Balance at June 30, 2022	\$ 8,151

As of June 30, 2022, the amount of goodwill that is expected to be deductible for tax purposes in future periods is \$40 million.

Goodwill represents the excess of purchase price over the value assigned to the net assets, including identifiable intangible assets, of a business acquired. Goodwill is allocated to our reporting units based on the assignment of the fair values of each reporting unit of the acquired company. We test goodwill for impairment at the reporting unit level annually, or in interim periods if certain events occur indicating that the carrying amount may be impaired, such as changes in the business climate, poor indicators of operating performance or the sale or disposition of a significant portion of a reporting unit. There was no impairment of goodwill for the three and six months ended June 30, 2022 and 2021; however, events such as prolonged economic weakness or unexpected significant declines in operating results of any of our reporting units or businesses, may result in goodwill impairment charges in the future.

Acquired Intangible Assets

The following table presents details of our total acquired intangible assets, both finite- and indefinite-lived:

	June 30, 2022	December 31, 2021
Finite-Lived Intangible Assets		
(in millions)		
Gross Amount		
Technology	\$ 305	\$ 295
Customer relationships	2,009	2,050
Trade names and other	60	60
Foreign currency translation adjustment	(199)	(143)
Total gross amount	\$ 2,175	\$ 2,262
Accumulated Amortization		
Technology	\$ (75)	\$ (54)
Customer relationships	(727)	(711)
Trade names and other	(14)	(11)
Foreign currency translation adjustment	111	81
Total accumulated amortization	\$ (705)	\$ (695)
Net Amount		
Technology	\$ 230	\$ 241
Customer relationships	1,282	1,339
Trade names and other	46	49
Foreign currency translation adjustment	(88)	(62)
Total finite-lived intangible assets	\$ 1,470	\$ 1,567
Indefinite-Lived Intangible Assets		
Exchange and clearing registrations	\$ 1,257	\$ 1,257
Trade names	121	121
Licenses	52	52
Foreign currency translation adjustment	(230)	(184)
Total indefinite-lived intangible assets	\$ 1,200	\$ 1,246
Total intangible assets, net	\$ 2,670	\$ 2,813

There was no impairment of indefinite-lived intangible assets for the three and six months ended June 30, 2022 and 2021.

The following table presents our amortization expense for acquired finite-lived intangible assets:

	Three Months Ended June 30,	
	2022	2021
	(in millions)	
Amortization expense	\$ 39	\$ 40

	Six Months Ended June 30,	
	2022	2021
	(in millions)	
Amortization expense	\$ 78	\$ 76

The table below presents the estimated future amortization expense (excluding the impact of foreign currency translation adjustments of \$88 million as of June 30, 2022) of acquired finite-lived intangible assets as of June 30, 2022:

	(in millions)
Remainder of 2022	\$ 80
2023	159
2024	153
2025	151
2026	148
2027+	867
Total	\$ 1,558

6. INVESTMENTS

The following table presents the details of our investments:

	June 30, 2022		December 31, 2021	
	(in millions)			
Financial investments	\$ 161	\$ 208		
Equity method investments	\$ 377	\$ 363		
Equity securities	\$ 63	\$ 67		

Financial Investments

Financial investments are comprised of trading securities, primarily highly rated European government debt securities, of which \$147 million as of June 30, 2022 and \$162 million as of December 31, 2021, are assets primarily utilized to meet regulatory capital requirements, mainly for our clearing operations at Nasdaq Clearing.

Equity Method Investments

We record our estimated pro-rata share of earnings or losses each reporting period and record any dividends as a reduction in the investment balance. As of June 30, 2022 and 2021, our equity method investments primarily included our 40.0% equity interest in OCC.

The carrying amounts of our equity method investments are included in other non-current assets in the Condensed Consolidated Balance Sheets. No material impairments were recorded for the three and six months end June 30, 2022 and 2021.

Net income recognized from our equity interest in the earnings and losses of these equity method investments, primarily OCC, was \$9 million for the three months ended June 30, 2022, \$27 million for the three months ended June 30, 2021, \$15 million for the six months ended June 30, 2022 and \$84 million for the six months ended June 30, 2021. For the three and six months ended June 30, 2022, lower equity interest in the earnings of OCC, as compared to 2021, was primarily driven by a reduction in the clearing fee rate that OCC charges its customers, partially offset by elevated U.S. industry trading volumes.

Equity Securities

The carrying amounts of our equity securities are included in other non-current assets in the Condensed Consolidated Balance Sheets. We elected the measurement alternative for substantially all of our equity securities as they do not have a readily determinable fair value. No material adjustments were made to the carrying value of our equity securities for the three and six months ended June 30, 2022 and 2021. As of June 30, 2022 and December 31, 2021, our equity securities primarily represent various strategic investments made through our corporate venture program as well as investments acquired through various acquisitions.

7. DEFERRED REVENUE

Deferred revenue represents consideration received that is yet to be recognized as revenue. The changes in our deferred revenue during the six months ended June 30, 2022 are reflected in the following table:

	Balance at December 31, 2021		Additions	Revenue Recognized	Adjustments	Balance at June 30, 2022	
	(in millions)						
Market Technology	\$ 117	\$ 87	\$ (84)	\$ (5)	\$ 115		
Investment Intelligence	106	82	(70)	—	118		
Corporate Platforms:							
Initial Listing	145	20	(30)	(2)	133		
Annual Listings	2	180	(1)	(1)	180		
IR & ESG Services	57	45	(39)	(1)	62		
Other	21	7	(6)	(2)	20		
Total	\$ 448	\$ 421	\$ (230)	\$ (11)	\$ 628		

In the above table:

- Additions primarily reflect deferred revenue billed in the current period, net of recognition.
- Revenue recognized includes revenue recognized during the current period that was included in the beginning balance.
- Adjustments reflect foreign currency translation adjustments.
- Other primarily includes deferred revenue from non-U.S. listing of additional shares fees. Listing of additional shares fees are included in our Listing Services business.

As of June 30, 2022, we estimate that our deferred revenue will be recognized in the following years:

Fiscal year ended:	2022	2023	2024	2025	2026	2027+	Total
	(in millions)						
Market Technology	\$ 87	\$ 27	\$ 1	\$ —	\$ —	\$ —	\$ 115
Investment Intelligence	87	31	—	—	—	—	118
Corporate Platforms:							
Initial Listings	24	38	28	19	16	8	133
Annual Listings	180	—	—	—	—	—	180
IR & ESG Services	50	12	—	—	—	—	62
Other	6	6	5	2	1	—	20
Total	\$ 434	\$ 114	\$ 34	\$ 21	\$ 17	\$ 8	\$ 628

In the above table, 2022 represents the remaining six months of 2022.

The timing of recognition of deferred revenue related to certain marketplace infrastructure technology contracts is primarily dependent upon the completion of customization and any significant modifications made pursuant to existing market technology contracts. As such, as it relates to market technology revenues, the timing represents our best estimate.

8. DEBT OBLIGATIONS

The following table presents the changes in the carrying amount of our debt obligations during the six months ended June 30, 2022:

	December 31, 2021	Additions	Payments, Foreign Currency Translation and Accretion	June 30, 2022
	(in millions)			
Short-term debt:				
Commercial paper	\$ 420	\$ 2,485	\$ (2,484)	\$ 421
2022 Notes	598	—	1	599
2024 Notes	499	—	(499)	—
Total short-term debt	\$ 1,517	\$ 2,485	\$ (2,982)	\$ 1,020
Long-term debt - senior unsecured notes:				
2026 Notes	498	—	—	498
2029 Notes	676	—	(53)	623
2030 Notes	676	—	(53)	623
2050 Notes	486	—	—	486
2031 Notes	643	—	1	644
2040 Notes	644	—	—	644
2033 Notes	694	—	(54)	640
2052 Notes	—	541	—	541
2020 Credit Facility	(4)	—	1	(3)
Total long-term debt	\$ 4,313	\$ 541	\$ (158)	\$ 4,696
Total debt obligations	\$ 5,830	\$ 3,026	\$ (3,140)	\$ 5,716

In the table above, the 2024 Notes were reclassified to short-term debt as of March 31, 2022.

The long-term debt senior unsecured notes in the table above, and discussion below, are listed based on their issuance date.

Commercial Paper Program

Our U.S. dollar commercial paper program is supported by our 2020 Credit Facility which provides liquidity support for the repayment of commercial paper issued through this program. See "2020 Credit Facility" below for further discussion. The effective interest rate of commercial paper issuances fluctuates as short term interest rates and demand fluctuate. The fluctuation of these rates may impact our interest expense.

In January 2022, we issued commercial paper to partially fund our ASR agreement. See "ASR Agreement," of Note 11, "Nasdaq Stockholders' Equity." As of June 30, 2022, we had \$421 million outstanding under our commercial paper program.

Senior Unsecured Notes

Our 2022 and 2040 Notes were issued at par. All of our other outstanding senior unsecured notes were issued at a discount. As a result of the discount, the proceeds received from each issuance were less than the aggregate principal amount. As of June 30, 2022, the amounts in the table above reflect the aggregate principal amount, less the unamortized debt discount and the unamortized debt issuance costs, which are being accreted through interest expense over the life of the applicable notes. For our Euro denominated notes, the “Payments, Foreign Currency Translation and Accretion” column also includes the impact of foreign currency translation. Our senior unsecured notes are general unsecured obligations which rank equally with all of our existing and future unsubordinated obligations and are not guaranteed by any of our subsidiaries. The senior unsecured notes were issued under indentures that, among other things, limit our ability to consolidate, merge or sell all or substantially all of our assets, create liens, and enter into sale and leaseback transactions. The senior unsecured notes may be redeemed by Nasdaq at any time, subject to a make-whole amount.

Upon a change of control triggering event (as defined in the various supplemental indentures governing the applicable notes), the terms require us to repurchase all or part of each holder’s notes for cash equal to 101% of the aggregate principal amount purchased plus accrued and unpaid interest, if any.

Early Extinguishment of 2024 Notes

In May 2014, Nasdaq issued the 2024 Notes, which paid interest semiannually at a rate of 4.25% per annum. In April 2022, we primarily used the net proceeds from the 2052 Notes to repay in full and redeem our 2024 Notes. For further discussion see “2052 Notes” below. In connection with the early extinguishment of the 2024 Notes, in April 2022 we recorded a pre-tax charge of \$16 million, which primarily includes a make-whole redemption price premium.

2026 Notes

In June 2016, Nasdaq issued the 2026 Notes, which pay interest semi-annually at a rate of 3.85% per annum until June 30, 2026. Such interest rate may vary with Nasdaq’s debt rating, to the extent Nasdaq is downgraded below investment grade, up to a rate not to exceed 5.85%.

2029 Notes

In April 2019, Nasdaq issued the 2029 Notes, which pay interest annually at a rate of 1.75% per annum until March 28, 2029. Such interest rate may vary with Nasdaq’s debt rating, to the extent Nasdaq is downgraded below investment grade, up to a rate not to exceed 3.75%.

The 2029 Notes have been designated as a hedge of our net investment in certain foreign subsidiaries to mitigate the foreign exchange risk associated with certain investments in these subsidiaries. The decrease in the carrying amount of \$53 million noted in the “Payments, Foreign Currency Translation and Accretion” column in the table above primarily reflects the remeasurement of the 2029 Notes into U.S. dollars and is recorded in accumulated other comprehensive loss within Nasdaq’s stockholders’ equity in the Condensed Consolidated Balance Sheets as of June 30, 2022.

2030 Notes

In February 2020, Nasdaq issued the 2030 Notes, which pay interest annually at a rate of 0.875% in arrears, which began on February 13, 2021.

The 2030 Notes were designated as a hedge of our net investment in certain foreign subsidiaries to mitigate the foreign exchange risk associated with certain investments in these subsidiaries. The decrease in the carrying amount of \$53 million noted in the “Payments, Foreign Currency Translation and Accretion” column in the table above primarily reflects the remeasurement of the 2030 Notes into U.S. dollars and is recorded in accumulated other comprehensive loss within Nasdaq’s stockholders’ equity in the Condensed Consolidated Balance Sheets as of June 30, 2022.

2050 Notes

In April 2020, Nasdaq issued the 2050 Notes, which pay interest semi-annually at a rate of 3.25% per annum until April 28, 2050. Such rate may vary with Nasdaq’s debt rating, to the extent Nasdaq is downgraded below investment grade, up to a rate not to exceed 5.25%.

2022, 2031 and 2040 Notes

In December 2020, Nasdaq issued the 2022, 2031 and 2040 Notes. The net proceeds were used to partially fund the acquisition of Verafin. For further discussion of the acquisition of Verafin, see “2021 Acquisition,” of Note 4, “Acquisitions and Divestiture.”

2022 Notes

The 2022 Notes pay interest semi-annually in arrears, which began on June 21, 2021. The interest rate of 0.445% may vary with Nasdaq’s debt rating, to the extent Nasdaq is downgraded below investment grade, up to a rate not to exceed 2.445%.

2031 Notes

The 2031 Notes pay interest semi-annually in arrears, which began on January 15, 2021. The interest rate of 1.650% may vary with Nasdaq’s debt rating, to the extent Nasdaq is downgraded below investment grade, up to a rate not to exceed 3.65%.

2040 Notes

The 2040 Notes pay interest semi-annually in arrears, which began on June 21, 2021. The interest rate of 2.500% may vary with Nasdaq's debt rating, to the extent Nasdaq is downgraded below investment grade, up to a rate not to exceed 4.50%.

2033 Notes

In July 2021, Nasdaq issued the 2033 Notes, which pay interest annually in arrears, at a rate of 0.900%, beginning on July 30, 2022.

The 2033 Notes have been designated as a hedge of our net investment in certain foreign subsidiaries to mitigate the foreign exchange risk associated with certain investments in these subsidiaries. The decrease in the carrying amount of \$54 million noted in the "Payments, Foreign Currency Translation and Accretion" column in the table above primarily reflects the remeasurement of the 2033 Notes into U.S. dollars and is recorded in accumulated other comprehensive loss within Nasdaq stockholders' equity in the Condensed Consolidated Balance Sheets as of June 30, 2022.

2052 Notes

In March 2022, Nasdaq issued \$550 million aggregate principal amount of 3.950% senior notes due in 2052, which pay interest semi-annually in arrears, beginning on September 7, 2022. The interest rate of 3.950% may vary with Nasdaq's debt rating, to the extent Nasdaq is downgraded below investment grade, up to a rate not to exceed 5.950%. The net proceeds from the 2052 Notes were approximately \$541 million after deducting the underwriting discount and expenses of the offering. We used the net proceeds from the 2052 Notes to redeem all of the 2024 Notes in April 2022.

Credit Facilities

2020 Credit Facility

In December 2020, Nasdaq entered into the 2020 Credit Facility, which replaced a former credit facility and consists of a \$1.25 billion five-year revolving credit facility (with sublimits for non-dollar borrowings, swingline borrowings and letters of credit). Nasdaq intends to use funds available under the 2020 Credit Facility for general corporate purposes and to provide liquidity support for the repayment of commercial paper issued through the commercial paper program. Nasdaq is permitted to repay borrowings under our 2020 Credit Facility at any time in whole or in part, without penalty.

As of June 30, 2022, no amounts were outstanding on the 2020 Credit Facility. The \$(3) million balance represents unamortized debt issuance costs which are being accreted through interest expense over the life of the credit facility.

Borrowings under the revolving credit facility and swingline borrowings bear interest on the principal amount outstanding at a variable interest rate based on either the LIBOR (or a successor rate to LIBOR), the base rate (as defined in the credit agreement), or other applicable rate with respect to non-dollar borrowings, plus an applicable margin that varies with Nasdaq's debt rating. We are charged commitment fees of 0.125% to 0.350%, depending on our credit rating, whether or not amounts have been borrowed. These commitment fees are included in interest expense and were not material for the three and six months ended June 30, 2022 and 2021.

The 2020 Credit Facility contains financial and operating covenants. Financial covenants include a maximum leverage ratio. Operating covenants include, among other things, limitations on Nasdaq's ability to incur additional indebtedness, grant liens on assets, dispose of assets and make certain restricted payments. The facility also contains customary affirmative covenants, including access to financial statements, notice of defaults and certain other material events, maintenance of properties and insurance, and customary events of default, including cross-defaults to our material indebtedness.

The 2020 Credit Facility includes an option for Nasdaq to increase the available aggregate amount by up to \$625 million, subject to the consent of the lenders funding the increase and certain other conditions.

Other Credit Facilities

Certain of our European subsidiaries have several other credit facilities, which are available in multiple currencies, primarily to support our Nasdaq Clearing operations in Europe, as well as to provide a cash pool credit line for one subsidiary. These credit facilities, in aggregate, totaled \$188 million as of June 30, 2022 and \$212 million as of December 31, 2021 in available liquidity, none of which was utilized. Generally, these facilities each have a one year term. The amounts borrowed under these various credit facilities bear interest on the principal amount outstanding at a variable interest rate based on a base rate (as defined in the applicable credit agreement), plus an applicable margin. We are charged commitment fees (as defined in the applicable credit agreement), whether or not amounts have been borrowed. These commitment fees are included in interest expense and were not material for the three and six months ended June 30, 2022 and 2021.

These facilities include customary affirmative and negative operating covenants and events of default.

Debt Covenants

As of June 30, 2022, we were in compliance with the covenants of all of our debt obligations.

9. RETIREMENT PLANS

Defined Contribution Savings Plan

We sponsor a 401(k) Plan for U.S. employees. Employees are immediately eligible to make contributions to the plan and are also eligible for an employer contribution match at an amount equal to 100.0% of the first 6.0% of eligible employee contributions. Savings plan expense included in compensation and benefits expense in the Condensed Consolidated Statements of Income was \$4 million for the three months ended June 30, 2022, \$3 million for the three months ended June 30, 2021, and \$8 million for the six months ended June 30, 2022 and \$7 million for the six months ended June 30, 2021.

Pension and Supplemental Executive Retirement Plans

We maintain non-contributory, defined-benefit pension plans, non-qualified SERPs for certain senior executives and other post-retirement benefit plans for eligible employees in the U.S. Our pension plans and SERPs are frozen. Future service and salary for all participants do not count toward an accrual of benefits under the pension plans and SERPs. Most employees outside the U.S. are covered by local retirement plans or by applicable social laws. Benefits under social laws are generally expensed in the periods in which the costs are incurred. The total expense for these plans is included in compensation and benefits expense in the Condensed Consolidated Statements of Income and was \$6 million for the three months ended June 30, 2022, \$7 million for the three months ended June 30, 2021, \$12 million for the six months ended June 30, 2022 and \$13 million for the six months ended June 30, 2021.

Deferred Compensation Plan

In June 2022, we established the Nasdaq, Inc. Deferred Compensation Plan. This plan provides certain eligible employees with the opportunity to defer a portion of their annual salary and bonus up to certain approval limits. All deferrals and associated earnings are our general unsecured obligations.

10. SHARE-BASED COMPENSATION

We have a share-based compensation program for employees and non-employee directors. Share-based awards granted under this program include restricted stock (consisting of restricted stock units), PSUs and stock options. For accounting purposes, we consider PSUs to be a form of restricted stock.

Summary of Share-Based Compensation Expense

The following table presents the total share-based compensation expense resulting from equity awards and the 15.0% discount for the ESPP for the three and six months ended June 30, 2022 and 2021, which is included in compensation and benefits expense in the Condensed Consolidated Statements of Income:

Three Months Ended June 30,		Six Months Ended June 30,	
2022	2021	2022	2021

(in millions)

Share-based compensation expense before income taxes	\$ 25	\$ 24	\$ 49	\$ 43
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Common Shares Available Under Our Equity Plan

As of June 30, 2022, we had approximately 8.9 million shares of common stock authorized for future issuance under our Equity Plan.

Restricted Stock

We grant restricted stock to most employees. The grant date fair value of restricted stock awards is based on the closing stock price at the date of grant less the present value of future cash dividends. Restricted stock awards granted to employees below the manager level generally vest 33.3% on the first anniversary of the grant date, 33.3% on the second anniversary of the grant date, and 33.3% on the third anniversary of the grant date. Restricted stock awards granted to employees at or above the manager level generally vest 33.3% on the second anniversary of the grant date, 33.3% on the third anniversary of the grant date, and 33.3% on the fourth anniversary of the grant date.

Summary of Restricted Stock Activity

The following table summarizes our restricted stock activity for the six months ended June 30, 2022:

	Restricted Stock	
	Number of Awards	Weighted-Average Grant Date Fair Value
Unvested at January 1, 2022	1,466,340	\$ 106.16
Granted	465,704	175.98
Vested	(464,316)	89.80
Forfeited	(48,415)	119.80
Unvested at June 30, 2022	1,419,313	\$ 133.96

As of June 30, 2022, \$121 million of total unrecognized compensation cost related to restricted stock is expected to be recognized over a weighted-average period of 1.9 years.

PSUs

PSUs are based on performance measures that impact the amount of shares that each recipient will receive upon vesting. Prior to April 1, 2020, we had two performance-based PSU programs for certain officers, a one-year performance-based program and a three-year cumulative performance-based program that focuses on TSR. Effective April 1, 2020, to better align the equity programs for eligible officers, the one-year performance-based program was eliminated and all eligible officers now participate in the three-year cumulative performance-based program. While the performance periods are complete for all PSUs granted under the one-year performance-based program, some shares underlying these PSUs have not vested.

One-Year PSU Program

The grant date fair value of PSUs under the one-year performance-based program was based on the closing stock price at the date of grant less the present value of future cash dividends. Under this program, an eligible employee received a target grant of PSUs, but could have received from 0.0% to 150.0% of the target amount granted, depending on the achievement of performance measures. These awards vest ratably on an annual basis over a three-year period commencing with the end of the one-year performance period. Compensation cost is recognized over the performance period and the three-year vesting period based on the probability that such performance measures will be achieved, taking into account an estimated forfeiture rate.

Three-Year PSU Program

Under the three-year performance-based program, each eligible individual receives PSUs, subject to market conditions, with a three-year cumulative performance period that vest at the end of the performance period. Compensation cost is recognized over the three-year performance period, taking into account an estimated forfeiture rate, regardless of whether the market condition is satisfied, provided that the requisite service period has been completed. Performance will be determined by comparing Nasdaq's TSR to two peer groups, each weighted 50.0%. The first peer group consists of exchange companies, and the second peer group consists of all companies in the S&P 500. Nasdaq's relative performance ranking against each of these groups will determine the final number of shares delivered to each individual under the program. The award issuance under this program will be between 0.0% and 200.0% of the number of PSUs granted and will be determined by Nasdaq's overall performance against both peer groups. However, if Nasdaq's TSR is negative for the three-year performance period, regardless of TSR ranking, the award issuance will not exceed 100.0% of the number of PSUs granted. We estimate the fair value of PSUs granted under the three-year PSU program using the Monte Carlo simulation model, as these awards contain a market condition.

Grants of PSUs that were issued in 2019 with a three-year performance period exceeded the applicable performance parameters. As a result, an additional 289,307 units above the original target were granted in the first quarter of 2022 and were fully vested upon issuance.

The following weighted-average assumptions were used to determine the weighted-average fair values of the PSU awards granted under the three-year PSU program for the six months ended June 30, 2022 and 2021:

	June 30, 2022	June 30, 2021
Weighted-average risk free interest rate	2.55 %	0.31 %
Expected volatility	30.33 %	30.11 %
Weighted-average grant date share price	\$ 181.92	\$ 150.85
Weighted-average fair value at grant date	\$ 190.51	\$ 206.17

In the table above, the risk-free interest rate for periods within the expected life of the award is based on the U.S. Treasury yield curve in effect at the time of grant; and we use historic volatility for PSU awards issued under the three-year PSU program, as implied volatility data could not be obtained for all the companies in the peer groups used for relative performance measurement within the program.

In addition, the annual dividend assumption utilized in the Monte Carlo simulation model is based on Nasdaq's dividend yield at the date of grant.

Summary of PSU Activity

The following table summarizes our PSU activity for the six months ended June 30, 2022:

	PSUs			
	One-Year Program		Three-Year Program	
	Number of Awards	Weighted-Average Grant Date Fair Value	Number of Awards	Weighted-Average Grant Date Fair Value
Unvested at January 1, 2022	49,734	\$ 84.03	764,124	\$ 135.04
Granted	—	—	490,364	135.88
Vested	(2,075)	84.18	(578,614)	97.70
Forfeited	(759)	84.18	(23,067)	149.66
Unvested at June 30, 2022	<u>46,900</u>	<u>\$ 84.02</u>	<u>652,807</u>	<u>\$ 168.25</u>

In the table above, the granted amount under the three year program reflects additional awards granted based on overachievement of performance parameters.

As of June 30, 2022, \$1 million of total unrecognized compensation cost related to the one-year PSU program is expected to be recognized over a weighted-average period of 1.0 year. For the three-year PSU program, \$62 million of total unrecognized compensation cost is expected to be recognized over a weighted-average period of 1.5 years.

Stock Options

In January 2022, in connection with a new five year employment agreement, our President and Chief Executive Officer received an aggregate of 204,624 performance-based non-qualified stock options, which will vest as follows:

- 50% will vest contingent upon the achievement of certain performance conditions; and
- 50% will vest five years after the grant date, subject to continued employment through such date.

The fair value of stock options are estimated using the Black-Scholes option-pricing model. These options expire 10 years after the date of grant. There were no stock option awards granted for the six months ended June 30, 2021.

A summary of stock option activity for the six months ended June 30, 2022 is as follows:

	Number of Stock Options	Weighted- Average Exercise Price	Weighted- Average Remaining Contractual Term (in years)	Aggregate Intrinsic Value (in millions)
Outstanding at December 31, 2021	268,817	\$ 66.68	5.0	\$ 39
Granted	204,624	202.46		
Outstanding at June 30, 2022	<u>473,441</u>	<u>\$ 125.36</u>	6.7	\$ 23
Exercisable at June 30, 2022	<u>268,817</u>	<u>\$ 66.68</u>	4.5	\$ 23

The net cash proceeds from the exercise of 24,409 stock options for the six months ended June 30, 2021 was \$1 million.

As of June 30, 2022, the aggregate pre-tax intrinsic value of the outstanding and exercisable stock options in the above table was \$23 million and represents the difference between our closing stock price on June 30, 2022 of \$152.54 and the exercise price, times the number of shares that would have been received by the option holders had the option holders exercised their stock options on that date. This amount can change based on the fair market value of our common stock. As of June 30, 2021, 0.3 million outstanding stock options were exercisable and the weighted-average exercise price was \$66.68.

The total pre-tax intrinsic value of stock options exercised was \$3 million for the six months ended June 30, 2021.

ESPP

We have an ESPP under which approximately 4.1 million shares of our common stock were available for future issuance as of June 30, 2022. Under our ESPP, employees may purchase shares having a value not exceeding 10.0% of their annual compensation, subject to applicable annual Internal Revenue Service limitations. We record compensation expense related to the 15.0% discount that is given to our employees, which totaled \$3 million for both the three months ended June 30, 2022 and 2021 and \$5 million for both the six months ended June 30, 2022 and 2021.

11. NASDAQ STOCKHOLDERS' EQUITY

Common Stock

As of June 30, 2022, 300,000,000 shares of our common stock were authorized, 170,888,738 shares were issued and 163,734,534 shares were outstanding. As of December 31, 2021, 300,000,000 shares of our common stock were authorized, 173,418,939 shares were issued and 166,679,635 shares were outstanding. The holders of common stock are entitled to one vote per share, except that our certificate of incorporation limits the ability of any shareholder to vote in excess of 5.0% of the then-outstanding shares of Nasdaq common stock.

Common Stock in Treasury, at Cost

We account for the purchase of treasury stock under the cost method with the shares of stock repurchased reflected as a reduction to Nasdaq stockholders' equity and included in common stock in treasury, at cost in the Condensed Consolidated Balance Sheets. Shares repurchased under our share repurchase program are currently retired and canceled and are therefore not included in the common stock in treasury balance. If treasury shares are reissued, they are recorded at the average cost of the treasury shares acquired. We held 7,154,204 shares of common stock in treasury as of June 30, 2022 and 6,739,304 shares as of December 31, 2021, most of which are related to shares of our common stock withheld for the settlement of employee tax withholding obligations arising from the vesting of restricted stock and PSUs.

Share Repurchase Program

As discussed in "2021 Divestiture," of Note 4, "Acquisitions and Divestiture," in June 2021, our board of directors authorized an increase to our share repurchase program to an aggregate authorized amount of \$1.5 billion. As of June 30, 2022, the remaining aggregate authorized amount under the existing share repurchase program was \$293 million.

These repurchases may be made from time to time at prevailing market prices in open market purchases, privately-negotiated transactions, block purchase techniques, an accelerated share repurchase program or otherwise, as determined by our management. The repurchases are primarily funded from existing cash balances. The share repurchase program may be suspended, modified or discontinued at any time, and has no defined expiration date.

The following is a summary of our share repurchase activity, excluding the repurchases done through our ASR agreement described below, reported based on settlement date, for the six months ended June 30, 2022:

	Six Months Ended June 30, 2022
Number of shares of common stock repurchased	1,821,865
Average price paid per share	\$ 168.78
Total purchase price (in millions)	\$ 308

In the table above, the number of shares of common stock repurchased excludes an aggregate of 414,900 shares withheld upon the vesting of restricted stock and PSUs for the six months ended June 30, 2022.

As discussed above in “Common Stock in Treasury, at Cost,” shares repurchased under our share repurchase program are currently retired and cancelled.

ASR Agreement

In January 2022, we entered into an ASR agreement to repurchase \$325 million of common stock. We received a total delivery of 1,876,387 shares of common stock and completed the ASR program during the first quarter of 2022.

Preferred Stock

Our certificate of incorporation authorizes the issuance of 30,000,000 shares of preferred stock, par value \$0.01 per share, issuable from time to time in one or more series. As of June 30, 2022 and December 31, 2021, no shares of preferred stock were issued or outstanding.

Stock Split

In April 2022, we announced our plan to seek shareholder and SEC approval for an increase in the number of authorized shares of common stock in order to effect a 3-for-1 stock split of the Company’s common stock in the form of a stock dividend. In June 2022, we received the necessary approvals. In July 2022, our board of directors approved and declared the stock split in the form of a stock dividend. The record date for the stock dividend is August 12, 2022, with a distribution date of August 26, 2022 and we expect trading to begin on a split-adjusted basis on August 29, 2022.

Cash Dividends on Common Stock

During the first six months of 2022, our board of directors declared and paid the following cash dividends:

Declaration Date	Dividend Per Common Share	Record Date	Total Amount Paid	Payment Date
(in millions)				
January 26, 2022	\$ 0.54	March 11, 2022	\$ 88	March 25, 2022
April 20, 2022	0.60	June 10, 2022	98	June 24, 2022
			\$ 186	

The total amount paid of \$186 million was recorded in retained earnings within Nasdaq's stockholders' equity in the Condensed Consolidated Balance Sheets at June 30, 2022.

In July 2022, the board of directors approved a regular quarterly cash dividend of \$0.20 per share on our outstanding common stock. On a split-adjusted basis, the dividend is economically equivalent to the pre-split quarterly dividend of \$0.60 per share on our outstanding common stock paid in the preceding quarter. The dividend is payable on September 30, 2022 to shareholders of record at the close of business on September 16, 2022. The estimated amount of this dividend is \$98 million. Future declarations of quarterly dividends and the establishment of future record and payment dates are subject to approval by the board of directors.

The board of directors maintains a dividend policy with the intention to provide stockholders with regular and increasing dividends as earnings and cash flows increase.

12. EARNINGS PER SHARE

The following table sets forth the computation of basic and diluted earnings per share:

	Three Months Ended June 30,	
	2022	2021
(in millions, except share and per share amounts)		
Numerator:		
Net income attributable to common shareholders	\$ 307	\$ 341
Denominator:		
Weighted-average common shares outstanding for basic earnings per share	164,078,459	164,085,819
Weighted-average effect of dilutive securities:		
Employee equity awards	1,448,250	2,352,338
Weighted-average common shares outstanding for diluted earnings per share	165,526,709	166,438,157
Basic and diluted earnings per share:		
Basic earnings per share	\$ 1.87	\$ 2.08
Diluted earnings per share	\$ 1.85	\$ 2.05
	Six Months Ended June 30,	
	2022	2021
(in millions, except share and per share amounts)		
Numerator:		
Net income attributable to common shareholders	\$ 590	\$ 639
Denominator:		
Weighted-average common shares outstanding for basic earnings per share	164,560,607	164,395,991
Weighted-average effect of dilutive securities:		
Employee equity awards	1,824,138	2,367,405
Weighted-average common shares outstanding for diluted earnings per share	166,384,745	166,763,396
Basic and diluted earnings per share:		
Basic earnings per share	\$ 3.59	\$ 3.89
Diluted earnings per share	\$ 3.55	\$ 3.83

In the table above, employee equity awards from our PSU program, which are considered contingently issuable, are included in the computation of diluted earnings per share on a weighted average basis when management determines that the applicable performance criteria would have been met if the performance period ended as of the date of the relevant computation.

Securities that were not included in the computation of diluted earnings per share because their effect was antidilutive were immaterial for both the three and six months ended June 30, 2022 and 2021.

13. FAIR VALUE OF FINANCIAL INSTRUMENTS

The following tables present our financial assets and financial liabilities that were measured at fair value on a recurring basis as of June 30, 2022 and December 31, 2021.

	June 30, 2022			
	Total	Level 1	Level 2	Level 3
(in millions)				
European government debt securities	\$ 132	\$ 132	\$ —	\$ —
Swedish mortgage bonds	20	—	20	—
Commercial paper	9	—	9	—
Total assets at fair value	\$ 161	\$ 132	\$ 29	\$ —
	December 31, 2021			
	Total	Level 1	Level 2	Level 3
(in millions)				
European government debt securities	\$ 144	\$ 144	\$ —	\$ —
Corporate debt securities	20	—	20	—
State-owned enterprises and municipal securities	11	—	11	—
Swedish mortgage bonds	21	—	21	—
Time deposits	12	—	12	—
Total assets at fair value	\$ 208	\$ 144	\$ 64	\$ —

Financial Instruments Not Measured at Fair Value on a Recurring Basis

Some of our financial instruments are not measured at fair value on a recurring basis but are recorded at amounts that approximate fair value due to their liquid or short-term nature. Such financial assets and financial liabilities include: cash and cash equivalents, restricted cash and cash equivalents, receivables, net, certain other current assets, accounts payable and accrued expenses, Section 31 fees payable to SEC, accrued personnel costs, commercial paper and certain other current liabilities.

Our investment in OCC is accounted for under the equity method of accounting. We have elected the measurement alternative for the majority of our equity securities, which primarily represent various strategic investments made through our corporate venture program. See "Equity Method Investments," and "Equity Securities," of Note 6, "Investments," for further discussion.

We also consider our debt obligations to be financial instruments. As of June 30, 2022, the majority of our debt obligations were fixed-rate obligations. We are exposed to changes in interest rates as a result of borrowings under our 2020 Credit Facility, as the interest rates on this facility have a variable rate depending on the maturity of the borrowing and the implied underlying reference rate. As of June 30, 2022, we had no outstanding borrowings under our 2020 Credit Facility. We are also exposed to changes in interest rates as a result of the amounts outstanding from the sale of commercial paper under our commercial paper program. As of June 30, 2022, we had \$421 million outstanding under our commercial paper program. The fair value of our debt obligations utilizing discounted cash flow analyses for our floating rate debt, and prevailing market rates for our fixed rate debt was \$4.8 billion as of June 30, 2022 and \$5.9 billion as of December 31, 2021. The discounted cash flow analyses are based on borrowing rates currently available to us for debt with similar terms and maturities. The fair value of our commercial paper as of June 30, 2022 approximated the carrying value since the rates of interest on this short-term debt approximated market rates. Our commercial paper and our fixed rate and floating rate debt are categorized as Level 2 in the fair value hierarchy.

For further discussion of our debt obligations, see Note 8, "Debt Obligations."

Non-Financial Assets Measured at Fair Value on a Non-Recurring Basis

Our non-financial assets, which include goodwill, intangible assets, and other long-lived assets, are not required to be carried at fair value on a recurring basis. Fair value measures of non-financial assets are primarily used in the impairment analysis of these assets. Any resulting asset impairment would require that the non-financial asset be recorded at its fair value. Nasdaq uses Level 3 inputs to measure the fair value of the above assets on a non-recurring basis. As of June 30, 2022 and December 31, 2021, there were no non-financial assets measured at fair value on a non-recurring basis.

14. CLEARING OPERATIONS

Nasdaq Clearing

Nasdaq Clearing is authorized and supervised under EMIR as a multi-asset clearinghouse by the SFSA. Such authorization is effective for all member states of the European Union and certain other non-member states that are part of the European Economic Area, including Norway. The clearinghouse acts as the CCP for exchange and OTC trades in equity derivatives, fixed income derivatives, resale and repurchase contracts, power derivatives, emission allowance derivatives, and seafood derivatives.

Through our clearing operations in the financial markets, which include the resale and repurchase market, the commodities markets, and the seafood market, Nasdaq Clearing is the legal counterparty for, and guarantees the fulfillment of, each contract cleared. These contracts are not used by Nasdaq Clearing for the purpose of trading on its

own behalf. As the legal counterparty of each transaction, Nasdaq Clearing bears the counterparty risk between the purchaser and seller in the contract. In its guarantor role, Nasdaq Clearing has precisely equal and offsetting claims to and from clearing members on opposite sides of each contract, standing as the CCP on every contract cleared. In accordance with the rules and regulations of Nasdaq Clearing, default fund and margin collateral requirements are calculated for each clearing member's positions in accounts with the CCP. See "Default Fund Contributions and Margin Deposits" below for further discussion of Nasdaq Clearing's default fund and margin requirements.

Nasdaq Clearing maintains three member sponsored default funds: one related to financial markets, one related to commodities markets and one related to the seafood market. Under this structure, Nasdaq Clearing and its clearing members must contribute to the total regulatory capital related to the clearing operations of Nasdaq Clearing. This structure applies an initial separation of default fund contributions for the financial, commodities and seafood markets in order to create a buffer for each market's counterparty risks. See "Default Fund Contributions" below for further discussion of Nasdaq Clearing's default fund. A power of assessment and a liability waterfall have also been implemented to further align risk between Nasdaq Clearing and its clearing members. See "Power of Assessment" and "Liability Waterfall" below for further discussion.

Nasdaq Commodities Clearing Default

In September 2018, a member of the Nasdaq Clearing commodities market defaulted due to the inability to post sufficient collateral to cover increased margin requirements for the positions of the relevant member, which had experienced losses due to sharp adverse movements in the Nordic - German power market spread. Nasdaq Clearing followed default procedures and offset the future market risk on the defaulting member's positions.

Immediately following the event, Nasdaq Clearing launched a comprehensive enhancement program to strengthen the resilience and robustness of the clearinghouse.

In December 2018, the SFSA initiated a review of Nasdaq Clearing. In January 2021, the SFSA issued a warning combined with an administrative fine of approximately \$29 million (SEK 300 million) to Nasdaq Clearing based on its review. Nasdaq Clearing appealed the SFSA's decision to the Administrative Court. In December 2021, the court rejected Nasdaq Clearing's appeal and upheld the decision of the SFSA. In January 2022, Nasdaq Clearing appealed this decision to the Administrative Court of Appeal, with the next hearing date set for October 2022. While we continue to firmly believe in the merit of our appeal, due to the recent decision by the Administrative Court, we have determined it is appropriate to record an accrual for the full amount of the administrative fine issued by the SFSA. The charge was included in regulatory expense in our Consolidated Statements of Income for the year ended December 31, 2021.

Default Fund Contributions and Margin Deposits

As of June 30, 2022, clearing member default fund contributions and margin deposits were as follows:

	June 30, 2022		
	Cash Contributions	Non-Cash Contributions	Total Contributions
	(in millions)		
Default fund contributions	\$ 763	\$ 115	\$ 878
Margin deposits	7,925	8,063	15,988
Total	\$ 8,688	\$ 8,178	\$ 16,866

Of the total default fund contributions of \$878 million, Nasdaq Clearing can utilize \$782 million as capital resources in the event of a counterparty default. The remaining balance of \$96 million pertains to member posted surplus balances.

Our clearinghouse holds material amounts of clearing member cash deposits which are held or invested primarily to provide security of capital while minimizing credit, market and liquidity risks. While we seek to achieve a reasonable rate of return, we are primarily concerned with preservation of capital and managing the risks associated with these deposits.

Clearing member cash contributions are maintained in demand deposits held at central banks and large, highly rated financial institutions or secured through direct investments, primarily central bank certificates and highly rated European government debt securities with original maturities primarily 1 year or less, reverse repurchase agreements and multilateral development bank debt securities. Investments in reverse repurchase agreements range in maturity from 1 day to 15 days and are secured with highly rated government securities and multilateral development banks. The carrying value of these securities approximates their fair value due to the short-term nature of the instruments and reverse repurchase agreements.

Nasdaq Clearing has invested the total cash contributions of \$8,688 million as of June 30, 2022 and \$5,911 million as of December 31, 2021, in accordance with its investment policy as follows:

	June 30, 2022		December 31, 2021	
	(in millions)			
Demand deposits	\$ 6,869	\$ 3,061		
Central bank certificates	900	2,013		
Restricted cash and cash equivalents	\$ 7,769	\$ 5,074		
European government debt securities	447	414		
Reverse repurchase agreements	282	152		
Multilateral development bank debt securities	190	271		
Investments	\$ 919	\$ 837		
Total	\$ 8,688	\$ 5,911		

In the preceding table, the change from December 31, 2021 to June 30, 2022 includes currency translation adjustments of \$657 million for restricted cash and cash equivalents and \$120 million for investments.

For the six months ended June 30, 2022 and 2021 investments related to default funds and margin deposits, net includes purchases of investment securities of \$17,539 million and \$20,419 million, respectively, and proceeds from sales and redemptions of investment securities of \$17,337 million and \$20,329 million, respectively.

In the investment activity related to default fund and margin contributions, we are exposed to counterparty risk related to reverse repurchase agreement transactions, which reflect the risk that the counterparty might become insolvent and, thus, fail to meet its obligations to Nasdaq Clearing. We mitigate this risk by only engaging in transactions with high credit quality reverse repurchase agreement counterparties and by limiting the acceptable collateral under the reverse repurchase agreement to high quality issuers, primarily government securities and other securities explicitly guaranteed by a government. The value of the underlying security is monitored during the lifetime of the contract, and in the event the market value of the underlying security falls below the reverse repurchase amount, our clearinghouse may require additional collateral or a reset of the contract.

Default Fund Contributions

Required contributions to the default funds are proportional to the exposures of each clearing member. When a clearing member is active in more than one market, contributions must be made to all markets' default funds in which the member is active. Clearing members' eligible contributions may include cash and non-cash contributions. Cash contributions received are maintained in demand deposits held at central banks and large, highly rated financial institutions or invested by Nasdaq Clearing, in accordance with its investment policy, either in central bank certificates, highly rated government debt securities, reverse repurchase agreements with highly rated government debt securities as collateral, or multilateral development bank debt securities. Nasdaq Clearing maintains and manages all cash deposits related to margin collateral. All risks and rewards of collateral ownership, including interest, belong to Nasdaq Clearing. Clearing members' cash contributions are included in default funds and margin deposits in the Condensed Consolidated Balance Sheets as both a current asset and a current liability. Non-cash contributions include highly rated government debt securities that must meet specific criteria approved by Nasdaq Clearing. Non-cash contributions are pledged assets that are not recorded in the Condensed Consolidated Balance Sheets as Nasdaq Clearing does not take legal ownership of these assets and the risks and rewards remain with the clearing members. These balances may fluctuate over time due to changes in the amount of deposits required and whether members choose to provide cash or non-cash contributions. Assets pledged are held at a nominee account in Nasdaq Clearing's name for the benefit of the clearing members and are immediately accessible by Nasdaq

Clearing in the event of a default. In addition to clearing members' required contributions to the liability waterfall, Nasdaq Clearing is also required to contribute capital to the liability waterfall and overall regulatory capital as specified under its clearinghouse rules. As of June 30, 2022, Nasdaq Clearing committed capital totaling \$123 million to the liability waterfall and overall regulatory capital, in the form of government debt securities, which are recorded as financial investments in the Condensed Consolidated Balance Sheets. The combined regulatory capital of the clearing members and Nasdaq Clearing is intended to secure the obligations of a clearing member exceeding such member's own margin and default fund deposits and may be used to cover losses sustained by a clearing member in the event of a default.

Margin Deposits

Nasdaq Clearing requires all clearing members to provide collateral, which may consist of cash and non-cash contributions, to guarantee performance on the clearing members' open positions, or initial margin. In addition, clearing members must also provide collateral to cover the daily margin call if needed. See "Default Fund Contributions" above for further discussion of cash and non-cash contributions.

Similar to default fund contributions, Nasdaq Clearing maintains and manages all cash deposits related to margin collateral. All risks and rewards of collateral ownership, including interest, belong to Nasdaq Clearing and are recorded in revenues. These cash deposits are recorded in default funds and margin deposits in the Condensed Consolidated Balance Sheets as both a current asset and a current liability. Pledged margin collateral is not recorded in our Condensed Consolidated Balance Sheets as all risks and rewards of collateral ownership, including interest, belong to the counterparty. Assets pledged are held at a nominee account in Nasdaq Clearing's name for the benefit of the clearing members and are immediately accessible by Nasdaq Clearing in the event of a default.

Nasdaq Clearing marks to market all outstanding contracts and requires payment from clearing members whose positions have lost value. The mark-to-market process helps identify any clearing members that may not be able to satisfy their financial obligations in a timely manner allowing Nasdaq Clearing the ability to mitigate the risk of a clearing member defaulting due to exceptionally large losses. In the event of a default, Nasdaq Clearing can access the defaulting member's margin and default fund deposits to cover the defaulting member's losses.

Regulatory Capital and Risk Management Calculations

Nasdaq Clearing manages risk through a comprehensive counterparty risk management framework, which is comprised of policies, procedures, standards and financial resources. The level of regulatory capital is determined in accordance with Nasdaq Clearing's regulatory capital and default fund policy, as approved by the SFSA. Regulatory capital calculations are continuously updated through a proprietary capital-at-risk calculation model that establishes the appropriate level of capital.

As mentioned above, Nasdaq Clearing is the legal counterparty for each contract cleared and thereby guarantees the fulfillment of each contract. Nasdaq Clearing accounts for this guarantee as a performance guarantee. We determine the fair value of the performance guarantee by considering daily settlement of contracts and other margining and default fund requirements, the risk management program, historical evidence of default payments, and the estimated probability of potential default payouts. The calculation is determined using proprietary risk management software that simulates gains and losses based on historical market prices, extreme but plausible market scenarios, volatility and other factors present at that point in time for those particular unsettled contracts. Based on this analysis, excluding any liability related to the Nasdaq commodities clearing default (see discussion above), the estimated liability was nominal and no liability was recorded as of June 30, 2022.

Power of Assessment

To further strengthen the contingent financial resources of the clearinghouse, Nasdaq Clearing has power of assessment that provides the ability to collect additional funds from its clearing members to cover a defaulting member's remaining obligations up to the limits established under the terms of the clearinghouse rules. The power of assessment corresponds to 230.0% of the clearing member's aggregate contribution to the financial, commodities and seafood markets' default funds.

Liability Waterfall

The liability waterfall is the priority order in which the capital resources would be utilized in the event of a default where the defaulting clearing member's collateral and default fund contribution would not be sufficient to cover the cost to settle its portfolio. If a default occurs and the defaulting clearing member's collateral, including cash deposits and pledged assets, is depleted, then capital is utilized in the following amount and order:

- junior capital contributed by Nasdaq Clearing, which totaled \$40 million as of June 30, 2022;
- a loss-sharing pool related only to the financial market that is contributed to by clearing members and only applies if the defaulting member's portfolio includes interest rate swap products;
- specific market default fund where the loss occurred (i.e., the financial, commodities, or seafood market), which includes capital contributions of the clearing members on a pro-rata basis; and

- fully segregated senior capital for each specific market contributed by Nasdaq Clearing, calculated in accordance with clearinghouse rules, which totaled \$21 million as of June 30, 2022.

If additional funds are needed after utilization of the liability waterfall, or if part of the waterfall has been utilized and needs to be replenished, then Nasdaq Clearing will utilize its power of assessment and additional capital contributions will be required by non-defaulting members up to the limits established under the terms of the clearinghouse rules.

In addition to the capital held to withstand counterparty defaults described above, Nasdaq Clearing also has committed capital of \$62 million to ensure that it can handle an orderly wind-down of its operation, and that it is adequately protected against investment, operational, legal, and business risks.

Market Value of Derivative Contracts Outstanding

The following table presents the market value of derivative contracts outstanding prior to netting:

	June 30, 2022
	(in millions)
Commodity and seafood options, futures and forwards	\$ 1,097
Fixed-income options and futures	1,969
Stock options and futures	226
Index options and futures	74
Total	\$ 3,366

In the table above:

- We determined the fair value of our option contracts using standard valuation models that were based on market-based observable inputs including implied volatility, interest rates and the spot price of the underlying instrument.
- We determined the fair value of our futures contracts based upon quoted market prices and average quoted market yields.
- We determined the fair value of our forward contracts using standard valuation models that were based on market-based observable inputs including benchmark rates and the spot price of the underlying instrument.

Derivative Contracts Cleared

The following table presents the total number of derivative contracts cleared through Nasdaq Clearing for the six months ended June 30, 2022 and 2021:

	Six Months Ended June 30,	
	2022	2021
Commodity and seafood options, futures and forwards	182,341	312,002
Fixed-income options and futures	12,287,280	12,185,338
Stock options and futures	8,980,694	10,607,666
Index options and futures	23,463,638	17,970,912
Total	44,913,953	41,075,918

In the table above, the total volume in cleared power related to commodity contracts was 250 Terawatt hours (TWh) and 456 TWh for the six months ended June 30, 2022 and 2021, respectively.

Resale and Repurchase Agreements Contracts Outstanding and Cleared

The outstanding contract value of resale and repurchase agreements was \$3.0 billion as of June 30, 2022 and the total number of resale and repurchase agreements contracts cleared was 3,117,583 for the six months ended June 30, 2022.

15. LEASES

We have operating leases which are primarily real estate leases predominantly for our U.S. and European headquarters, data centers and for general office space. The following table provides supplemental balance sheet information related to Nasdaq's operating leases:

Leases	Balance Sheet Classification	June 30, 2022	December 31, 2021
(in millions)			
Assets:			
Operating lease assets	Operating lease assets	\$ 462	\$ 366
Liabilities:			
Current lease liabilities	Other current liabilities	\$ 56	\$ 37
Non-current lease liabilities	Operating lease liabilities	470	386
Total lease liabilities		\$ 526	\$ 423

The following table summarizes Nasdaq's lease cost:

	Three Months Ended June 30,		Six Months Ended June 30,	
	2022	2021	2022	2021
	(in millions)			
Operating lease cost	\$ 19	\$ 21	\$ 38	\$ 44
Variable lease cost	8	6	16	13
Sublease income	(1)	(1)	(2)	(2)
Total lease cost	<u>\$ 26</u>	<u>\$ 26</u>	<u>\$ 52</u>	<u>\$ 55</u>

In the table above, operating lease costs include short-term lease cost, which was immaterial.

The following table reconciles the undiscounted cash flows for each of the first five years and total of the remaining years to the operating lease liabilities recorded in our Condensed Consolidated Balance Sheets.

	June 30, 2022
	(in millions)
Remainder of 2022	\$ 37
2023	70
2024	68
2025	54
2026	51
2027+	359
Total lease payments	639
Less: interest	(113)
Present value of lease liabilities	<u>\$ 526</u>

In the table above, interest is calculated using the interest rate for each lease. Present value of lease liabilities include the current portion of \$56 million.

Total lease payments in the table above exclude \$44 million of legally binding minimum lease payments for a lease signed but not yet commenced.

The following table provides information related to Nasdaq's lease term and discount rate:

	June 30, 2022
Weighted-average remaining lease term (in years)	<u>10.9</u>
Weighted-average discount rate	<u>3.5 %</u>

The following table provides supplemental cash flow information related to Nasdaq's operating leases:

	Six Months Ended June 30,	
	2022	2021
	(in millions)	
Cash paid for amounts included in the measurement of operating lease liabilities	\$ 28	\$ 37
Lease assets obtained in exchange for operating lease liabilities	<u>\$ 126</u>	<u>\$ 35</u>

16. INCOME TAXES

Income Tax Provision

The following table presents our income tax provision and effective tax rate:

	Three Months Ended	
	June 30, 2022	June 30, 2021
	(in millions)	
Income tax provision	\$ 90	\$ 113
Effective tax rate	22.7 %	24.9 %

	Six Months Ended	
	June 30, 2022	June 30, 2021
	(in millions)	
Income tax provision	\$ 182	\$ 210
Effective tax rate	23.6 %	24.7 %

The lower effective tax rate for both the three and six months ended June 30, 2022 was primarily due to the income tax effect on geographic mix of earnings and higher tax benefit from vested share-based awards in the U.S. The effective tax rate may vary from period to period depending on, among other factors, the geographic and business mix of earnings and losses. These same and other factors, including history of pre-tax earnings and losses, are taken into account in assessing the ability to realize deferred tax assets.

Tax Audits

Nasdaq and its eligible subsidiaries file a consolidated U.S. federal income tax return, applicable state and local income tax returns and non-U.S. income tax returns. We are subject to examination by federal, state and local, and foreign tax authorities. Our Federal income tax returns for the years 2018 through 2020 are subject to examination by the Internal Revenue Service. Several state tax returns are currently under examination by the respective tax authorities for the years 2012 through 2018, while 2019 and 2020 are subject to examination. Non-U.S. tax returns are subject to examination by the respective tax authorities for the years 2015 through 2020.

We regularly assess the likelihood of additional assessments by each jurisdiction and have established tax reserves that we believe are adequate in relation to the potential for additional assessments. Examination outcomes and the timing of examination settlements are subject to uncertainty. Although the results of such examinations may have an impact on our unrecognized tax benefits, we do not anticipate that such impact will be material to our condensed consolidated financial position or results of operations, but may be material to our operating results for a particular period and the effective tax rate for that period. We do not expect the settlement of any tax audits to be material in the next twelve months.

17. COMMITMENTS, CONTINGENCIES AND GUARANTEES

Guarantees Issued and Credit Facilities Available

In addition to the default fund contributions and margin collateral pledged by clearing members discussed in Note 14, "Clearing Operations," we have obtained financial guarantees and credit facilities, which are guaranteed by us through counter indemnities, to provide further liquidity related to our clearing businesses. Financial guarantees issued to us totaled \$4 million as of June 30, 2022 and \$5 million December 31, 2021. As discussed in "Other Credit Facilities," of Note 8, "Debt Obligations," we also have credit facilities primarily related to our Nasdaq Clearing operations, which are available in multiple currencies, and totaled \$188 million as of June 30, 2022 and \$212 million as of December 31, 2021 in available liquidity, none of which was utilized.

Other Guarantees

Through our clearing operations in the financial markets, Nasdaq Clearing is the legal counterparty for, and guarantees the performance of, its clearing members. See Note 14, "Clearing Operations," for further discussion of Nasdaq Clearing performance guarantees.

We have provided a guarantee related to lease obligations for The Nasdaq Entrepreneurial Center, Inc., which is a not-for-profit organization designed to convene, connect and engage aspiring and current entrepreneurs. This entity is not included in the condensed consolidated financial statements of Nasdaq.

We believe that the potential for us to be required to make payments under these arrangements is unlikely. Accordingly, no contingent liability is recorded in the Condensed Consolidated Balance Sheets for the above guarantees.

Routing Brokerage Activities

One of our broker-dealer subsidiaries, Nasdaq Execution Services, provides a guarantee to securities clearinghouses and exchanges under its standard membership agreements, which require members to guarantee the performance of other members. If a member becomes unable to satisfy its obligations to a clearinghouse or exchange, other members would be required to meet its shortfalls. To mitigate these performance risks, the exchanges and clearinghouses often require members to post collateral, as well as meet certain minimum financial standards. Nasdaq Execution Services' maximum potential liability under these arrangements cannot be quantified. However, we believe that the potential for Nasdaq Execution Services to be required to make payments under these arrangements is unlikely. Accordingly, no contingent liability is recorded in the Condensed Consolidated Balance Sheets for these arrangements.

Legal and Regulatory Matters

Armenian Stock Exchange Investigation

As disclosed in our prior filings with the SEC, a former non-U.S. subsidiary of Nasdaq, NASDAQ OMX Armenia OJSC, operated the Armenian Stock Exchange and the Central Depository of Armenia, which are regulated by the Central Bank of Armenia under Armenian law. In accordance with the requirements of Armenian law, Mellat Bank SB CJSC, an Armenian entity that is designated under Executive Order 13382, was a market participant on the Armenian Stock Exchange and, as a result, paid participation and transaction fees to the Armenian Stock Exchange during the period from 2012-2014. In 2014, we voluntarily self-disclosed this matter to the U.S. Department of Treasury's Office of Foreign Assets Control, or OFAC, and received authorization from OFAC to continue, if necessary, certain activities pertaining to Mellat Bank SB CJSC in Armenia in a limited manner. In 2015, Nasdaq sold a majority of its ownership of Nasdaq OMX Armenia OJSC, with the remaining minority interest sold in 2018.

OFAC has been conducting an inquiry into the Armenian Stock Exchange matter described above and in our prior filings since 2016, and during the first quarter of 2021, we were advised that OFAC is considering a civil monetary penalty in connection with that matter. We are currently in discussions with OFAC.

While we believe our decision to voluntarily self-report this issue and our continued cooperation with OFAC, along with the permit we received from OFAC in connection with our transactions involving the Armenian Stock Exchange, will be mitigating factors with respect to the matter, any monetary fines or restrictions may nonetheless be material to our financial results in the period in which they are imposed. We cannot currently predict when our discussions with OFAC will conclude or the amount of any potential penalties imposed. Accordingly, we are unable to reasonably estimate any potential loss or range of loss and we have not accrued for a loss contingency.

CFTC Matter

In June 2022, NASDAQ Futures, Inc. (“NFX”), a non-operational, wholly-owned subsidiary of Nasdaq, received a telephonic “Wells Notice” from the staff of the CFTC relating to certain alleged potential violations by NFX of provisions of the Commodity Exchange Act and CFTC rules thereunder during the period beginning July 2015 through October 2018. The Wells Notice informed NFX that the CFTC staff has made, subject to consideration of NFX’s response, a preliminary determination to recommend that the CFTC authorize an enforcement action against NFX in connection with its former futures exchange business. Nasdaq sold NFX’s futures exchange business to a third-party in November 2019, including the portfolio of open interest in NFX contracts. During 2020, all remaining open interest in NFX contracts was migrated to other exchanges and NFX ceased operation. NFX plans to contest the staff’s positions in its response to the Wells Notice. A Wells Notice is neither a formal charge of wrongdoing nor a final determination that the recipient has violated any law. Accordingly, we are unable to reasonably estimate any potential loss or range of loss, and therefore, we have not accrued for a loss contingency.

Nasdaq Commodities Clearing Default

In December 2021, we recorded a charge related to an administrative fine issued by the SFSA associated with the default which occurred in 2018. The charge was included in regulatory expense in our Consolidated Statements of Income for the year ended December 31, 2021. See “Nasdaq Commodities Clearing Default,” of Note 14, “Clearing Operations,” for further information.

Other Matters

Except as disclosed above and in prior reports filed under the Exchange Act, we are not currently a party to any litigation or proceeding that we believe could have a material adverse effect on our business, consolidated financial condition, or operating results. However, from time to time, we have been threatened with, or named as a defendant in, lawsuits or involved in regulatory proceedings.

In the normal course of business, Nasdaq discusses matters with its regulators raised during regulatory examinations or otherwise subject to their inquiries. Management believes that censures, fines, penalties or other sanctions that could result from any ongoing examinations or inquiries will not have a material impact on its consolidated financial position or results of operations. However, we are unable to predict the outcome or the timing of the ultimate resolution of these matters, or the potential fines, penalties or injunctive or other equitable relief, if any, that may result from these matters.

Tax Audits

We are engaged in ongoing discussions and audits with taxing authorities on various tax matters, the resolutions of which are uncertain. Currently, there are matters that may lead to assessments, some of which may not be resolved for several years. Based on currently available information, we believe we have adequately provided for any assessments that could result from those proceedings where it is more likely than not that we will be assessed. We review our positions on these matters as they progress. See “Tax Audits,” of Note 16, “Income Taxes,” for further discussion.

18. BUSINESS SEGMENTS

We manage, operate and provide our products and services in four business segments: Market Technology, Investment Intelligence, Corporate Platforms and Market Services. See Note 1, “Organization and Nature of Operations,” for further discussion of our reportable segments.

Our management allocates resources, assesses performance and manages these businesses as four separate segments. We evaluate the performance of our segments based on several factors, of which the primary financial measure is operating income. Results of individual businesses are presented based on our management accounting practices and structure. Our chief operating decision maker does not review total assets or statements of income below operating income by segments as key performance metrics; therefore, such information is not presented below.

The following table presents certain information regarding our business segments for the three months ended June 30, 2022 and 2021:

	Three Months Ended June 30,	
	2022	2021
	(in millions)	
Market Technology		
Total revenues	\$ 131	\$ 117
Operating income	16	17
Investment Intelligence		
Total revenues	283	261
Operating income	186	169
Corporate Platforms		
Total revenues	168	149
Operating income	78	62
Market Services		
Total revenues	969	874
Transaction-based expenses	(659)	(566)
Revenues less transaction-based expenses	310	308
Operating income	200	200
Corporate Items		
Total revenues	1	11
Operating loss	(68)	(72)
Consolidated		
Total revenues	\$ 1,552	\$ 1,412
Transaction-based expenses	(659)	(566)
Revenues less transaction-based expenses	\$ 893	\$ 846
Operating income	\$ 412	\$ 376

The following table presents certain information regarding our business segments for the six months ended June 30, 2022 and 2021:

	Six Months Ended June 30,	
	2022	2021
	(in millions)	
Market Technology		
Total revenues	\$ 255	\$ 217
Operating income	20	15
Investment Intelligence		
Total revenues	567	516
Operating income	369	333
Corporate Platforms		
Total revenues	336	296
Operating income	152	122
Market Services		
Total revenues	1,927	2,010
Transaction-based expenses	(1,302)	(1,366)
Revenues less transaction-based expenses	625	644
Operating income	401	428
Corporate Items		
Total revenues	2	24
Operating loss	(125)	(157)
Consolidated		
Total revenues	\$ 3,087	\$ 3,063
Transaction-based expenses	(1,302)	(1,366)
Revenues less transaction-based expenses	\$ 1,785	\$ 1,697
Operating income	\$ 817	\$ 741

Certain amounts are allocated to corporate items in our management reports as we believe they do not contribute to a meaningful evaluation of a particular segment's ongoing operating performance. These items, which are presented in the table below, include the following:

- *Amortization expense of acquired intangible assets:* We amortize intangible assets acquired in connection with various acquisitions. Intangible asset amortization expense can vary from period to period due to episodic acquisitions completed, rather than from our ongoing business operations. As such, if intangible asset amortization is included in performance measures, it is more difficult to assess the day-to-day operating performance of the segments, and the relative operating performance of the segments between periods. Management does not consider intangible asset amortization expense for the purpose of evaluating the performance of our segments or their managers or when making decisions to allocate resources. Therefore, we believe performance measures excluding intangible asset amortization expense provide management with a useful representation of our segments' ongoing activity in each period.

- *Merger and strategic initiatives expense:* We have pursued various strategic initiatives and completed acquisitions and divestitures in recent years that have resulted in expenses which would not have otherwise been incurred. These expenses generally include integration costs, as well as legal, due diligence and other third-party transaction costs. The frequency and the amount of such expenses vary significantly based on the size, timing and complexity of the transaction. Management does not consider merger and strategic initiatives expense for the purpose of evaluating the performance of our segments or their managers or when making decisions to allocate resources. Therefore, we believe performance measures excluding merger and strategic initiatives expense provide management with a useful representation of our segments' ongoing activity in each period.
- *Restructuring charges:* We initiated the transition of certain technology platforms to advance our strategic opportunities as a technology and analytics provider and continue the realignment of certain business areas. See Note 19, "Restructuring Charges," for further discussion of our 2019 restructuring plan. We believe performance measures excluding restructuring charges provide management with a useful representation of our segments' ongoing activity in each period.
- *Revenues and expenses - divested/contributed businesses:* We have included in corporate items the revenues and expenses of our U.S. Fixed Income business, which was previously included in our Market Services and Investment Intelligence results. See "2021 Divestiture," of Note 4, "Acquisitions and Divestiture," for further discussion of this divestiture. Additionally, other revenues related to a transitional services agreement associated with a divested business are included in corporate items. Also included are the revenues and expenses associated with the NPM business, which we contributed in July 2021 to a standalone, independent company, of which we own the largest minority interest together with a consortium of third-party financial institutions. Prior to July 2021, these revenues were previously included in our Corporate Platforms results.
- *Other items:* We have included certain other charges or gains in corporate items, to the extent we believe they should be excluded when evaluating the ongoing operating performance of each individual segment. For the three and six months ended June 30, 2022, other items primarily include a loss on extinguishment of debt.

The above charges are recorded in general, administrative and other expense, unless otherwise noted, in our Condensed Consolidated Statements of Income.

The following table summarizes our Corporate Items:

	Three Months Ended June 30,	
	2022	2021
(in millions)		
Revenues - divested/contributed businesses	\$ 1	\$ 11
Expenses:		
Amortization expense of acquired intangible assets	\$ 39	\$ 40
Merger and strategic initiatives expense	12	12
Restructuring charges	—	21
Extinguishment of debt	16	—
Expenses - divested/contributed businesses	—	5
Other	2	5
Total expenses	69	83
Operating loss	\$ (68)	\$ (72)
Six Months Ended June 30,		
2022 2021		
(in millions)		
Revenues - divested/contributed businesses	\$ 2	\$ 24
Expenses:		
Amortization expense of acquired intangible assets	78	76
Merger and strategic initiatives expense	27	57
Restructuring charges	—	31
Extinguishment of debt	16	—
Expenses - divested/contributed businesses	—	10
Other	6	7
Total expenses	127	181
Operating loss	\$ (125)	\$ (157)

For further discussion of our segments' results, see "Segment Operating Results," of "Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations."

19. RESTRUCTURING CHARGES

In September 2019, we initiated the transition of certain technology platforms to advance the Company's strategic opportunities as a technology and analytics provider and continue the realignment of certain business areas. In connection with these restructuring efforts, we retired certain elements of our marketplace infrastructure and technology product offerings as we implement NFF and other technologies internally and externally. This represented a fundamental shift in our strategy and technology as well as executive realignment. In June 2021, we completed our 2019 restructuring plan and recognized total pre-tax charges of \$118 million over a two-year period. Total pre-tax charges related primarily to non-cash items such as asset impairments and accelerated depreciation, and third-party consulting costs. Severance and employee-related charges were also incurred.

The following table presents a summary of the 2019 restructuring plan charges in the Condensed Consolidated Statements of Income for the three and six months ended June 30, 2021 which primarily consisted of consulting services, asset impairment charges primarily related to capitalized software that was retired, and accelerated depreciation expense on certain assets as a result of a decrease in their useful life.

	Three Months Ended June 30, 2021	Six Months Ended June 30, 2021
	(in millions)	
Asset impairment charges and accelerated depreciation expense	\$ 3	\$ 4
Consulting services	14	19
Severance and employee-related costs	1	1
Other	3	7
Total restructuring charges	<u>\$ 21</u>	<u>\$ 31</u>

Item 2. Management's Discussion and Analysis of Financial Condition and Results Of Operations

The following discussion and analysis of the financial condition and results of operations of Nasdaq should be read in conjunction with our condensed consolidated financial statements and related notes included in this Form 10-Q.

OVERVIEW

Nasdaq is a global technology company serving the capital markets and other industries. Our diverse offerings of data, analytics, software and services enables clients to optimize and execute their business vision with confidence.

We manage, operate and provide our products and services in four business segments: Market Technology, Investment Intelligence, Corporate Platforms and Market Services.

Second Quarter 2022 and Recent Developments

Dividends on Common Stock

- For the three months ended June 30, 2022, we returned \$98 million to shareholders through dividend payments.
- In June 2022, the Company's shareholders, and the SEC, approved the Company's proposed charter amendment to increase the number of authorized shares of common stock. In July 2022, the charter was amended and the board of directors approved and declared a 3-for-1 stock split in the form of a stock dividend on each share of common stock. Trading on a split-adjusted basis is expected to take place on August 29, 2022.
- In July 2022, the board of directors approved a regular quarterly cash dividend of \$0.20 per share on our outstanding common stock. On a split-adjusted basis, the dividend is economically equivalent to the pre-split quarterly dividend of \$0.60 per share on our outstanding common stock paid in the preceding quarter.

Share Repurchase Program

- In second quarter of 2022, we repurchased 1,086,000 shares of common stock for an aggregate of \$166 million.
- As of June 30, 2022, the remaining amount authorized for repurchases under our share repurchase program was \$293 million.

Corporate Highlights

- Our Index business continued to experience strong net inflows of \$71 billion over the last 12 months and the number of contracts traded on futures and options on futures tracking Nasdaq indexes increased 64% year over year.
- The Nasdaq Stock Market led U.S. exchanges for IPOs during the second quarter of 2022. The Nasdaq Stock Market IPO win rate was 88% in the second quarter of 2022, including 38 IPOs representing \$2.8 billion in capital raised. There were 22 operating company and 16 special purpose acquisition company IPOs during the period.
- Nasdaq led all exchanges in total multiply-listed options traded and set a record for the number of shares traded during the 2022 Russell U.S. indexes reconstitution. In the second quarter and first six months of 2022, Nasdaq led all exchanges during the period in total volume traded for multiply-listed equity options. Nasdaq achieved a record day for rebalancing Nasdaq listed securities in the annual Russell reconstitution, with 3.31 billion shares representing \$63.8 billion, executed in 2.04 seconds.
- Market Technology new order intake totaled \$102 million in the second quarter of 2022, with nearly 60% coming from new customers, including a client agreement with Climate Impact X to leverage Nasdaq's Marketplace Services Platform.

Financial Summary

The following tables summarize our financial performance for the three and six months ended June 30, 2022 when compared to the same periods in 2021. The comparability of our results of operations between reported periods is impacted by the acquisition of Verafin in February 2021 and the divestiture of our U.S. Fixed Income business in June 2021, which was part of our FICC business within our Market Services segment, as well as the contribution of our NPM business in July 2021 to a standalone, independent company, of which we own the largest minority interest, together with a consortium of third-party financial institutions. See “2021 Divestiture,” and “2021 Acquisition,” of Note 4, “Acquisitions and Divestiture,” to the condensed consolidated financial statements for further discussion. For a detailed discussion of our results of operations, see “Segment Operating Results” below.

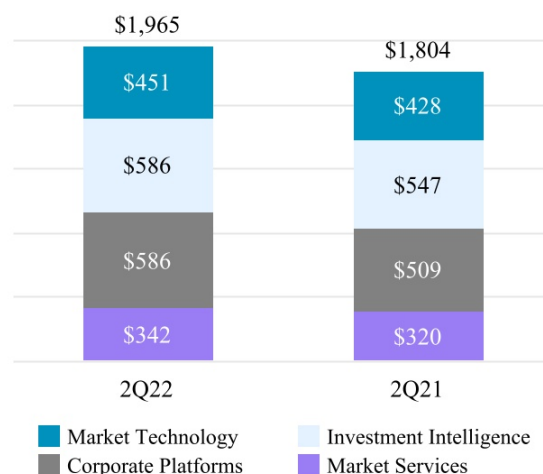
	Three Months Ended June 30,		Percentage Change
	2022	2021	
	(in millions, except per share amounts)		
Revenues less transaction-based expenses	\$ 893	\$ 846	5.6 %
Operating expenses	481	470	2.3 %
Operating income	412	376	9.6 %
Net income attributable to Nasdaq	\$ 307	\$ 341	(10.0)%
Diluted earnings per share	\$ 1.85	\$ 2.05	(9.8)%
Cash dividends declared per common share	\$ 0.60	\$ 0.54	11.1 %

	Six Months Ended June 30,		Percentage Change
	2022	2021	
	(in millions, except per share amounts)		
Revenues less transaction-based expenses	\$ 1,785	\$ 1,697	5.2 %
Operating expenses	968	956	1.3 %
Operating income	817	741	10.3 %
Net income attributable to Nasdaq	\$ 590	\$ 639	(7.7)%
Diluted earnings per share	\$ 3.55	\$ 3.83	(7.3)%
Cash dividends declared per common share	\$ 1.14	\$ 1.03	10.7 %

In countries with currencies other than the U.S. dollar, revenues and expenses are translated using monthly average exchange rates. Impacts on our revenues less transaction-based expenses and operating income associated with fluctuations in foreign currency are discussed in more detail under “Item 3. Quantitative and Qualitative Disclosures about Market Risk.”

Nasdaq's Operating Results

The following chart summarizes our ARR (in millions):

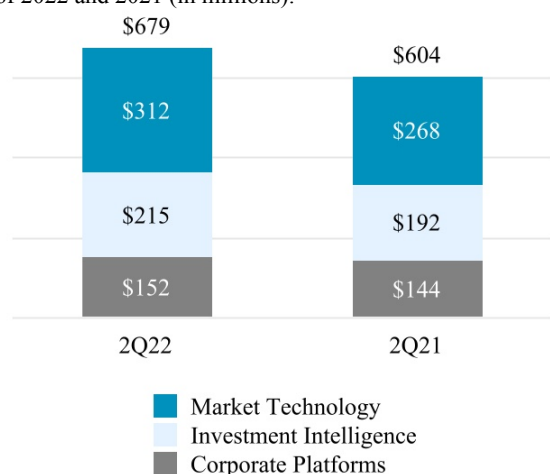


ARR for a given period is the annualized revenue derived from subscription contracts with a defined contract value. This excludes contracts that are not recurring, are one-time in nature, or where the contract value fluctuates based on defined metrics. ARR is one of our key performance metrics to assess the health and trajectory of our recurring business. ARR does not have any standardized definition and is therefore unlikely to be comparable to similarly titled measures presented by other companies. ARR should be viewed independently of revenue and deferred revenue and is not intended to be combined with or to replace either of those items. ARR is not a forecast and the active contracts at the end of a reporting period used in calculating ARR may or may not be extended or renewed by our customers.

The ARR chart includes:

- Active Market Technology support and SaaS subscription contracts.
- Proprietary market data and index data subscriptions as well as subscription contracts for eVestment, Solovis, NDW Research Platform, Nasdaq Fund Network and Nasdaq Data Link. It also includes guaranteed minimum on futures contracts within the Index business.
- U.S. and Nordic annual listing fees, IR and ESG products, including subscription contracts for IR Insight, board portals and OneReport, as well as IR advisory services.
- Trade Management Services business, excluding one-time service requests.

The following chart summarizes our quarterly annualized SaaS revenues for our Solutions Segments, which is comprised of the Market Technology, Investment Intelligence and Corporate Platforms segments, for the second quarter of 2022 and 2021 (in millions):



Segment Operating Results

The following table presents our revenues by segment, transaction-based expenses for our Market Services segment and total revenues less transaction-based expenses:

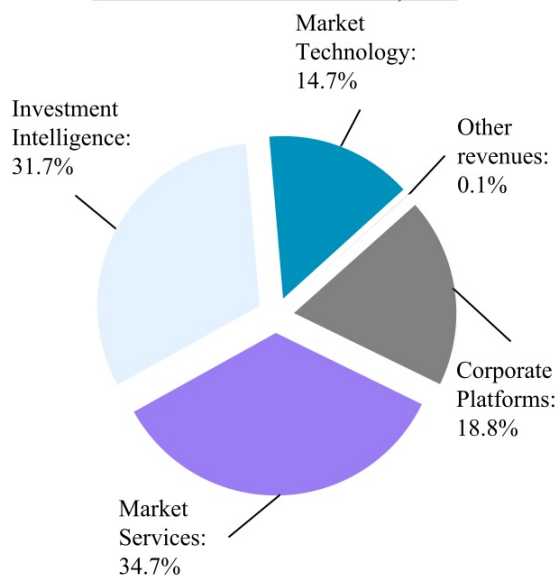
	Three Months Ended June 30,		Percentage Change
	2022	2021	
(in millions)			
Market Technology	\$ 131	\$ 117	12.0 %
Investment Intelligence	283	261	8.4 %
Corporate Platforms	168	149	12.8 %
Market Services	969	874	10.9 %
Other revenues	1	11	(90.9)%
Total revenues	\$ 1,552	\$ 1,412	9.9 %
Transaction rebates	(529)	(517)	2.3 %
Brokerage, clearance and exchange fees	(130)	(49)	165.3 %
Total revenues less transaction-based expenses	\$ 893	\$ 846	5.6 %

	Six Months Ended June 30,		Percentage Change
	2022	2021	
(in millions)			
Market Technology	\$ 255	\$ 217	17.5 %
Investment Intelligence	567	516	9.9 %
Corporate Platforms	336	296	13.5 %
Market Services	1,927	2,010	(4.1)%
Other revenues	2	24	(91.7)%
Total revenues	3,087	3,063	0.8 %
Transaction rebates	(1,111)	(1,170)	(5.0)%
Brokerage, clearance and exchange fees	(191)	(196)	(2.6)%
Total revenues less transaction-based expenses	\$ 1,785	\$ 1,697	5.2 %

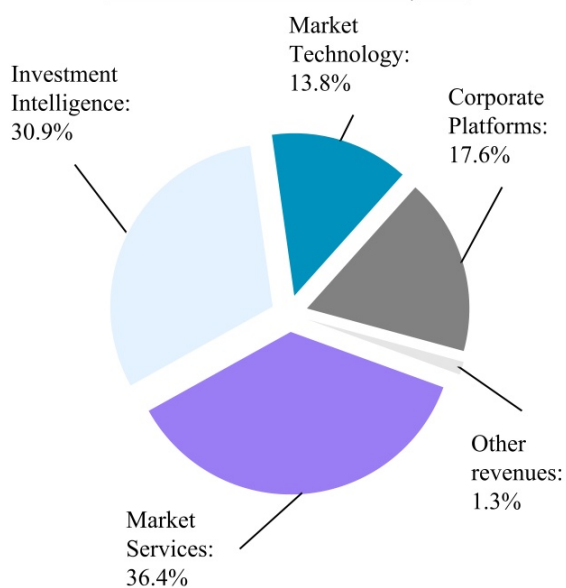
The following charts present our Market Technology, Investment Intelligence, Corporate Platforms and Market Services segments as a percentage of our total revenues, less transaction-based expenses.

Percentage of Revenues Less Transaction-based Expenses by Segment for the:

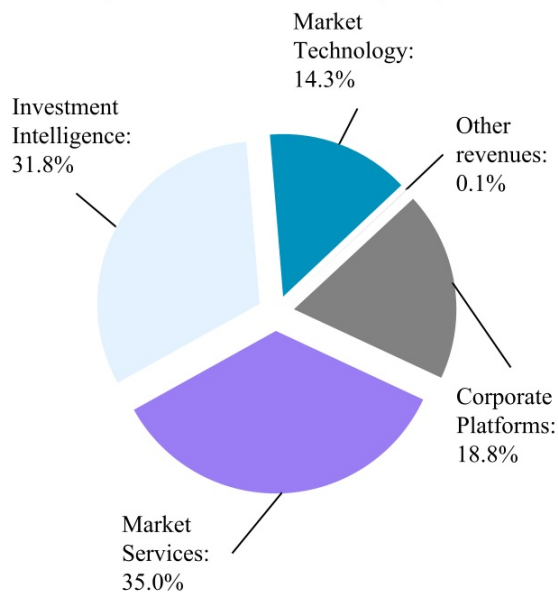
Three Months Ended June 30, 2022



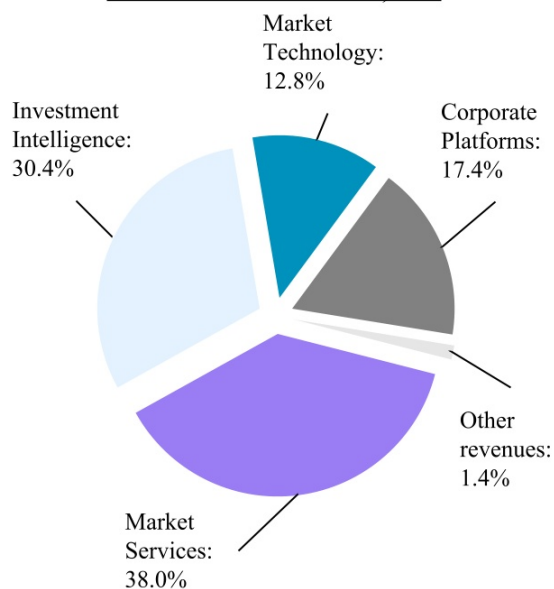
Three Months Ended June 30, 2021



Six Months Ended June 30, 2022



Six Months Ended June 30, 2021



MARKET TECHNOLOGY

The following tables present revenues and key drivers from our Market Technology segment:

	Three Months Ended June 30,		Percentage Change
	2022	2021	
(in millions)			
Anti Financial Crime Technology	\$ 75	\$ 58	29.3 %
Marketplace Infrastructure Technology	56	59	(5.1)%
Total Market Technology	\$ 131	\$ 117	12.0 %

	Six Months Ended June 30,		Percentage Change
	2022	2021	
(in millions)			
Anti Financial Crime Technology	\$ 147	\$ 101	45.5 %
Marketplace Infrastructure Technology	108	116	(6.9)%
Total Market Technology	\$ 255	\$ 217	17.5 %

	Three Months Ended June 30,		
	2022	2021	
(in millions)			
Order intake (in millions)	\$ 102	\$ 119	
ARR	451	428	
Quarterly annualized SaaS revenues	312	268	
Six Months Ended June 30,			
(in millions)			
Order intake	\$ 150	\$ 160	

In the tables above, order intake is the total contract value of orders signed during the period, excluding Verafin. ARR and SaaS revenues include Verafin.

Anti Financial Crime Technology Revenues

Anti-financial crime technology revenues increased in both the second quarter and first six months of 2022 compared with the same periods in 2021 primarily due to increased demand for fraud and anti-money laundering and surveillance solutions.

Marketplace Infrastructure Technology Revenues

Marketplace infrastructure technology revenues decreased in both the second quarter and first six months of 2022 compared with the same periods in 2021 primarily due to the unfavorable impact of changes in foreign exchange rates and the successful completion of a significant long-term contract, partially offset by growth in SaaS revenues.

INVESTMENT INTELLIGENCE

The following tables present revenues and key drivers from our Investment Intelligence segment:

	Three Months Ended June 30,		Percentage Change
	2022	2021	
(in millions)			
Market Data	\$ 105	\$ 104	1.0 %
Index	124	107	15.9 %
Analytics	54	50	8.0 %
Total Investment Intelligence	\$ 283	\$ 261	8.4 %

	Six Months Ended June 30,		Percentage Change
	2022	2021	
(in millions)			
Market Data	\$ 213	\$ 209	1.9 %
Index	246	209	17.7 %
Analytics	108	98	10.2 %
Total Investment Intelligence	\$ 567	\$ 516	9.9 %

	As of or Three Months Ended June 30,	
	2022	2021
Number of licensed ETPs	374	359
TTM Change in Period End ETP AUM tracking Nasdaq indexes (in billions)		
Beginning balance	\$ 415	\$ 272
Net (depreciation) appreciation	(90)	113
Net impact of ETP sponsor switches	(75)	(17)
Net inflows	71	47
Ending balance	\$ 321	\$ 415
ARR (in millions)	\$ 586	\$ 547
Quarterly annualized SaaS revenues (in millions)	\$ 215	\$ 192

In the table above, TTM represents trailing twelve months.

Market Data Revenues

Market data revenues increased in both the second quarter and first six months of 2022 compared with the same periods in 2021 primarily due to an increase in proprietary data revenues driven by higher international demand, partially offset by an unfavorable impact from changes in foreign exchange rates.

Index Revenues

Index revenues increased in both the second quarter and first six months of 2022 compared with the same periods in 2021 primarily due to higher licensing revenues from futures trading linked to the Nasdaq-100 Index. The increase in the first six months of 2022 also reflects higher licensing revenues resulting from higher average AUM in ETPs linked to Nasdaq indexes.

Analytics Revenues

Analytics revenues increased in both the second quarter and first six months of 2022 compared with the same periods in 2021 primarily due to the growth in our eVestment platform driven by new sales and strong net retention.

CORPORATE PLATFORMS

The following tables present revenues and key drivers from our Corporate Platforms segment:

	Three Months Ended June 30,		Percentage Change
	2022	2021	
	(in millions)		
Listing Services	\$ 107	\$ 93	15.1 %
IR & ESG Services	61	56	8.9 %
Total Corporate Platforms	\$ 168	\$ 149	12.8 %
	Six Months Ended June 30,		Percentage Change
	2022	2021	
	(in millions)		
Listing Services	\$ 214	\$ 184	16.3 %
IR & ESG Services	122	112	8.9 %
Total Corporate Platforms	\$ 336	\$ 296	13.5 %

	As of or Three Months Ended June 30,	
	2022	2021
<u>IPOs</u>		
The Nasdaq Stock Market	38	135
Exchanges that comprise Nasdaq Nordic and Nasdaq Baltic	17	62
<u>Total new listings</u>		
The Nasdaq Stock Market	84	192
Exchanges that comprise Nasdaq Nordic and Nasdaq Baltic	25	72
<u>Number of listed companies</u>		
The Nasdaq Stock Market	4,269	3,817
Exchanges that comprise Nasdaq Nordic and Nasdaq Baltic	1,260	1,152
ARR (in millions)	\$ 586	\$ 509
Quarterly annualized SaaS revenues (in millions)	\$ 152	\$ 144

	As of or Six Months Ended June 30,	
	2022	2021
<u>IPOs</u>		
The Nasdaq Stock Market	108	410
Exchanges that comprise Nasdaq Nordic and Nasdaq Baltic	30	86
<u>Total new listings</u>		
The Nasdaq Stock Market	194	511
Exchanges that comprise Nasdaq Nordic and Nasdaq Baltic	44	104

In the tables above:

- The Nasdaq Stock Market new listings include IPOs, including issuers that switched from other listing venues and separately listed ETPs. For the three months ended June 30, 2022 and 2021, IPOs included 16 and 47 SPACs, respectively. For the six months ended June 30, 2022 and 2021, IPOs included 59 and 243 SPACs, respectively.
- Exchanges that comprise Nasdaq Nordic and Nasdaq Baltic new listings include IPOs and represent companies listed on the Nasdaq Nordic and Nasdaq Baltic exchanges and companies on the alternative markets of Nasdaq First North.
- Number of total listed companies on The Nasdaq Stock Market at period end includes 465 ETPs as of June 30, 2022 and 419 ETPs as of June 30, 2021.
- Number of total listed companies on the exchanges that comprise Nasdaq Nordic and Nasdaq Baltic represents companies listed on these exchanges and companies on the alternative markets of Nasdaq First North.

Listing Services Revenues

Listing services revenues increased in both the second quarter and first six months of 2022 compared with the same periods in 2021 primarily due to an increase in the overall number of listed companies.

IR & ESG Services Revenues

IR & ESG Services revenues increased in both the second quarter and first six months of 2022 compared with the same periods in 2021 primarily due to increased sales and higher retention rates. Growth in revenues reflect higher adoption across the breadth of investor relations and newer ESG advisory and reporting offerings as well as an increase in the number of corporate issuer clients.

MARKET SERVICES

Equity Derivative Trading and Clearing Revenues

The following tables present total revenues, transaction-based expenses, and total revenues less transaction-based expenses as well as key drivers from our Equity Derivative Trading and Clearing business:

	Three Months Ended June 30,		Percentage Change
	2022	2021	
	(in millions)		
Equity Derivative Trading and Clearing Revenues	\$ 324	\$ 364	(11.0)%
Transaction-based expenses:			
Transaction rebates	(206)	(255)	(19.2)%
Brokerage, clearance and exchange fees	(15)	(6)	150.0 %
Equity derivative trading and clearing revenues less transaction-based expenses	\$ 103	\$ 103	— %
	(in millions)		
Equity Derivative Trading and Clearing Revenues	\$ 674	\$ 785	(14.1)%
Transaction-based expenses:			
Transaction rebates	(438)	(550)	(20.4)%
Brokerage, clearance and exchange fees	(21)	(26)	(19.2)%
Equity derivative trading and clearing revenues less transaction-based expenses	\$ 215	\$ 209	2.9 %

In the tables above, brokerage, clearance and exchange fees includes Section 31 fees of \$14 million in the second quarter of 2022, \$5 million in the second quarter of 2021, \$20 million in the first six months of 2022 and \$22 million in the first six months of 2021. Section 31 fees are recorded as equity derivative trading and clearing revenues with a corresponding amount recorded in transaction-based expenses.

Three Months Ended June 30,

	2022	2021
	<u>U.S. equity options</u>	
Total industry average daily volume (in millions)	36.7	34.6
Nasdaq PHLX matched market share	11.7 %	12.7 %
The Nasdaq Options Market matched market share	8.2 %	8.4 %
Nasdaq BX Options matched market share	2.1 %	1.1 %
Nasdaq ISE Options matched market share	5.4 %	6.1 %
Nasdaq GEMX Options matched market share	2.4 %	6.1 %
Nasdaq MRX Options matched market share	1.6 %	1.5 %
Total matched market share executed on Nasdaq's exchanges	31.4 %	35.9 %
<u>Nasdaq Nordic and Nasdaq Baltic options and futures</u>		
Total average daily volume of options and futures contracts	277,008	262,890

Six Months Ended June 30,

	2022	2021
	<u>U.S. equity options</u>	
Total industry average daily volume (in millions)	38.3	37.3
Nasdaq PHLX matched market share	11.6 %	12.8 %
The Nasdaq Options Market matched market share	8.3 %	8.1 %
Nasdaq BX Options matched market share	2.1 %	0.9 %
Nasdaq ISE Options matched market share	5.6 %	7.0 %
Nasdaq GEMX Options matched market share	2.4 %	6.0 %
Nasdaq MRX Options matched market share	1.7 %	1.4 %
Total matched market share executed on Nasdaq's exchanges	31.7 %	36.2 %
<u>Nasdaq Nordic and Nasdaq Baltic options and futures</u>		
Total average daily volume of options and futures contracts	322,390	311,016

In the tables above, Nasdaq Nordic and Nasdaq Baltic total average daily volume of options and futures contracts include Finnish option contracts traded on Eurex for which Nasdaq and Eurex have a revenue sharing arrangement.

Equity derivative trading and clearing revenues decreased in both the second quarter and first six months of 2022 compared with the same periods in 2021. The decrease in the second quarter of 2022 was primarily due to lower U.S. matched market share executed on Nasdaq's exchanges, partially offset by a higher gross capture rate and higher Section 31 pass-through fee revenue. The decrease for the first six months of 2022 was primarily due to lower U.S. matched market share executed on Nasdaq's exchanges and lower gross capture rate, partially offset by higher U.S. and European industry trading volumes.

Equity derivative trading and clearing revenues less transaction-based expenses remained flat in the second quarter of 2022 compared with the same period in 2021 primarily due to higher net capture rates and higher U.S. and European industry trading volumes, offset by lower U.S. matched market share executed on Nasdaq's exchanges and the unfavorable impact of the changes in foreign exchange rates. Equity derivative trading and clearing revenues less transaction-based expenses increased in the first six months of 2022 compared with the same period in 2021 primarily due to higher net capture rates and higher U.S. and European industry trading volumes, partially offset by lower U.S. matched market share executed on Nasdaq's exchanges.

Section 31 fees are recorded as equity derivative trading and clearing revenues with a corresponding amount recorded as brokerage, clearance and exchange fees in the Condensed Consolidated Statements of Income. In the U.S., we are assessed these fees from the SEC and pass them through to our customers in the form of incremental fees. Pass-through fees can increase or decrease due to rate changes by the SEC, our percentage of the overall industry volumes processed on our systems, and differences in actual dollar value traded. Since the amount recorded in revenues is equal to the amount recorded as brokerage, clearance and exchange fees, there is no impact on our revenues less transaction-based expenses. Section 31 fees increased in the second quarter of 2022 compared with same period in 2021 primarily due to higher average SEC fee rates, following the increase in SEC 31 fee rates in May 2022. Section 31 fees decreased in the first six months of 2022 compared with same period in 2021 primarily due to lower average SEC fee rates, following the decrease in SEC 31 fee rates in February 2021.

Transaction rebates, in which we credit a portion of the execution charge to the market participant, decreased in both the second quarter and first six months of 2022 compared with the same periods in 2021. The decrease in the second quarter of 2022 was primarily due to lower overall U.S. matched market share executed on Nasdaq's exchanges and lower volumes, partially offset by a higher rebate capture rate. The decrease in the first six months of 2022 was primarily due to lower overall U.S. matched market share executed on Nasdaq's exchanges and lower rebate capture rate, partially offset by higher U.S. and European industry trading volumes.

Cash Equity Trading Revenues

The following tables present total revenues, transaction-based expenses, and total revenues less transaction-based expenses as well as key drivers and other metrics from our Cash Equity Trading business:

	Three Months Ended June 30,		Percentage Change
	2022	2021	
	(in millions)		
Cash Equity Trading Revenues	\$ 546	\$ 415	31.6 %
Transaction-based expenses:			
Transaction rebates	(323)	(262)	23.3 %
Brokerage, clearance and exchange fees	(115)	(43)	167.4 %
Cash equity trading revenues less transaction-based expenses	\$ 108	\$ 110	(1.8)%
	Six Months Ended June 30,		Percentage Change
	2022	2021	
	(in millions)		
Cash Equity Trading Revenues	\$ 1,056	\$ 1,033	2.2 %
Transaction-based expenses:			
Transaction rebates	(673)	(620)	8.5 %
Brokerage, clearance and exchange fees	(170)	(170)	— %
Cash equity trading revenues less transaction-based expenses	\$ 213	\$ 243	(12.3)%

In the tables above, brokerage, clearance and exchange fees includes Section 31 fees of \$108 million in the second quarter of 2022, \$36 million in the second quarter of 2021, \$156 million in the first six months of 2022 and \$151 million in the first six months of 2021. Section 31 fees are recorded as cash equity trading revenues with a corresponding amount recorded in transaction-based expenses.

	Three Months Ended June 30,	
	2022	2021
<u>Total U.S.-listed securities</u>		
Total industry average daily share volume (in billions)	12.6	10.6
Matched share volume (in billions)	139.0	114.2
The Nasdaq Stock Market matched market share	16.5 %	15.8 %
Nasdaq BX matched market share	0.5 %	0.7 %
Nasdaq PSX matched market share	0.8 %	0.7 %
Total matched market share executed on Nasdaq's exchanges	17.8 %	17.2 %
Market share reported to the FINRA/Nasdaq Trade Reporting Facility	34.3 %	35.3 %
Total market share	52.1 %	52.5 %

Nasdaq Nordic and Nasdaq Baltic securities

Average daily number of equity trades executed on Nasdaq's exchanges	948,874	1,019,162
Total average daily value of shares traded (in billions)	\$ 5.7	\$ 6.6
Total market share executed on Nasdaq's exchanges	72.2 %	77.3 %

	Six Months Ended June 30,	
	2022	2021
<u>Total U.S.-listed securities</u>		
Total industry average daily share volume (in billions)	12.7	12.6
Matched share volume (in billions)	281.2	266.8
The Nasdaq Stock Market matched market share	16.4 %	15.8 %
Nasdaq BX matched market share	0.5 %	0.6 %
Nasdaq PSX matched market share	0.8 %	0.7 %
Total matched market share executed on Nasdaq's exchanges	17.7 %	17.1 %
Market share reported to the FINRA/Nasdaq Trade Reporting Facility	33.9 %	35.3 %
Total market share	51.6 %	52.4 %

Nasdaq Nordic and Nasdaq Baltic securities

Average daily number of equity trades executed on Nasdaq's exchanges	1,043,461	1,056,726
Total average daily value of shares traded (in billions)	\$ 6.4	\$ 6.8
Total market share executed on Nasdaq's exchanges	72.6 %	77.9 %

In the tables above, total market shares includes transactions executed on The Nasdaq Stock Market's, Nasdaq BX's and Nasdaq PSX's systems plus trades reported through the FINRA/Nasdaq Trade Reporting Facility.

Cash equity trading revenues increased in the second quarter and first six months of 2022 compared with the same periods in 2021 primarily due to higher U.S. industry trading volumes and higher U.S. matched market share executed on Nasdaq's exchanges, partially offset by lower U.S. gross capture rate, lower European market share and the unfavorable impact of changes in foreign exchange rates.

Cash equity trading revenues less transaction-based expenses decreased in the second quarter and first six months of 2022 compared with the same periods in 2021 primarily due to lower U.S. net capture rate, lower European market share and the unfavorable impact of changes in foreign exchange rates, partially offset by higher U.S. industry volumes and higher U.S. matched market share executed on Nasdaq's exchanges. The decrease in cash equity trading revenues was also due to higher transaction rebates.

Similar to equity derivative trading and clearing, in the U.S. we record Section 31 fees as cash equity trading revenues with a corresponding amount recorded as brokerage, clearance and exchange fees in the Condensed Consolidated Statements of Income. We are assessed these fees from the SEC and pass them through to our customers in the form of incremental fees. Since the amount recorded as revenues is equal to the amount recorded as brokerage, clearance and exchange fees, there is no impact on our revenues less transaction-based expenses. Section 31 fees increased in the second quarter and first six months of 2022 compared with the same periods in 2021 primarily due to higher average SEC fee rates.

Transaction rebates increased in the second quarter and the first six months of 2022 compared with the same periods in 2021. For The Nasdaq Stock Market and Nasdaq PSX, we credit a portion of the per share execution charge to the market participant that provides the liquidity, and for Nasdaq BX, we credit a portion of the per share execution charge to the market participant that takes the liquidity. The increase was primarily due to higher US industry volumes, higher U.S. matched market share executed on Nasdaq's exchanges and a higher rebate capture rate.

FICC Revenues

The following tables present revenues from our FICC business:

	Three Months Ended June 30,		Percentage Change
	2022	2021	
	(in millions)		
FICC Revenues	\$ 12	\$ 14	(14.3)%

	Six Months Ended June 30,		Percentage Change
	2022	2021	
	(in millions)		
FICC Revenues	\$ 26	\$ 31	(16.1)%

FICC revenues decreased in the second quarter and first six months of 2022 compared with the same periods in 2021 primarily due to the unfavorable impact of changes in foreign exchange rates. FICC revenues also decreased in the first six months of 2022 due to lower commodities products revenues.

Trade Management Services Revenues

The following tables present revenues and key drivers from our Trade Management Services business:

	Three Months Ended June 30,		Percentage Change
	2022	2021	
	(in millions)		
Trade Management Services Revenues	\$ 87	\$ 81	7.4 %

	Six Months Ended June 30,		Percentage Change
	2022	2021	
	(in millions)		
Trade Management Services Revenues	\$ 171	\$ 161	6.2 %

	Three Months Ended June 30,	
	2022	2021
	(in millions)	
ARR	\$ 342	\$ 320

Trade management services revenues increased in the second quarter and first six months of 2022 compared with the same periods in 2021 primarily due to higher demand for connectivity and infrastructure services.

OTHER REVENUES

For the three and six months ended June 30, 2021, other revenues include the revenues associated with our U.S. Fixed Income business, which was sold in June 2021. Prior to the sale date, these revenues were included in our Market Services and Investment Intelligence segments. See “2021 Divestiture,” of Note 4, “Acquisitions and Divestiture,” to the condensed consolidated financial statements for further discussion of this divestiture. Additionally, other revenues include revenues associated with the NPM business which we contributed in July 2021 to a standalone, independent company, of which we own the largest minority interest, together with a consortium of third-party financial institutions. Prior to July 2021, these revenues were included in our Corporate Platforms segment. For the three and six months ended June 30, 2022, other revenues were related to a transitional services agreement associated with a divested business.

EXPENSES

Operating Expenses

The following tables present our operating expenses:

	Three Months Ended June 30,		Percentage Change
	2022	2021	
	(in millions)		
Compensation and benefits	\$ 247	\$ 231	6.9 %
Professional and contract services	29	38	(23.7)%
Computer operations and data communications	50	46	8.7 %
Occupancy	25	26	(3.8)%
General, administrative and other	34	12	183.3 %
Marketing and advertising	11	9	22.2 %
Depreciation and amortization	65	68	(4.4)%
Regulatory	8	7	14.3 %
Merger and strategic initiatives	12	12	— %
Restructuring charges	—	21	(100.0)%
Total operating expenses	\$ 481	\$ 470	2.3 %

	Six Months Ended June 30,		Percentage Change
	2022	2021	
	(in millions)		
Compensation and benefits	\$ 501	\$ 470	6.6 %
Professional and contract services	64	65	(1.5)%
Computer operations and data communications	101	90	12.2 %
Occupancy	52	55	(5.5)%
General, administrative and other	55	24	129.2 %
Marketing and advertising	21	19	10.5 %
Depreciation and amortization	132	131	0.8 %
Regulatory	15	14	7.1 %
Merger and strategic initiatives	27	57	(52.6)%
Restructuring charges	—	31	(100.0)%
Total operating expenses	\$ 968	\$ 956	1.3 %

The increase in compensation and benefits expense in both the second quarter and first six months of 2022 compared with the same periods in 2021 was primarily driven by continued investment in employees to drive growth and inflationary pressures, partially offset by a favorable impact from foreign exchange rates.

Headcount increased to 6,214 employees as of June 30, 2022 from 5,696 as of June 30, 2021 primarily due to growth in various businesses.

Professional and contract services expense decreased in both the second quarter and first six months of 2022 compared with the same periods in 2021 primarily due to a decrease in legal fees.

Computer operations and data communications expense increased in both the second quarter and first six months of 2022 compared with the same periods in 2021 primarily due to higher software costs related to new cloud initiatives.

Occupancy expense decreased in both the second quarter and first six months of 2022 compared with the same periods in 2021 primarily due to a favorable impact from foreign exchange rates.

General, administrative and other expense increased in both the second quarter and first six months of 2022 compared with the same periods in 2021 due to debt extinguishment costs following the repayment of our 2024 Notes and higher travel costs.

Depreciation and amortization expense decreased for the second quarter of 2022 compared with the same period in 2021 due to a favorable impact from foreign exchange rates. Depreciation and amortization expense remained relatively flat in the first six months of 2022 compared with the same period in 2021.

Regulatory expense remained relatively flat in the second quarter and first six months of 2022 compared with the same periods in 2021.

Merger and strategic initiatives expense remained relatively flat in the second quarter of 2022 compared with the same period in 2021 and decreased in the first six months of 2022 compared with the same period in 2021 due to acquisition costs associated with the Verafin transaction that occurred in the first quarter of 2021. We have pursued various strategic initiatives and completed acquisitions and divestitures in recent years, which have resulted in expenses which would not have otherwise been incurred. These expenses generally include integration costs, as well as legal, due diligence and other third-party transaction costs and will vary based on the size and frequency of the activities described above.

See Note 19, "Restructuring Charges," to the condensed consolidated financial statements for further discussion of our 2019 restructuring plan and charges associated with this plan.

Non-operating Income and Expenses

The following table presents our non-operating income and expenses:

	Three Months Ended June 30,		Percentage Change
	2022	2021	
	(in millions)		
Interest expense	(32)	(33)	(3.0)%
Net gain on divestiture of business	—	84	(100.0)%
Other income	8	—	N/M
Net income from unconsolidated investees	9	27	(66.7)%
Total non-operating income (expenses)	<u>\$ (15)</u>	<u>\$ 78</u>	(119.2)%
	(in millions)		
	Six Months Ended June 30,		Percentage Change
	2022	2021	
Interest income	\$ 1	\$ 1	— %
Interest expense	(64)	(62)	3.2 %
Net interest expense	(63)	(61)	3.3 %
Net gain on divestiture of business	—	84	(100.0)%
Other income	2	1	100.0 %
Net income from unconsolidated investees	15	84	(82.1)%
Total non-operating income (expenses)	<u>\$ (46)</u>	<u>\$ 108</u>	(142.6)%

N/M Not meaningful.

The following table presents our interest expense:

	Three Months Ended June 30,		Percentage Change
	2022	2021	
	(in millions)		
Interest expense on debt	\$ 30	\$ 30	— %
Accretion of debt issuance costs and debt discount	1	2	(50.0)%
Other fees	1	1	— %
Interest expense	<u>\$ 32</u>	<u>\$ 33</u>	(3.0)%
	(in millions)		
	Six Months Ended June 30,		Percentage Change
	2022	2021	
Interest expense on debt	\$ 59	\$ 57	3.5 %
Accretion of debt issuance costs and debt discount	4	4	— %
Other fees	1	1	— %
Interest expense	<u>\$ 64</u>	<u>\$ 62</u>	3.2 %

Interest expense remained relatively flat in the second quarter of 2022 compared with the same period in 2021 and slightly increased in the first six months of 2022 compared with the same period in 2021 primarily due to the issuance of the 2052 Notes in the first quarter of 2022 and the repayment of the 2024 Notes in the second quarter of 2022. See Note 8, "Debt Obligations," to the condensed consolidated financial statements for further discussion of our debt obligations.

The net gain on divestiture of business in the second quarter and first six months of 2021 relates to the sale of our U.S. Fixed Income business, which was part of our FICC business within our Market Services segment, to Tradeweb. We recognized a pre-tax gain on the sale of \$84 million, net of disposal costs. See "2021 Divestiture," of Note 4, "Acquisitions and Divestiture," to the condensed consolidated financial statements for further discussion.

Other income increased in both the second quarter and first six months of 2022 compared with the same periods in 2021 primarily due to gains from strategic investments related to our corporate venture program.

Net income from unconsolidated investees decreased in both the second quarter and first six months of 2022 compared with the same period in 2021 primarily due to a decrease in income recognized from our equity method investment in OCC. See "Equity Method Investments," of Note 6, "Investments," to the condensed consolidated financial statements for further discussion.

Tax Matters

The following table presents our income tax provision and effective tax rate:

	Three Months Ended June 30,		Percentage Change
	2022	2021	
	(\$ in millions)		
Income tax provision	\$ 90	\$ 113	(20.4)%
Effective tax rate	22.7 %	24.9 %	
	(in millions)		
	Six Months Ended June 30,		Percentage Change
	2022	2021	
Income tax provision	\$ 182	\$ 210	(13.3)%
Effective tax rate	23.6 %	24.7 %	

For further discussion of our tax matters, see Note 16, "Income Taxes," to the condensed consolidated financial statements.

NON-GAAP FINANCIAL MEASURES

In addition to disclosing results determined in accordance with U.S. GAAP, we also provide non-GAAP net income attributable to Nasdaq and non-GAAP diluted earnings per share. Management uses this non-GAAP information internally, along with U.S. GAAP information, in evaluating our performance and in making financial and operational decisions. We believe our presentation of these measures provides investors with greater transparency and supplemental data relating to our financial condition and results of operations. In addition, we believe the presentation of these measures is useful to investors for period-to-period comparisons of our ongoing operating performance.

These measures are not in accordance with, or an alternative to, U.S. GAAP, and may be different from non-GAAP measures used by other companies. In addition, other companies, including companies in our industry, may calculate such measures differently, which reduces their usefulness as comparative measures. Investors should not rely on any single financial measure when evaluating our business. This non-GAAP information should be considered as supplemental in nature and is not meant as a substitute for our operating results in accordance with U.S. GAAP. We recommend investors review the U.S. GAAP financial measures included in this Quarterly Report on Form 10-Q, including our condensed consolidated financial statements and the notes thereto. When viewed in conjunction with our U.S. GAAP results and the accompanying reconciliation, we believe these non-GAAP measures provide greater transparency and a more complete understanding of factors affecting our business than U.S. GAAP measures alone.

We understand that analysts and investors regularly rely on non-GAAP financial measures, such as non-GAAP net income attributable to Nasdaq and non-GAAP diluted earnings per share, to assess operating performance. We use non-GAAP net income attributable to Nasdaq and non-GAAP diluted earnings per share because they highlight trends more clearly in our business that may not otherwise be apparent when relying solely on U.S. GAAP financial measures, since these measures eliminate from our results specific financial items that have less bearing on our ongoing operating performance. We believe that excluding the following items from the non-GAAP net income attributable to Nasdaq provides a more meaningful analysis of Nasdaq's ongoing operating performance and comparisons in Nasdaq's performance between periods:

- *Amortization expense of acquired intangible assets:* We amortize intangible assets acquired in connection with various acquisitions. Intangible asset amortization expense can vary from period to period due to episodic acquisitions completed, rather than from our ongoing business operations. As such, if intangible asset amortization is included in performance measures, it is more difficult to assess the day-to-day operating performance of the businesses, the relative operating performance of the businesses between periods, and the earnings power of Nasdaq.

- *Merger and strategic initiatives expense:* We have pursued various strategic initiatives and completed acquisitions and divestitures in recent years that have resulted in expenses which would not have otherwise been incurred. The frequency and the amount of such expenses vary significantly based on the size, timing and complexity of the transaction. These expenses primarily include integration costs, as well as legal, due diligence and other third-party transaction costs.
- *Restructuring charges:* We initiated the transition of certain technology platforms to advance our strategic opportunities as a technology and analytics provider and continue the realignment of certain business areas. See Note 19, "Restructuring Charges," to the condensed consolidated financial statements for further discussion of our 2019 restructuring plan, which was completed in June 2021. Charges associated with this plan represented a fundamental shift in our strategy and technology as well as executive realignment.
- *Net income from unconsolidated investee:* See "Equity Method Investments," of Note 6, "Investments," to the condensed consolidated financial statements for further discussion. Our income on our investment in OCC may vary significantly compared to prior periods due to the changes in OCC's capital management policy.
- *Other items:* We have excluded certain other charges or gains, including certain tax items, that are the result of other non-comparable events to measure operating performance. For the three and six months ended June 30, 2022, other items primarily include a loss on extinguishment of debt. For the three and six months ended June 30, 2021, other items primarily include a net gain on divestiture of businesses, which primarily represents our pre-tax net gain of \$84 million on the sale of our U.S. Fixed Income business.
- *Significant tax items:* The non-GAAP adjustment to the income tax provision for the three and six months ended June 30, 2022 and 2021 primarily includes the tax impact of each non-GAAP adjustment.

The following tables present reconciliations between U.S. GAAP net income attributable to Nasdaq and diluted earnings per share and non-GAAP net income attributable to Nasdaq and diluted earnings per share:

	Three Months Ended June 30,	
	2022	2021
	(in millions, except per share amounts)	
U.S. GAAP net income attributable to Nasdaq	\$ 307	\$ 341
Non-GAAP adjustments:		
Amortization expense of acquired intangible assets	39	40
Merger and strategic initiatives expense	12	12
Restructuring charges	—	21
Net income from unconsolidated investee	(9)	(26)
Extinguishment of debt	16	—
Net gain on divestiture of business	—	(84)
Other	(8)	5
Total non-GAAP adjustments	50	(32)
Total non-GAAP tax adjustments	(15)	7
Total non-GAAP adjustments, net of tax	35	(25)
Non-GAAP net income attributable to Nasdaq	\$ 342	\$ 316
U.S. GAAP effective tax rate	22.7 %	24.9 %
Total adjustments from non-GAAP tax rate	0.8 %	0.2 %
Non-GAAP effective tax rate	23.5 %	25.1 %
Weighted-average common shares outstanding for diluted earnings per share	165.5	166.4
U.S. GAAP diluted earnings per share	\$ 1.85	\$ 2.05
Total adjustments from non-GAAP net income	0.22	(0.15)
Non-GAAP diluted earnings per share	\$ 2.07	\$ 1.90

	Six Months Ended June 30,	
	2022	2021
	(in millions, except per share amounts)	
U.S. GAAP net income attributable to Nasdaq	\$ 590	\$ 639
Non-GAAP adjustments:		
Amortization expense of acquired intangible assets	78	76
Merger and strategic initiatives expense	27	57
Restructuring charges	—	31
Net income from unconsolidated investee	(14)	(83)
Extinguishment of debt	16	—
Net gain on divestiture of business	—	(84)
Other	2	7
Total non-GAAP adjustments	109	4
Total non-GAAP tax adjustments	(29)	—
Total non-GAAP adjustments, net of tax	80	4
Non-GAAP net income attributable to Nasdaq	\$ 670	\$ 643
U.S. GAAP effective tax rate	23.6 %	24.7 %
Total adjustments from non-GAAP tax rate	0.4 %	(0.1)%
Non-GAAP effective tax rate	24.0 %	24.6 %
Weighted-average common shares outstanding for diluted earnings per share	166.4	166.8
U.S. GAAP diluted earnings per share	\$ 3.55	\$ 3.83
Total adjustments from non-GAAP net income	0.48	0.02
Non-GAAP diluted earnings per share	\$ 4.03	\$ 3.85

LIQUIDITY AND CAPITAL RESOURCES

Historically, we have funded our operating activities and met our commitments through cash generated by operations, augmented by the periodic issuance of our common stock and debt. Currently, our cost and availability of funding remain healthy. We continue to prudently assess our capital deployment strategy through balancing acquisitions, internal investments, debt repayments, and shareholder return activity, including share repurchases and dividends.

In the near term, we expect that our operations and the availability under our revolving credit facility and commercial paper program will provide sufficient cash to fund our operating expenses, capital expenditures, debt repayments, any share repurchases, and any dividends.

The value of various assets and liabilities, including cash and cash equivalents, receivables, accounts payable and accrued expenses, the current portion of long-term debt, and commercial paper, can fluctuate from month to month. Working capital (calculated as current assets less current liabilities) was \$(653) million as of June 30, 2022, compared with \$(449) million as of December 31, 2021, a decrease of \$204 million. The decrease was primarily due to increases in deferred revenue, Section 31 fees payable to SEC and other current liabilities and a decrease in other current assets and financial investments, partially offset by a decrease in accrued personnel costs and increases in receivables, net and cash and cash equivalents.

Principal factors that could affect the availability of our internally-generated funds include:

- deterioration of our revenues in any of our business segments;
- changes in regulatory and working capital requirements; and
- an increase in our expenses.

Principal factors that could affect our ability to obtain cash from external sources include:

- operating covenants contained in our credit facilities that limit our total borrowing capacity;
- credit rating downgrades, which could limit our access to additional debt;
- a significant decrease in the market price of our common stock;
- volatility or disruption in the public debt and equity markets; and
- the impact of the COVID-19 pandemic on our business.

The following table summarizes our financial assets:

	June 30, 2022	December 31, 2021
	(in millions)	
Cash and cash equivalents	\$ 454	\$ 393
Financial investments	161	208
Total financial assets	\$ 615	\$ 601

Cash and Cash Equivalents

Cash and cash equivalents includes all non-restricted cash in banks and highly liquid investments with original maturities of 90 days or less at the time of purchase. The balance retained in cash and cash equivalents is a function of anticipated or possible short-term cash needs, prevailing interest rates, our investment policy, and alternative investment choices. As of June 30, 2022, our cash and cash equivalents of \$454 million were primarily invested in money market funds, commercial paper and bank deposits. In the long-term, we may use both internally generated funds and external sources to satisfy our debt obligations and other long-term liabilities. Cash and cash equivalents as of June 30, 2022 increased \$61 million from December 31, 2021.

Repatriation of Cash

Our cash and cash equivalents held outside of the U.S. in various foreign subsidiaries totaled \$277 million as of June 30, 2022 and \$266 million as of December 31, 2021. The remaining balance held in the U.S. totaled \$177 million as of June 30, 2022 and \$127 million as of December 31, 2021.

Unremitted earnings of certain subsidiaries outside of the U.S. are used to finance our international operations and are considered to be indefinitely reinvested.

Cash Flow Analysis

The following table summarizes the changes in cash flows:

	Six Months Ended June 30,		Percentage Change
	2022	2021	
Net cash provided by (used in):	(in millions)		
Operating activities	\$ 980	\$ 467	109.9 %
Investing activities	(244)	(2,525)	(90.3)%
Financing activities	2,703	(609)	(543.8)%
Effect of exchange rate changes on cash and cash equivalents and restricted cash and cash equivalents	(682)	(108)	531.5 %
Net increase (decrease) in cash and cash equivalents and restricted cash and cash equivalents	2,757	(2,775)	(199.4)%
Cash and cash equivalents, restricted cash and cash equivalents at beginning of period	5,496	5,979	(8.1)%
Cash and cash equivalents, restricted cash and cash equivalents at end of period	\$ 8,253	\$ 3,204	157.6 %
Reconciliation of Cash, Cash Equivalents and Restricted Cash and Cash Equivalents			
Cash and cash equivalents	\$ 454	\$ 390	16.4 %
Restricted cash and cash equivalents	30	40	(25.0)%
Restricted cash and cash equivalents (default funds and margin deposits)	7,769	2,774	180.1 %
Total	\$ 8,253	\$ 3,204	157.6 %

We have adjusted prior period presentation of opening and ending amounts of cash, cash equivalents, and restricted cash and cash equivalents in our condensed consolidated statements of cash flows to include restricted cash and cash equivalents related to the default funds and margin deposits. See Note 2, "Summary of Significant Accounting Policies," to the condensed consolidated financial statements for further discussion of this adjustment.

Net Cash Provided by Operating Activities

Net cash provided by operating activities primarily consists of net income adjusted for certain non-cash items such as: depreciation and amortization expense of property and equipment; amortization expense of acquired finite-lived intangible assets; expense associated with share-based compensation; deferred income taxes; expense associated with extinguishment of debt; and net income from unconsolidated investees.

Net cash provided by operating activities is also impacted by the effects of changes in operating assets and liabilities such as: accounts receivable and deferred revenue which are impacted by the timing of customer billings and related collections from our customers; accounts payable and accrued expenses due to timing of payments; accrued personnel costs, which are impacted by employee performance targets and the timing of payments related to employee bonus incentives; and Section 31 fees payable to the SEC, which is impacted by the timing of collections from customers and payments to the SEC.

Net cash provided by operating activities increased \$513 million for the six months ended June 30, 2022 compared with the same period in 2021. The increase was primarily driven by cash payments made in the second quarter of 2021 related to the acquisition of Verafin, including a tax obligation paid on behalf of Verafin of \$221 million and a cash payment of \$102 million, the release of which is subject to certain employment-related conditions over three years following the closing of the acquisition of Verafin as well as an increase in Section 31 fees payable to SEC due to higher SEC fee rates in 2022. The remaining change was primarily due to other fluctuations in our working capital.

Net Cash Used in Investing Activities

Net cash used in investing activities for the six months ended June 30, 2022 primarily related to net purchases of investments related to default funds and margin deposits of \$202 million, purchases of property and equipment of \$77 million and \$41 million cash used for acquisitions, net of cash and cash equivalents acquired, partially offset by proceeds of \$55 million from other investing activities and net proceeds from sales and redemptions of securities of \$21 million.

Net cash used in investing activities for the six months ended June 30, 2021 primarily related to \$2,430 million of cash used for acquisitions, net of cash and cash equivalents acquired of \$221 million which was utilized to satisfy an acquisition-related tax obligation on behalf of Verafin, net purchases of investments related to default funds and margin deposits of \$90 million, \$81 million of purchases of property and equipment, other investing activities of \$67 million and payments of \$47 million of net purchases of securities, partially offset by proceeds from divestiture of business, net of cash divested \$190 million.

Net Cash Provided by Financing Activities

Net cash provided by financing activities for the six months ended June 30, 2022 primarily related to a net increase in default funds and margin deposits of \$3,554 million, proceeds of \$541 million from the issuances of long-term-debt, partially offset by \$499 million extinguishment of our 2024 Notes, \$325 million of repurchases of common stock pursuant to the ASR agreement, \$308 million in other repurchases of common stock and \$186 million of dividend payments to our shareholders.

Net cash provided by financing activities for the six months ended June 30, 2021 primarily related to \$410 million in repurchases of common stock, a decrease in default funds and margin deposits of \$229 million and \$169 million of dividend payments to our shareholders, partially offset by \$221 million of proceeds from issuances of commercial paper, net.

See Note 4, “Acquisitions and Divestiture,” to the condensed consolidated financial statements for further discussion of our acquisitions and divestiture.

See Note 8, “Debt Obligations,” to the condensed consolidated financial statements for further discussion of our debt obligations.

See “ASR Agreement,” “Share Repurchase Program,” and “Cash Dividends on Common Stock,” of Note 11, “Nasdaq Stockholders’ Equity,” to the condensed consolidated financial statements for further discussion of our ASR agreement, share repurchase program and cash dividends paid on our common stock.

Financial Investments

Our financial investments totaled \$161 million as of June 30, 2022 and \$208 million as of December 31, 2021. Of these securities, \$147 million as of June 30, 2022 and \$162 million as of December 31, 2021 are assets primarily utilized to meet regulatory capital requirements, mainly for our clearing operations at Nasdaq Clearing. See Note 6, “Investments,” to the condensed consolidated financial statements for further discussion.

Regulatory Capital Requirements

Clearing Operations Regulatory Capital Requirements

We are required to maintain minimum levels of regulatory capital for the clearing operations of Nasdaq Clearing. The level of regulatory capital required to be maintained is dependent upon many factors, including market conditions and creditworthiness of the counterparty. As of June 30, 2022, our required regulatory capital of \$123 million was comprised of highly rated European government debt securities that are included in financial investments in the Condensed Consolidated Balance Sheets.

Broker-Dealer Net Capital Requirements

Our broker-dealer subsidiaries, Nasdaq Execution Services, NFSTX, LLC, and Nasdaq Capital Markets Advisory, are subject to regulatory requirements intended to ensure their general financial soundness and liquidity. These requirements obligate these subsidiaries to comply with minimum net capital requirements. As of June 30, 2022, the combined required minimum net capital totaled \$1 million and the combined excess capital totaled \$22 million, substantially all of which is held in cash and cash equivalents in the Condensed Consolidated Balance Sheets. The required minimum net capital is included in restricted cash and cash equivalents in the Condensed Consolidated Balance Sheets.

Nordic and Baltic Exchange Regulatory Capital Requirements

The entities that operate trading venues in the Nordic and Baltic countries are each subject to local regulations and are required to maintain regulatory capital intended to ensure their general financial soundness and liquidity. As of June 30, 2022, our required regulatory capital of \$35 million was primarily invested in European government debt securities, European mortgage bonds and Icelandic government bonds that are included in financial investments in the Condensed Consolidated Balance Sheets and cash, which is included in restricted cash and cash equivalents in the Condensed Consolidated Balance Sheets.

Other Capital Requirements

We operate several other businesses, which are subject to local regulation and are required to maintain certain levels of regulatory capital. As of June 30, 2022, other required regulatory capital of \$9 million was primarily related to Nasdaq Central Securities Depository and is included in restricted cash in the Condensed Consolidated Balance Sheets.

Equity and dividends

Share Repurchase Program

See “Share Repurchase Program,” of Note 11, “Nasdaq Stockholders’ Equity,” to the condensed consolidated financial statements for further discussion of our share repurchase program.

ASR Agreement

See “ASR Agreement,” of Note 11, “Nasdaq Stockholders’ Equity,” to the condensed consolidated financial statements for further discussion of our ASR agreement.

Cash Dividends on Common Stock

The following table presents our quarterly cash dividends paid per common share on our outstanding common stock:

	2022	2021
First quarter	\$ 0.54	\$ 0.49
Second quarter	0.60	0.54
Total	<u>\$ 1.14</u>	<u>\$ 1.03</u>

See “Cash Dividends on Common Stock,” of Note 11, “Nasdaq Stockholders’ Equity,” to the condensed consolidated financial statements for further discussion of the dividends.

Debt Obligations

The following table summarizes our debt obligations by contractual maturity:

<u>Maturity Date</u>	<u>June 30, 2022</u>	<u>December 31, 2021</u>
(in millions)		
Short-term debt:		
Commercial paper	\$ 421	\$ 420
2022 Notes December 2022	599	598
2024 Notes June 2024	—	499
Total short-term debt	<u>\$ 1,020</u>	<u>\$ 1,517</u>
Long-term debt - senior unsecured notes:		
2020 Credit Facility December 2025	(3)	(4)
2026 Notes June 2026	498	498
2029 Notes March 2029	623	676
2030 Notes February 2030	623	676
2031 Notes January 2031	644	643
2033 Notes July 2033	640	694
2040 Notes December 2040	644	644
2050 Notes April 2050	486	486
2052 Notes March 2052	541	—
Total long-term debt	<u>\$ 4,696</u>	<u>\$ 4,313</u>
Total debt obligations	<u>\$ 5,716</u>	<u>\$ 5,830</u>

In the table above, the 2024 Notes were reclassified to short-term debt as of March 31, 2022, and were repaid in April 2022.

In addition to the 2020 Credit Facility, we also have other credit facilities primarily to support our Nasdaq Clearing operations in Europe, as well as to provide a cash pool credit line for one subsidiary. These credit facilities, which are available in multiple currencies, totaled \$188 million as of June 30, 2022 and \$212 million as of December 31, 2021 in available liquidity, none of which was utilized.

As of June 30, 2022, we were in compliance with the covenants of all of our debt obligations.

See Note 8, “Debt Obligations,” to the condensed consolidated financial statements for further discussion of our debt obligations.

Contractual Obligations and Contingent Commitments

There were no significant changes to our contractual obligations and contingent commitments from those disclosed in “Part I. Item 7. Management’s Discussion and Analysis of Financial Condition and Results of Operations” in our Annual Report Form 10-K that was filed with the SEC February 23, 2022.

Off-Balance Sheet Arrangements

For discussion of off-balance sheet arrangements see:

- Note 14, “Clearing Operations,” to the condensed consolidated financial statements for further discussion of our non-cash default fund contributions and margin deposits received for clearing operations; and
- Note 17, “Commitments, Contingencies and Guarantees,” to the condensed consolidated financial statements for further discussion of:
 - Guarantees issued and credit facilities available;
 - Other guarantees;
 - Routing brokerage activities;
 - Legal and regulatory matters; and
 - Tax audits.

Item 3. Quantitative and Qualitative Disclosures About Market Risk

As a result of our operating, investing and financing activities, we are exposed to market risks such as interest rate risk and foreign currency exchange rate risk. We are also exposed to credit risk as a result of our normal business activities.

We have implemented policies and procedures to measure, manage, monitor and report risk exposures, which are reviewed regularly by management and the board of directors. We identify risk exposures and monitor and manage such risks on a daily basis.

We perform sensitivity analyses to determine the effects of market risk exposures. We may use derivative instruments solely to hedge financial risks related to our financial positions or risks that are incurred during the normal course of business. We do not use derivative instruments for speculative purposes.

Interest Rate Risk

We are subject to the risk of fluctuating interest rates in the normal course of business. Our exposure to market risk for changes in interest rates relates primarily to our financial investments and debt obligations, which are discussed below.

Financial Investments

As of June 30, 2022, our investment portfolio was primarily comprised of highly rated European government debt securities, which pay a fixed rate of interest. These securities are subject to interest rate risk and the fair value of these securities will decrease if market interest rates increase. If market interest rates were to increase immediately and uniformly by a hypothetical 100 basis points from levels as of June 30, 2022, the fair value of this portfolio would have declined by \$4 million.

Debt Obligations

As of June 30, 2022, the majority of our debt obligations were fixed-rate obligations. Interest rates on certain tranches of notes are subject to adjustment to the extent our debt rating is downgraded below investment grade, as further discussed in Note 8, “Debt Obligations,” to the condensed consolidated financial statements. While changes in interest rates will have no impact on the interest we pay on fixed-rate obligations, we are exposed to changes in interest rates as a result of the borrowings under our 2020 Credit Facility, as this facility has a variable interest rate. We are also exposed to changes in interest rates as a result of the amounts outstanding from the sale of commercial paper under our commercial paper program, which have variable interest rates. As of June 30, 2022, we had principal amounts outstanding of \$421 million of commercial paper and no amounts outstanding under our 2020 Credit Facility. A hypothetical 100 basis points increase in interest rates on our outstanding commercial paper would increase our annual interest expense by approximately \$4 million based on borrowings as of June 30, 2022.

We may utilize interest rate swap agreements to achieve a desired mix of variable and fixed rate debt.

Foreign Currency Exchange Rate Risk

We are subject to foreign currency exchange rate risk. Our primary transactional exposure to foreign currency denominated revenues less transaction-based expenses and operating income for the three and six months ended June 30, 2022 is presented in the following tables:

	Euro	Swedish Krona	Other Foreign Currencies	U.S. Dollar	Total
(in millions, except currency rate)					
Three Months End June 30, 2022					
Average foreign currency rate to the U.S. dollar	1.065	0.102	#	N/A	N/A
Percentage of revenues less transaction-based expenses	6.1 %	5.4 %	4.1 %	84.4 %	100.0 %
Percentage of operating income	9.6 %	(3.3)%	(9.8)%	103.5 %	100.0 %
Impact of a 10% adverse currency fluctuation on revenues less transaction-based expenses	\$ (5)	\$ (5)	\$ (4)	\$ —	\$ (14)
Impact of a 10% adverse currency fluctuation on operating income	\$ (4)	\$ (1)	\$ (4)	\$ —	\$ (9)

	Euro	Swedish Krona	Other Foreign Currencies	U.S. Dollar	Total
(in millions, except currency rate)					
Six Months Ended June 30, 2022					
Average foreign currency rate to the U.S. dollar	1.093	0.104	#	N/A	N/A
Percentage of revenues less transaction-based expenses	6.2 %	5.7 %	4.3 %	83.8 %	100.0 %
Percentage of operating income	9.6 %	(2.5)%	(10.0)%	102.9 %	100.0 %
Impact of a 10% adverse currency fluctuation on revenues less transaction-based expenses	\$ (11)	\$ (10)	\$ (8)	\$ —	\$ (29)
Impact of a 10% adverse currency fluctuation on operating income	\$ (8)	\$ (2)	\$ (8)	\$ —	\$ (18)

Represents multiple foreign currency rates.

N/A Not applicable.

Our investments in foreign subsidiaries are exposed to volatility in currency exchange rates through translation of the foreign subsidiaries' net assets or equity to U.S. dollars. Substantially all of our foreign subsidiaries operate in functional currencies other than the U.S. dollar. The financial statements of these subsidiaries are translated into U.S. dollars for consolidated reporting using a current rate of exchange, with net gains or losses recorded in accumulated other comprehensive loss within stockholders' equity in the Condensed Consolidated Balance Sheets.

Our primary exposure to net assets in foreign currencies as of June 30, 2022 is presented in the following table:

	Impact of a 10% Adverse Currency Fluctuation	
Net Assets	(in millions)	
Swedish Krona	\$ 2,971	\$ 297
British Pound	159	16
Norwegian Krone	148	15
Canadian Dollar	157	16
Australian Dollar	109	11
Euro	50	5

In the table above, Swedish Krona includes goodwill of \$2,196 million and intangible assets, net of \$513 million.

Credit Risk

Credit risk is the potential loss due to the default or deterioration in credit quality of customers or counterparties. We are exposed to credit risk from third parties, including customers, counterparties and clearing agents. These parties may default on their obligations to us due to bankruptcy, lack of liquidity, operational failure or other reasons. We limit our exposure to credit risk by evaluating the counterparties with which we make investments and execute agreements. For our investment portfolio, our objective is to invest in securities to preserve principal while maximizing yields, without significantly increasing risk. Credit risk associated with investments is minimized substantially by ensuring that these financial assets are placed with governments which have investment grade ratings, well-capitalized financial institutions and other creditworthy counterparties.

Our subsidiary, Nasdaq Execution Services, may be exposed to credit risk due to the default of trading counterparties in connection with the routing services it provides for our trading customers. System trades in cash equities routed to other market centers for members of our cash equity exchanges are routed by Nasdaq Execution Services for clearing to the NSCC. In this function, Nasdaq Execution Services is to be neutral by the end of the trading day, but may be exposed to intraday risk if a trade extends beyond the trading day and into the next day, thereby leaving Nasdaq Execution Services susceptible to counterparty risk in the period between accepting the trade and routing it to the clearinghouse. In this interim period, Nasdaq Execution Services is not novating like a clearing broker but instead is subject to the short-term risk of counterparty failure before the clearinghouse enters the transaction. Once the clearinghouse officially accepts the trade for novation, Nasdaq Execution Services is legally removed from trade execution risk. However, Nasdaq has membership obligations to NSCC independent of Nasdaq Execution Services' arrangements.

Pursuant to the rules of the NSCC and Nasdaq Execution Services' clearing agreement, Nasdaq Execution Services is liable for any losses incurred due to a counterparty or a clearing agent's failure to satisfy its contractual obligations, either by making payment or delivering securities. Adverse

movements in the prices of securities that are subject to these transactions can increase our credit risk. However, we believe that the risk of material loss is limited, as Nasdaq Execution Services' customers are not permitted to trade on margin and NSCC rules limit counterparty risk on self-cleared transactions by establishing credit limits and capital deposit requirements for all brokers that clear with NSCC. Historically, Nasdaq Execution Services has never incurred a liability due to a customer's failure to satisfy its contractual obligations as counterparty to a system trade. Credit difficulties or insolvency, or the perceived possibility of credit difficulties or insolvency, of one or more larger or visible market participants could also result in market-wide credit difficulties or other market disruptions.

We have credit risk related to transaction and subscription-based revenues that are billed to customers on a monthly or quarterly basis, in arrears. Our potential exposure to credit losses on these transactions is represented by the receivable balances in our Condensed Consolidated Balance Sheets. We review and evaluate changes in the status of our counterparties' creditworthiness. Credit losses such as those described above could adversely affect our condensed consolidated financial position and results of operations.

We also are exposed to credit risk through our clearing operations with Nasdaq Clearing. See Note 14, "Clearing Operations," to the condensed consolidated financial statements for further discussion. Our clearinghouse holds material amounts of clearing member cash deposits, which are held or invested primarily to provide security of capital while minimizing credit, market and liquidity risks. While we seek to achieve a reasonable rate of return, we are primarily concerned with preservation of capital and managing the risks associated with these deposits. As the clearinghouse may pass on interest revenues (minus costs) to the members, this could include negative or reduced yield due to market conditions. The following is a summary of the risks associated with these deposits and how these risks are mitigated.

- **Credit Risk.** When the clearinghouse has the ability to hold cash collateral at a central bank, the clearinghouse utilizes its access to the central bank system to minimize credit risk exposures. When funds are not held at a central bank, we seek to substantially mitigate credit risk by ensuring that investments are primarily placed in large, highly rated financial institutions, highly rated government debt instruments and other creditworthy counterparties.

- **Liquidity Risk.** Liquidity risk is the risk a clearinghouse may not be able to meet its payment obligations in the right currency, in the right place and the right time. To mitigate this risk, the clearinghouse monitors liquidity requirements closely and maintains funds and assets in a manner which minimizes the risk of loss or delay in the access by the clearinghouse to such funds and assets. For example, holding funds with a central bank where possible or investing in highly liquid government debt instruments serves to reduce liquidity risks.
- **Interest Rate Risk.** Interest rate risk is the risk that interest rates rise causing the value of purchased securities to decline. If we were required to sell securities prior to maturity, and interest rates had risen, the sale of the securities might be made at a loss relative to the latest market price. Our clearinghouse seeks to manage this risk by making short term investments of members' cash deposits. In addition, the clearinghouse investment guidelines allow for direct purchases or repurchase agreements with short dated maturities of high quality sovereign debt (for example, European government and U.S. Treasury securities), central bank certificates and multilateral development bank debt instruments.
- **Security Issuer Risk.** Security issuer risk is the risk that an issuer of a security defaults on its payment when the security matures. This risk is mitigated by limiting allowable investments and collateral under reverse repurchase agreements to high quality sovereign, government agency or multilateral development bank debt instruments.

Item 4. Controls and Procedures

Disclosure controls and procedures. Nasdaq's management, with the participation of Nasdaq's President and Chief Executive Officer, and Executive Vice President and Chief Financial Officer, has evaluated the effectiveness of Nasdaq's disclosure controls and procedures (as defined in Rule 13a-15(e) and Rule 15d-15(e) under the Exchange Act) as of the end of the period covered by this report. Based upon that evaluation, Nasdaq's President and Chief Executive Officer and Executive Vice President and Chief Financial Officer, have concluded that, as of the end of such period, Nasdaq's disclosure controls and procedures are effective.

Changes in internal control over financial reporting. There have been no changes in Nasdaq's internal control over financial reporting (as defined in Rule 13a-15(f) and Rule 15d-15(f) under the Exchange Act) that occurred during the quarter ended June 30, 2022 that have materially affected, or are reasonably likely to materially affect, Nasdaq's internal control over financial reporting.

PART II. OTHER INFORMATION

Item 1. Legal Proceedings

For a description of our legal proceedings, if any, see “Legal and Regulatory Matters - Litigation,” of Note 17, “Commitments, Contingencies and Guarantees,” to the condensed consolidated financial statements, which is incorporated herein by reference.

Item 1A. Risk Factors

In addition to the other information set forth in this Quarterly Report on Form 10-Q, you should carefully consider the factors discussed under “Risk Factors” in our most recent Form 10-K and Quarterly Report on Form 10-Q for the quarter ended March 31, 2022. These risks could materially and adversely affect our business, financial condition and results of operations. These risks and uncertainties are not the only ones facing us. Additional risks and uncertainties not presently known to us or that we currently believe to be immaterial may also adversely affect our business. As of the date of this Form 10-Q, there have been no material changes to the risk factors described in our most recent Form 10-K, as supplemented by our Quarterly Report on Form 10-Q for the quarter ended March 31, 2022.

Item 2. Unregistered Sales of Equity Securities and Use of Proceeds

Issuer Purchases of Equity Securities

Share Repurchase Program

See “Share Repurchase Program,” of Note 11, “Nasdaq Stockholders’ Equity,” to the condensed consolidated financial statements for further discussion of our share repurchase program.

Purchases of Equity Securities by the Issuer and Affiliated Purchasers

The table below represents repurchases made by or on behalf of us or any “affiliated purchaser” of our common stock during the fiscal quarter ended June 30, 2022:

Period	(a) Total Number of Shares Purchased	(b) Average Price Paid Per Share	(c) Total Number of Shares Purchased as Part of Publicly Announced Plans or Programs	(d) Maximum Dollar Value of Shares that May Yet Be Purchased Under the Plans or Programs (in millions)
April 2022				
Share repurchase program	173,104	\$ 163.28	173,104	\$ 431
Employee transactions	106,717	\$ 188.71	N/A	N/A
May 2022				
Share repurchase program	906,973	\$ 151.17	906,973	\$ 293
Employee transactions	170	\$ 148.12	N/A	N/A
June 2022				
Share repurchase program	5,923	\$ 153.59	5,923	\$ 293
Employee transactions	345	\$ 150.53	N/A	N/A
Total Quarter Ended June 30, 2022				
Share repurchase program	<u>1,086,000</u>	<u>\$ 153.11</u>	<u>1,086,000</u>	<u>\$ 293</u>
Employee transactions	<u>107,232</u>	<u>\$ 188.52</u>	<u>N/A</u>	<u>N/A</u>

In the preceding table:

- N/A - Not applicable.
- See “Share Repurchase Program,” of Note 11, “Nasdaq Stockholders’ Equity,” to the condensed consolidated financial statements for further discussion of our share repurchase program.
- Employee transactions represents shares surrendered to us to satisfy tax withholding obligations arising from the vesting of restricted stock and PSUs previously issued to employees.

Item 3. Defaults Upon Senior Securities

None.

Item 4. Mine Safety Disclosures

Not applicable.

Item 5. Other Information

None.

Item 6. Exhibits

Exhibit Number	
<u>3.1</u>	<u>Certificate of Amendment to Nasdaq's Amended and Restated Certificate of Incorporation (incorporated by reference to Exhibit 3.1 to the Company's Current Report on Form 8-K filed on July 20, 2022).</u>
<u>10.1</u>	<u>Form of Nasdaq Restricted Stock Unit Award Certificate (employees)*</u>
<u>10.2</u>	<u>Form of Nasdaq Restricted Stock Unit Award Certificate (directors)*</u>
<u>10.3</u>	<u>Form of Nasdaq Three-Year Performance Share Unit Agreement*</u>
<u>10.4</u>	<u>Nasdaq, Inc. Deferred Compensation Plan (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed on June 16, 2022).</u>
<u>10.5</u>	<u>Employment Agreement by and between Nasdaq, Inc. and Bradley J. Peterson, dated June 22, 2022*</u>
<u>31.1</u>	<u>Certification of President and Chief Executive Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002 ("Sarbanes-Oxley").</u>
<u>31.2</u>	<u>Certification of Executive Vice President and Chief Financial Officer pursuant to Section 302 of Sarbanes-Oxley.</u>
<u>32.1</u>	<u>Certifications Pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of Sarbanes-Oxley.</u>
101	The following materials from the Nasdaq, Inc. Quarterly Report on Form 10-Q for the quarter ended June 30, 2022, formatted in iXBRL (Inline eXtensible Business Reporting Language): (i) Condensed Consolidated Balance Sheets as of June 30, 2022 and December 31, 2021; (ii) Condensed Consolidated Statements of Income for the three and six months end June 30, 2022 and 2021; (iii) Condensed Consolidated Statements of Comprehensive Income for the three and six months end June 30, 2022 and 2021; (iv) Condensed Consolidated Statements of Changes in Stockholders' Equity for the three and six months end June 30, 2022 and 2021; (v) Condensed Consolidated Statements of Cash Flows for the six months end June 30, 2022 and 2021; and (vi) notes to condensed consolidated financial statements.
104	Cover Page Interactive Data File, formatted in iXBRL and contained in Exhibit 101.

* Management contract or compensatory plan or arrangement.

SIGNATURES

Pursuant to the requirements 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.

Nasdaq, Inc.
(Registrant)

By: /s/ Adena T. Friedman
Name: **Adena T. Friedman**
Title: **President and Chief Executive Officer**
Date: August 3, 2022

By: /s/ Ann M. Dennison
Name: **Ann M. Dennison**
Title: **Executive Vice President and Chief Financial Officer**
Date: August 3, 2022

NASDAQ, INC.
RESTRICTED STOCK UNIT AWARD CERTIFICATE

Award Date: <u>April 1, 2022</u>	Number of Restricted Stock Units: <u>TOTAL SHARES GRANTED</u>	Final Vesting Date: _____ (See below)
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THIS CERTIFIES THAT Nasdaq, Inc. (the “Company”) has on the Award Date specified above granted to

[NAME]

(the “Participant”) an award (the “Award”) to receive the number of Restricted Stock Units (the “RSUs”) indicated in the box above labeled “Number of Restricted Stock Units,” each RSU representing the right to receive one share of the Company’s common stock, \$0.01 per value per share (the “Share”), subject to certain restrictions and on the terms and conditions contained in this award certificate (“Award Certificate”) and the Nasdaq, Inc. Equity Incentive Plan (as amended and restated April 24, 2018) (the “Plan”). Capitalized terms not otherwise defined have the meanings set forth in the Plan. A copy of the Plan is available from Human Resources, and is also available on the Company’s website.

* * *

1. Rights of the Participant with Respect to the Restricted Stock Units.

(a) Prior to vesting of the RSUs pursuant to Section 2, (i) the Participant shall not be treated as a shareholder as to Shares issuable to the Participant with respect to such RSUs, and shall only have a contractual right to receive such Shares following such vesting, unsecured by any assets of the Company or its Subsidiaries; (ii) the Participant shall not be permitted to vote the RSUs or the Shares issuable with respect to such RSUs; and (iii) the Participant’s right to receive such Shares following vesting of the RSUs shall be subject to the adjustment provisions set forth in Section 13 of the Plan. The RSUs shall be subject to all of the restrictions hereinafter set forth.

(b) At the sole discretion of the Committee, the Participant shall be permitted to receive cash payments equal to the dividends and distributions paid on Shares (other than dividends or distributions of securities of the Company which may be issued with respect to Shares by virtue of any stock split, combination, stock dividend or recapitalization) to the same extent as if each RSU was a Share, and those Shares were not subject to the restrictions imposed by this Award Certificate and the Plan; provided, however, that no dividends or distributions shall be payable to or for the benefit of the Participant with respect to record dates for such dividends or distributions occurring on or after the date, if any, on which the Participant has forfeited the RSUs.

2. Vesting.

(a) Except as otherwise provided under this Award Certificate, the RSUs shall vest in accordance with the following vesting schedule: 33% of the RSUs shall vest on the second anniversary of the Award Date (specified above); an additional 33% of the RSUs shall vest on the third anniversary of the Award Date; and the remaining balance of the RSUs shall vest on the fourth anniversary of the Award Date (the "Final Vesting Date"); provided, in each case, that the Participant remains in continuous employment with the Company or any of its Subsidiaries until such date(s).

(b) If, prior to the Final Vesting Date of the RSUs under paragraph (a) above the Participant has a Separation from Service (as defined in the Plan) with the Company or any of its Subsidiaries for any reason (voluntary or involuntary), then such non-vested RSUs shall be immediately and irrevocably forfeited, except as otherwise provided in Section 8(e)(ii) of the Plan (Separation from Service by reason of death or Retirement) or Section 12 of the Plan (Separation from Service following a Change in Control). Notwithstanding anything to the contrary in the Plan or this Award Certificate, and for purposes of clarity, any Separation from Service shall be effective as of the date the Participant's active employment ends and shall not be extended by any statutory or common law notice period.

(c) If, prior to the vesting of the RSUs under paragraph (a) above the Participant is determined by the insurance carrier under the Company's then-current long-term disability plan to be entitled to receive benefits under such plan, and, by reason of such Disability, is deemed to have a Separation from Service (within the meaning of the Plan), then an amount of unvested RSUs shall vest as described in Section 8(e)(iii) of the Plan.

3. Issuance of Shares. Following the applicable vesting date with respect to the RSUs, and subject to the terms and conditions of the Plan, the Company will issue Shares with respect to such vested RSUs net of any Shares withheld by the Company to satisfy the payment of taxes as described in Section 6 of this Award Certificate. Such issuance shall take place as soon as practicable following the applicable vesting date (but in no event later than 60 days following the applicable vesting date described in Section 2(a), (b) or (c) above). The Shares issued in respect of the RSUs shall be subject to such stop transfer orders and other restrictions as the Committee may determine is required by the rules, regulations, and other requirements of the Securities and Exchange Commission, The Nasdaq Stock Market, any applicable federal, state or local laws and the Company's Certificate of Incorporation and By-Laws, and the Committee may cause a legend or legends to be put on such Shares to make appropriate reference to such restrictions. The Company may make delivery of Shares in settlement of RSUs by either (A) delivering certificates representing such Shares to the Participant, registered in the name of the Participant, or (B) by depositing such Shares into a stock brokerage account maintained for the Participant. The Company will not deliver any fractional Shares but will instead round down to the next full number the amount of Shares to be delivered.

4. No Right to Continued Employment. Neither the Plan nor this Award Certificate shall confer on the Participant any right to be retained, in any position, as an employee, consultant or director of the Company, and nothing in this Award Certificate or the Plan shall be construed to limit the discretion of the Company (or subsidiary that employs the Participant) to terminate the Participant's employment at any time, with or without cause.

5. Transferability.

(a) The RSUs are not transferable and may not be sold, assigned, transferred, disposed of, pledged or otherwise encumbered by the Participant, other than by will or the laws of descent and distribution. Upon such transfer (by will or the laws of descent and distribution), such transferee in interest shall take the rights granted herein subject to all the terms and conditions hereof.

(b) Subject to Section 5(a) hereof, in order to comply with any applicable securities laws, the Shares issued to the Participant with respect to vested RSUs may only be sold by the Participant following registration of such Shares under the U.S. Securities Act of 1933, as amended, or pursuant to an exemption therefrom.

(c) Following settlement and issuance of Shares, in the event the Company permits Participant to arrange for sale of Shares through a broker or another designated agent of the Company, Participant acknowledges and agrees that the Company may block any such sale and/or cancel any order to sell placed by the Participant, in each case if the Participant is not then permitted under the Company's insider trading policy to engage in transactions with respect to securities of the Company. If the Committee determines that the ability of the Participant to sell or transfer Shares is restricted, then the Company may notify the Participant in accordance with Section 14 of this Award Certificate. The Participant may only sell such Shares in compliance with such notification from the Company.

6. Withholding.

(a) In order to comply with all applicable federal, state and local tax laws or regulations, the Company may take such actions as it deems appropriate to ensure that all applicable federal, state and local income, payroll or other taxes are withheld or collected from the Participant.

(b) In accordance with the terms of the Plan, and such rules as may be adopted by the Committee under the Plan, the Participant may elect to satisfy the Participant's federal, state and local tax withholding obligations arising from the receipt of, the vesting of or the lapse of restrictions relating to, or the settlement of, the RSUs, by one or a combination of (i) delivering cash, check or money order payable to the Company, (ii) delivering to the Company other Shares, (iii) having the Company withhold a portion of the Shares otherwise to be delivered having a Fair Market Value sufficient to satisfy the statutory withholding required with respect thereto to the extent permitted by the Company; or (iv) having the Company (or the Subsidiary that employs the Participant) withhold any amounts necessary to pay the statutory withholding required from the Participant's salary or other amounts payable to the Participant. The Company will not deliver any fractional Shares but will instead round down to the next full number the amount of Shares to be delivered. The Participant's election must be made on or before the date that any such withholding obligation with respect to the RSUs arises. If the Participant fails to timely make such an election, the Company shall have the right to withhold a portion of the Shares otherwise to be delivered having a Fair Market Value equal to the statutory amount of withholding with respect to applicable taxes, as determined by the Company in its sole discretion. The net settlement of the shares underlying the vested RSUs and the delivery of Shares previously owned are hereby specifically authorized alternatives for the satisfaction of the foregoing withholding obligation. To the extent necessary to meet any obligation to withhold

Federal Insurance Contributions Act taxes before delivery of the Shares, the Company is authorized to deduct those taxes from other current wages or other compensation.

7. Governing Law. This Award Certificate shall be governed by and construed in accordance with the laws of the State of Delaware, without regard to the conflicts of law provisions thereof.

8. Amendments. The Company, acting by means of the Committee, has the right, as set forth in the Plan, to amend, alter, suspend, discontinue or cancel this Award, prospectively or retroactively; provided however, that no such amendment, alteration, suspension, discontinuance or cancelation of the RSUs will adversely affect the Participant's material rights under this Award Certificate without the Participant's consent. The Company has the authority to amend this Award Certificate, consistent with the foregoing, without the Participant's written agreement, except as set forth in this Section 8.

In the event that the Company is reorganized or liquidated, or if all or substantially all of its assets are sold, or if the Company is merged or consolidated with another corporation or entity (or in the event the Company consummates a written agreement to accomplish any of the foregoing), the Committee may, in its sole discretion and upon at least 10 days advance notice to the Participant, cancel any outstanding RSUs and cause the Participant to be paid (in cash or in stock, or any combination thereof) the value of such RSUs based upon the price per Share received or to be received in the transaction.

9. Administration. This Award Certificate shall at all times be subject to the terms and conditions of the Plan. The Committee shall have sole and complete discretion with respect to all matters reserved to it by the Plan and decisions of the Committee with respect thereto and this Award Certificate shall be final and binding upon the Participant and the Company. The Committee has the authority and discretion to determine any questions which arise in connection with the award of the RSUs hereunder.

10. Compliance with Code Section 409A for U.S. Taxpayers.

(a) Distributions of Shares in settlement of RSUs as described herein which represent a "deferral of compensation" within the meaning of Code section 409A shall conform to the applicable requirements of Code section 409A, including, without limitation, the requirement that a distribution to a Participant who is a "specified employee" within the meaning of Code section 409A(a)(2)(B)(i) which is made on account of the specified employee's Separation from Service shall not be made before the date which is six (6) months after the date of Separation from Service. However, distributions as aforesaid shall not be deemed to be a "deferral of compensation" subject to Code section 409A to the extent provided in the exception in Treasury Regulation Section 1.409A-1(b)(4) for short-term deferrals.

(b) It is the intention of the Company and Participant that this Award Certificate not result in an unfavorable tax consequences to Participant under Code Section 409A. Accordingly, as permitted by the Plan, the Company may at any time (without the consent of the Participant) modify or amend the Plan or this Award Certificate to the extent necessary to ensure that the Award is not "deferred compensation" subject to Code Section 409A (or, alternatively, to conform to the requirements of Code Section 409A). Any such amendments shall be made in a manner that preserves to the maximum extent possible the intended benefits to Participant. This paragraph does not create an obligation on the part of Company to modify this Award Certificate

and does not guarantee that the amounts or benefits owed under this Award Certificate will not be subject to interest and penalties under Code Section 409A. For purposes of applying the provisions of Code Section 409A, to the extent applicable, each group of Restricted Stock Units that would vest in accordance with Section 2(a) shall be treated as a separate payment.

(c) While the Company intends that this Award Certificate and the RSUs granted hereunder comply with or be exempt from the requirements of Code Section 409A and any related regulations or other guidance promulgated thereunder, neither the Company or the Committee nor any of their respective affiliates shall be liable to any person for the tax consequences of any failure to comply with the requirements of Code Section 409A or any other tax consequences relating to this Award.

11. Imposition of Other Requirements. The Company reserves the right to impose other requirements on the Participant's participation in the Plan, on the RSUs and on any Shares acquired under the Plan, to the extent the Company determines it is necessary or advisable in order to comply with local law or facilitate the administration of the Plan, and to require the Participant, as a condition of receipt of Shares underlying an RSU, to sign any additional Award Certificates or undertakings that may be necessary to accomplish the foregoing.

12. Nature of Grant. In accepting the Award, the Participant acknowledges, understands and agrees that:

- (i) the Plan is established voluntarily by the Company, it is discretionary in nature, and may be modified, amended, suspended or terminated by the Company at any time, to the extent permitted by the Plan;
- (ii) all decisions with respect to future Awards or other grants, if any, will be at the sole discretion of the Company;
- (iii) the grant of the RSUs and the Participant's participation in the Plan shall not create a right to employment or be interpreted as forming an employment or service contract with the Company, the Participant's employer or any Subsidiary, and shall not interfere with the ability of the Company, the Participant's employer or any Subsidiary, as applicable, to terminate the Participant's employment or service relationship (if any);
- (iv) the Participant is voluntarily participating in the Plan;
- (v) the RSUs and any Shares issued under the Plan and the income and value of the same are not intended to replace any pension rights or compensation;
- (vi) the future value of the Shares underlying the RSUs is unknown and indeterminable;
- (vii) unless otherwise agreed with the Company, the Award and the Shares subject to the Award, and the income and value of same, are not granted as consideration for, or in connection with, the service Participant may provide as a director of a Subsidiary of the Company; and

(viii) no claim or entitlement to compensation or damages shall arise from forfeiture of the RSUs resulting from Separation from Service (for any reason whatsoever, whether or not later found to be invalid or in breach of employment laws in the jurisdiction where the Participant is employed or the terms of the Participant's employment agreement, if any), and in consideration of the grant of the RSUs to which the Participant is otherwise not entitled, the Participant irrevocably agrees never to institute any claim against the Company, any of its Subsidiaries or the Participant's employer, waives his ability, if any, to bring any such claim, and releases the Company, its Subsidiaries and the Participant's employer from any such claim; if, notwithstanding the foregoing, any such claim is allowed by a court of competent jurisdiction, then, by participating in the Plan, the Participant shall be deemed irrevocably to have agreed not to pursue such claim and agrees to execute any and all documents necessary to request dismissal or withdrawal of such claim.

13. Consent to Collection, Processing and Transfer of Personal Data. Pursuant to applicable personal data protection laws, the Company hereby notifies the Participant of the following in relation to the Participant's personal data and the collection, processing and transfer of such data in relation to the Company's grant of this Award and the Participant's participation in the Plan. The collection, processing and transfer of the Participant's personal data are necessary for the Company's administration of the Plan and the Participant's participation in the Plan. The Participant's denial and/or objection to the collection, processing and transfer of personal data may affect the Participant's participation in the Plan. As such, the Participant voluntarily explicitly and unambiguously acknowledges and consents (where required under applicable law) to the collection, use, processing and transfer of personal data as described in this Award Certificate and any other Award grant materials by and among, as applicable, the Company, its Subsidiaries and/or the Participant's employer for the purpose of implementing, administering and managing the Participant's participation in the Plan.

The Company and the Subsidiaries, including the Participant's employer hold certain personal information about the Participant, including, but not limited to his or her name, home address, email address and telephone number, date of birth, social security number, passport number or other employee identification number, salary, nationality, job title, any Shares or directorships held in the Company, details of all Awards or any other entitlement to Shares awarded, canceled, purchased, vested, unvested or outstanding in Participant's favor, for the exclusive purpose of managing and administering the Plan ("Data").

The Company and its Subsidiaries, including the Participant's employer, will transfer Data amongst themselves as necessary for the purpose of implementation, administration and management of the Participant's participation in the Plan, and the Company and its Subsidiaries, including the Participant's employer, may each further transfer Data to a designated Plan broker, administrative agent or such other stock plan service provider as may be selected by the Company presently or in the future (a "Plan Service Provider"), which may be assisting the Company in the implementation, administration and management of the Plan. These recipients may be located throughout the world. The Participant understands that if he or she resides outside the United States, the Participant may request a list with the names and addresses of any potential recipients of the Data by contacting the Participant's local human

resources representative. The Participant hereby authorizes (where required under applicable law) the Company, any Plan Service Provider and any other possible recipients which may assist the Company (presently or in the future) to receive, possess, use, retain and transfer the Data, in electronic or other form, for the sole purpose of implementing, administering and managing the Participant's participation in the Plan. Furthermore, the Participant acknowledges and understands that the transfer of the Data to the Company or its Subsidiaries, including the Participant's employer, to any Plan Service Provider, or to any third parties is necessary for the Participant's participation in the Plan. The Participant understands that Data will be held only as long as is necessary to implement, administer and manage the Participant's participation in the Plan. If the Participant does not consent, or if the Participant later seeks to revoke his or her consent, the Participant's employment status or service and career with the Company and its Subsidiaries will not be affected. The only consequence of refusing or withdrawing the Participant's consent is that the Company may not be able to grant the Participant RSUs or other awards or administer or maintain such awards. Therefore, the Participant acknowledges that withdrawal of consent may affect the Participant's ability to vest in or realize benefits from the RSUs, and the Participant's ability to participate in the Plan, in which case neither the Company nor any of its Subsidiaries, including the Participant's employer, will have any liability or obligation to the Participant related to this Award. For more information on the consequences of refusal to consent or withdrawal of consent, the Participant understands that he or she may contact his or her local human resources representative.

Finally, upon request of the Company or the Participant's employer, the Participant agrees to provide an executed data privacy consent form (or any other agreements or consents that may be required by the Company and/or the Participant's employer) that the Company and/or the Participant's employer may deem necessary to obtain from the Participant for the purpose of administering the Participant's participation in the Plan in compliance with the data privacy laws in the Participant's country, either now or in the future. The Participant understands and agrees that the Participant will not be able to participate in the Plan if the Participant fails to provide any such consent or agreement requested by the Company and/or the Participant's employer.

14. Notices. Any notice, request, instruction or other document given under this Award Certificate shall be in writing and may be delivered by such method as may be permitted by the Company, and shall be addressed and delivered, in the case of the Company, to the Secretary of the Company at the principal office of the Company and, in the case of the Participant, to the Participant's address as shown in the records of the Company or to such other address as may be designated in writing (or by such other method approved by the Company) by either party.

15. Severability. The invalidity or unenforceability of any provision of this Award Certificate shall not affect the validity or enforceability of any other provision of this Award Certificate, and each other provision of the Award Certificate shall be severable and enforceable to the extent permitted by law.

16. Award Subject to Plan; Amendments to Award. This Award is subject to the Plan as approved by the shareholders of the Company. The terms and provisions of the Plan as it may be amended from time to time are hereby incorporated herein by reference. In the event of a conflict between any term or provision contained in this Award Certificate and a term or

provision of the Plan, the applicable terms and provisions of this Award Certificate will govern and prevail.

17. Discretionary Nature of Plan; No Vested Rights. The Plan is discretionary in nature and limited in duration, and may be amended, cancelled, or terminated by the Company, in its sole discretion, at any time. The grant of the Award represented by this Award Certificate is exceptional, voluntary and occasional and does not create any contractual or other right to receive an award or benefit in lieu of an award in the future, even if awards have been granted repeatedly in the past. Future Awards, if any, will be at the sole discretion of the Company, including, but not limited to, the form and timing of an Award, the number of Shares subject to the Award, and the vesting provisions. Any amendment, modification or termination of the Plan shall not constitute a change or impairment of the terms and conditions of the Participant's employment with the Company.

18. No Advice Regarding Grant. The Company is not providing any tax, legal or financial advice, nor is the Company making any recommendations regarding the Participant's participation in the Plan, or his acquisition or sale of the underlying Shares. The Participant acknowledges that he should consult with his own personal tax, legal and financial advisors regarding his participation in the Plan before taking any action related to the Plan.

19. Entire Agreement. This Award Certificate represents the entire understanding and agreement between the parties with respect to the subject matter of this Award Certificate and supersedes and replaces all previous agreements, arrangements, understandings, rights, obligations and liabilities between the parties in respect of such matters.

20. Execution of Agreement. By electronically or otherwise accepting this Award Certificate, the Participant acknowledges his or her understanding and acceptance of the terms and conditions of the Award. The Company has no obligation to issue the Participant Shares under this Award Certificate if the Participant does not accept the Award. Further, any acceptance of Shares issued pursuant to this Award Certificate shall constitute the Participant's acceptance of the Award and the Participant's agreement with all terms and conditions of the Award, as set forth in the Plan and this Award Certificate

NASDAQ, INC.

By: Bryan Smith
Title: EVP and Chief People Officer

NASDAQ, INC.
RESTRICTED STOCK UNIT AWARD CERTIFICATE

Award Date: June 22, 2022	Number of Restricted Stock Units: # GRANTED
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THIS CERTIFIES THAT Nasdaq, Inc. (the “Company”) has on the Award Date specified above granted to

NAME

(the “Director”) an award (the “Award”) to receive the number of Restricted Stock Units (the “RSUs” or “Restricted Stock Units”) indicated in the box above labeled “Number of Restricted Stock Units,” with each RSU representing the right to receive one share (“Share”) of the Company’s common stock, \$0.01 per value per share (the “Common Stock”), subject to certain restrictions and on the terms and conditions contained in this award certificate (the “Award Certificate”) and the Nasdaq, Inc. Equity Incentive Plan (as amended and restated April 24, 2018) (the “Plan”). Capitalized terms not otherwise defined have the meanings set forth in the Plan. A copy of the Plan is available from the People @ Nasdaq team, and is also available on the Company’s website.

* * *

1. Rights of the Director with Respect to the Restricted Stock Units.

(a) Prior to vesting of the Restricted Stock Units pursuant to Section 2, (i) the Director shall not be treated as a shareholder as to Shares issuable to the Director with respect to such Restricted Stock Units, and shall only have a contractual right to receive such Shares following such vesting, unsecured by any assets of the Company or its Subsidiaries; (ii) the Director shall not be permitted to vote the Restricted Stock Units or the Shares issuable with respect to such Restricted Stock Units; and (iii) the Director’s right to receive such Shares following vesting of the Restricted Stock Units shall be subject to the adjustment provisions set forth in Section 13 of the Plan. The Restricted Stock Units shall be subject to all of the restrictions hereinafter set forth.

(b) At the sole discretion of the Committee, the Director shall be permitted to receive cash payments equal to the dividends and distributions paid on Shares (other than dividends or distributions of securities of the Company which may be issued with respect to Shares by virtue of any stock split, combination, stock dividend or recapitalization) to the same extent as if each Restricted Stock Unit was a Share, and those Shares were not subject to the restrictions imposed by this Award Certificate and the Plan; provided, however, that no dividends or distributions shall be payable to or for the benefit of the Director with respect to record dates for such dividends or distributions occurring on or after the date, if any, on which the Director has forfeited the Restricted Stock Units.

2. Vesting.

(a) Except as otherwise provided under this Award Certificate, and contingent upon the Director's continued service, the Restricted Stock Units shall vest in accordance with the following vesting schedule: 100% of the Restricted Stock Units shall vest on the first anniversary of the Award Date (specified above) (the "Final Vesting Date").

3. Termination of Service.

(b) If the Company terminates the Director's service on the Board on account of "Misconduct" (as such term is defined below), all Restricted Stock Units which have not as of the date of such termination become vested shall be deemed canceled and forfeited on the effective date of such termination without further consideration to the Director.

(c) If the Director's service on the Board terminates by reason of death or "Disability" (as such term is defined below), all Restricted Stock Units shall become vested on the date of such termination.

(d) If the Director's service on the Board terminates by reason of the expiration of his "Term" (as such term is defined below) prior to the date his Restricted Stock Units would otherwise vest pursuant to Section 2 hereof, all Restricted Stock Units shall become vested Restricted Stock Units.

(d) If the Director's service on the Board terminates for any reason other than those set forth in Sections (a) through (c) of this Section 3, all Restricted Stock Units which have not as of the date of such termination become vested shall be deemed canceled and forfeited on the effective date of such termination without further consideration to the Director.

(e) For purposes of this Award Certificate the terms "Misconduct," "Disability," and "Term" shall have meanings set forth in this Section 3(e):

- (i) "Misconduct" means the Director's conviction of, or pleading *nolo contendere* to a felony or to any crime, whether a felony or misdemeanor, involving the purchase or sale of any security, mail or wire fraud, theft or embezzlement of Company property or a material breach of the Director's fiduciary duty to the Company or its shareholders.
- (ii) "Disability" means the Director's physical or mental incapacity for a period of 45 consecutive working days or 60 days in a six (6) month period which makes the Director unable to perform his duties to the Company. Any question as to the existence of the Disability of the Director shall be determined by a qualified physician selected by the Company.
- (iii) "Term" shall mean each term of service on the Board commencing on the Director's election or most recent re-election to the Board and ending on the first anniversary thereafter unless the Director was elected for a longer or shorter period, in which event the longer or shorter period shall be the Term; provided, however, that the Term shall be deemed to include any automatic renewal thereof.

4. Issuance of Shares. Following the applicable vesting date with respect to the Restricted Stock Units, and subject to the terms and conditions of the Plan, the Company will issue Shares with respect to such vested Restricted Stock Units, net of any Shares withheld by the Company to satisfy the payment of taxes as described in Section 7 herein. Such issuance shall take place as soon as practicable following the applicable vesting date (but in no event later than 60 days following the applicable vesting date described in Section 2 above). The Shares issued in respect of the Restricted Stock Units shall be subject to such stop transfer orders and other restrictions as the Committee may determine is required by the rules, regulations, and other requirements of the Securities and Exchange Commission, The Nasdaq Stock Market, any applicable federal, state or local laws and the Company's Certificate of Incorporation and By-Laws, and the Committee may cause a legend or legends to be put on such Shares to make appropriate reference to such restrictions. The Company may make delivery of Shares in settlement of Restricted Stock Units by either (A) delivering certificates representing such Shares to the Director, registered in the name of the Director, or (B) by depositing such Shares into a stock brokerage account maintained for the Director. The Company will not deliver any fractional shares of Common Stock but will instead round down to the next full number the amount of shares of Common Stock to be delivered.

Notwithstanding anything in this Section 4 to the contrary, the Company may, in its sole discretion, settle the Restricted Stock Units in the form of a cash payment to the extent settlement in Shares is prohibited under local law, or would require the Director, the Company and/or a Subsidiary to obtain the approval of any governmental and/or regulatory body in the Director's country of residence (and country where the Director performs services, if different). Alternatively, the Company may, in its sole discretion, settle the Restricted Stock Units in the form of Shares but require the Director to immediately sell such Shares (in which case, the Award Certificate shall give the Company the authority to issue sales instructions on behalf of the Director).

5. No Right to Continued Service. Neither the Plan nor this Award Certificate shall confer on the Director any right to be retained, in any position, as an employee, consultant or director of the Company.

6. Transferability.

(a) At any time prior to becoming vested, the Restricted Stock Units are not transferable and may not be sold, assigned, transferred, disposed of, pledged or otherwise encumbered by the Director, other than by will or the laws of descent and distribution. Upon such transfer (by will or the laws of descent and distribution), such transferee in interest shall take the rights granted herein subject to all the terms and conditions hereof.

(b) Subject to Section 6(a) hereof, in order to comply with any applicable securities laws, the Shares issued to the Director with respect to vested Restricted Stock Units may only be sold by the Director following registration of such Shares under the U.S. Securities Act of 1933, as amended, or pursuant to an exemption therefrom.

(c) Following settlement and issuance of Shares, in the event the Company permits the Director to arrange for sale of Shares through a broker or another designated agent of the Company, Director acknowledges and agrees that the Company may block any such sale and/or cancel any order to sell placed by the Director, in each case if the Director is not then permitted under the Company's insider trading policy to engage in transactions with respect to securities of

the Company. If the Committee determines that the ability of the Director to sell or transfer Shares is restricted, then the Company may notify the Director in accordance with Section 13 of this Award Certificate. The Director may only sell such Shares in compliance with such notification from the Company.

7. Withholding.

(a) The Director acknowledges that, regardless of any action taken by the Company, the ultimate liability for all income tax, social insurance, payroll tax, fringe benefits tax, payment on account or other tax-related items related to the Director's participation in the Plan and legally applicable to the Director ("Tax-Related Items"), is and remains the Director's responsibility and may exceed any amount actually withheld by the Company and/or any Subsidiary. The Director further acknowledges that the Company (i) make no representations or undertakings regarding the treatment of any Tax-Related Items in connection with any aspect of the Restricted Stock Units, including the grant, vesting or settlement of the Restricted Stock Units, the issuance of Shares upon settlement of the RSUs, the subsequent sale of Shares acquired pursuant to such issuance and the receipt of any dividends and/or dividend equivalent amounts; and (ii) do not commit to, and are under no obligation to, structure the terms of the grant or any aspect of the Restricted Stock Units to reduce or eliminate Director's liability for Tax-Related Items or achieve any particular tax result. Further, if the Director has become subject to Tax-Related Items in more than one jurisdiction, the Director acknowledges that the Company may be required to withhold or account for Tax-Related Items in more than one jurisdiction.

(b) In order to comply with all applicable federal, state and local tax laws or regulations, the Company may take such actions as it deems appropriate to ensure that all applicable Tax-Related Items are withheld or collected from the Director.

(c) In accordance with the terms of the Plan, and such rules as may be adopted by the Committee under the Plan, the Director may elect to satisfy the Director's obligations with regard to all Tax-Related Items arising from the receipt of, the vesting of or the lapse of restrictions relating to, the Restricted Stock Units, by (i) delivering cash, check or money order payable to the Company, (ii) delivering to the Company other Shares, (iii) having the Company withhold a portion of the Shares otherwise to be delivered having a Fair Market Value sufficient to satisfy the statutory withholding required with respect thereto to the extent permitted by the Company; or (iv) having the Company withhold any amounts necessary to pay the statutory withholding required from the Director's salary or other amounts payable to the Director. The Company will not deliver any fractional Shares but will instead round down to the next full number the amount of Shares to be delivered. The Director's election must be made on or before the date that any such withholding obligation with respect to the Restricted Stock Units arises. If the Director fails to timely make such an election, the Company shall have the right to withhold a portion of the Shares otherwise to be delivered having a Fair Market Value equal to the statutory amount of withholding with respect to applicable taxes, as determined by the Company in its sole discretion. The net settlement of the shares underlying the vested Restricted Stock Units and the delivery of Shares previously owned are hereby specifically authorized alternatives for the satisfaction of the foregoing withholding obligation. To the extent necessary to meet any obligation to withhold Federal Insurance Contributions Act taxes before delivery of the Shares, the Company is authorized to deduct those taxes from other compensation.

8. Governing Law. This Award Certificate shall be governed by and construed in accordance with the laws of the State of Delaware, without regard to the conflicts of law provisions thereof.

9. Amendments. The Company, acting by means of the Committee, has the right, as set forth in the Plan, to amend, alter, suspend, discontinue or cancel this Award, prospectively or retroactively; provided however, that no such amendment, alteration, suspension, discontinuance or cancellation of the RSUs will adversely affect the Director's material rights under this Award Certificate without the Director's consent. The Company has the authority to amend this Award Certificate, consistent with the foregoing, without the Director's written agreement, except as set forth in this Section 9.

In the event that the Company is reorganized or liquidated, or if all or substantially all of its assets are sold, or if the Company is merged or consolidated with another corporation or entity (or in the event the Company consummates a written agreement to accomplish any of the foregoing), the Committee may, in its sole discretion and upon at least 10 days advance notice to the Director, cancel any outstanding RSUs and cause the Director to be paid (in cash or in stock, or any combination thereof) the value of such RSUs based upon the price per share of Common Stock received or to be received in the transaction.

10. Administration. This Award Certificate shall at all times be subject to the terms and conditions of the Plan. Capitalized terms not defined in this Award Certificate shall have the meanings set forth in the Plan. The Committee shall have sole and complete discretion with respect to all matters reserved to it by the Plan and decisions of the Committee with respect thereto and this Award Certificate shall be final and binding upon the Director and the Company. The Committee has the authority and discretion to determine any questions which arise in connection with the award of the Restricted Stock Units hereunder.

11. Compliance with Code Section 409A for U.S. Taxpayers.

(a) Distributions of Shares in settlement of Restricted Stock Units as described herein which represent a "deferral of compensation" within the meaning of Code Section 409A shall conform to the applicable requirements of Code Section 409A. However, distributions as aforesaid shall not be deemed to be a "deferral of compensation" subject to Code section 409A to the extent provided in the exception in Treasury Regulation Section 1.409A-1(b)(4) for short-term deferrals.

(b) It is the intention of the Company and Director that this Award Certificate not result in an unfavorable tax consequence to the Director under Code Section 409A. Accordingly, as permitted by the Plan, the Company may at any time (without the consent of the Director) modify or amend the Plan or this Award Certificate to the extent necessary to ensure that the Award is not "deferred compensation" subject to Code Section 409A (or, alternatively, to conform to the requirements of Code Section 409A). Any such amendments shall be made in a manner that preserves to the maximum extent possible the intended benefits to Director. This paragraph does not create an obligation on the part of Company to modify this Award Certificate and does not guarantee that the amounts or benefits owed under this Award Certificate will not be subject to interest and penalties under Code Section 409A. For purposes of applying the provisions of Code Section 409A, to the extent applicable, each group of Restricted Stock Units that would vest in accordance with Section 2 shall be treated as a separate payment.

(c) While the Company intends that this Award Certificate and the RSUs granted hereunder comply with or be exempt from the requirements of Code Section 409A and any related regulations or other guidance promulgated thereunder, neither the Company or the Committee nor any of their respective affiliates shall be liable to any person for the tax consequences of any failure to comply with the requirements of Code Section 409A or any other tax consequences relating to this Award.

12. Imposition of Other Requirements. The Company reserves the right to impose other requirements on the Director's participation in the Plan, on the Restricted Stock Units and on any Shares acquired under the Plan, to the extent the Company determines it is necessary or advisable in order to comply with local law or facilitate the administration of the Plan, and to require the Director, as a condition of receipt of Shares underlying a Restricted Stock Unit, to sign any additional Award Certificates or undertakings that may be necessary to accomplish the foregoing.

13. Notices. Any notice, request, instruction or other document given under this Award Certificate shall be in writing and may be delivered by such method as may be permitted by the Company, and shall be addressed and delivered, in the case of the Company, to the Secretary of the Company at the principal office of the Company and, in the case of the Director, to the Director's address as shown in the records of the Company or to such other address as may be designated in writing (or by such other method approved by the Company) by either party.

14. Severability. The invalidity or unenforceability of any provision of this Award Certificate shall not affect the validity or enforceability of any other provision of this Award Certificate, and each other provision of the Award Certificate shall be severable and enforceable to the extent permitted by law.

15. Award Subject to Plan; Amendments to Award. This Award is subject to the Plan as approved by the shareholders of the Company. The terms and provisions of the Plan as it may be amended from time to time are hereby incorporated herein by reference. In the event of a conflict between any term or provision contained in this Award Certificate and a term or provision of the Plan, the applicable terms and provisions of this Award Certificate will govern and prevail.

16. Discretionary Nature of Plan; No Vested Rights. The Plan is discretionary in nature and limited in duration, and may be amended, cancelled, or terminated by the Company, in its sole discretion, at any time. The grant of the Award represented by this Award Certificate is exceptional, voluntary and occasional and does not create any contractual or other right to receive an award or benefit in lieu of an award in the future, even if awards have been granted repeatedly in the past. Future Awards, if any, will be at the sole discretion of the Company, including, but not limited to, the form and timing of an Award, the number of Shares subject to the Award, and the vesting provisions. Any amendment, modification or termination of the Plan shall not constitute a change or impairment of the terms and conditions of the Director's service with the Company.

17. Electronic Delivery. The Company may, in its sole discretion, decide to deliver any documents related to the RSU or future Awards granted under the Plan by electronic means or request the Director's consent to participate in the Plan by electronic means. By accepting this Award, the Director hereby consents and agrees to receive such documents by electronic delivery

and agrees to participate in the Plan through an on-line or electronic system established and maintained by the Company or another third party designated by the Company.

18. English Language. The Director acknowledges and agrees that it is the Director's express intent that the Plan, this Award Certificate, any addendum and all other documents, notices and legal proceedings entered into, given or instituted pursuant to the Award, be drawn up in English. Unless specifically indicated, if the Director has received the Plan, this Award Certificate, any addendum or any other documents related to the Award translated into a language other than English, and if the meaning of the translated version is different than the English version, the English version shall control.

19. Nature of Grant. In accepting the Award, the Director acknowledges, understands and agrees that:

- (i) the Plan is established voluntarily by the Company, it is discretionary in nature, and may be modified, amended, suspended or terminated by the Company at any time, to the extent permitted by the Plan;
- (ii) the Award is voluntary and occasional and does not create any contractual or other right to receive future grants of RSUs, or benefits in lieu of RSUs, even if RSUs have been granted in the past;
- (iii) all decisions with respect to future Awards or other grants, if any, will be at the sole discretion of the Company;
- (iv) the Director is voluntarily participating in the Plan;
- (v) the future value of the Shares underlying the RSUs is unknown and indeterminable; and
- (vi) the Director acknowledges and agrees that neither the Company nor any Subsidiary shall be liable for any foreign exchange rate fluctuation between the Director's local currency and the United States Dollar that may affect the value of the RSUs or of any amounts due to the Director pursuant to the vesting and settlement of the RSU or the subsequent sale of any Shares issued upon settlement.

20. Consent to Collection, Processing and Transfer of Personal Data. *Pursuant to applicable personal data protection laws, the Company hereby notifies the Director of the following in relation to the Director's personal data and the collection, processing and transfer of such data in relation to the Company's grant of this Award and the Director's participation in the Plan. The collection, processing and transfer of the Director's personal data are necessary for the Company's administration of the Plan and the Director's participation in the Plan. The Director's denial and/or objection to the collection, processing and transfer of personal data may affect the Director's participation in the Plan. As such, the Director voluntarily explicitly and unambiguously acknowledges and consents (where required under applicable law) to the collection, use, processing and transfer of personal data as described in this Award Certificate and any other Award grant materials by and among, as applicable, the Company and its Subsidiaries for the purpose of implementing, administering and managing the Director's participation in the Plan.*

The Company holds certain personal information about the Director, including name, home address, email address and telephone number, date of birth, social security number, passport number or other employee identification number, salary, nationality, job title, any Shares or directorships held in the Company, details of all Awards or any other entitlement to Shares awarded, canceled, purchased, vested, unvested or outstanding in Director's favor, for the purpose of managing and administering the Plan ("Data"). The Data may be provided by the Director or collected, where lawful, from third parties, and the Company will process the Data for the exclusive purpose of implementing, administering and managing the Director's participation in the Plan. The Data processing will take place through electronic and non-electronic means according to logics and procedures strictly correlated to the purposes for which Data are collected and with confidentiality and security provisions as set forth by applicable laws and regulations in the Director's country of residence. Data processing operations will be performed minimizing the use of personal and identification data when such operations are unnecessary for the processing purposes sought. Data will be accessible within the Company's organization only by those persons requiring access for purposes of the implementation, administration and operation of the Plan and for the Director's participation in the Plan.

The Company may further transfer Data to any third parties assisting the Company in the implementation, administration and management of the Plan. These recipients may be located in the European Economic Area, or elsewhere throughout the world, such as the United States. The Director hereby authorizes (where required under applicable law) them to receive, possess, use, retain and transfer the Data, in electronic or other form, for purposes of implementing, administering and managing the Director's participation in the Plan, including any requisite transfer of such Data as may be required for the administration of the Plan and/or the subsequent holding of Shares on the Director's behalf to a broker or other third party with whom the Director may elect to deposit any Shares acquired pursuant to the Plan.

The Director may, at any time, exercise his or her rights provided under applicable personal data protection laws, which may include the right to (a) obtain confirmation as to the existence of the Data, (b) verify the content, origin and accuracy of the Data, (c) request the integration, update, amendment, deletion, or blockage (for breach of applicable laws) of the Data, and (d) to oppose, for legal reasons, the collection, processing or transfer of the Data which is not necessary or required for the implementation, administration and/or operation of the Plan and the Director's participation in the Plan. The Director may seek to exercise these rights by contacting the Office of the Corporate Secretary.

Finally, upon request of the Company, the Director agrees to provide an executed data privacy consent form (or any other agreements or consents that may be required by the Company) that the Company may deem necessary to obtain from the Director for the purpose of administering the Director's participation in the Plan in compliance with the data privacy laws in the Director's country, either now or in the future. The Director understands and agrees that the Director will not be able to participate in the Plan if the Director fails to provide any such consent or agreement requested by the Company.

21. Private Placement. The grant of the RSUs is not intended to be a public offering of securities in the Director's country of residence (and country of employment, if different). The Company has not submitted any registration statement, prospectus or other filings with the local securities authorities (unless otherwise required under local law), and the grant of the RSUs is not subject to the supervision of the local securities authorities.

22. Addendum to Award Certificate. Notwithstanding any provisions of this Award Certificate to the contrary, the Award shall be subject to any special terms and conditions for the Director's country of residence (and country where services are primarily performed, if different), as are set forth in the applicable addendum (the "Addendum") as attached to the Award Certificate. Further, if the Director transfers residence to another country reflected in an Addendum to the Award Certificate, the special terms and conditions for such country will apply to the Director to the extent the Company determines, in its sole discretion, that the application of such terms is necessary or advisable in order to comply with local laws, rules, and regulations, or to facilitate operation and administration of the Plan. Any applicable Addendum shall constitute part of this Award Certificate.

23. No Advice Regarding Grant. The Company is not providing any tax, legal or financial advice, nor is the Company making any recommendations regarding the Director's participation in the Plan, or his acquisition or sale of the underlying Shares. The Director acknowledges that he should consult with his own personal tax, legal and financial advisors regarding his participation in the Plan before taking any action related to the Plan.

24. Entire Agreement. This Award Certificate represents the entire understanding and agreement between the parties with respect to the subject matter of this Award Certificate and supersedes and replaces all previous agreements, arrangements, understandings, rights, obligations and liabilities between the parties in respect of such matters.

25. Insider Trading / Market Abuse Laws. The Director acknowledges that, depending on the Director's or the Director's broker's country of residence or where the Shares are listed, the Director may be subject to insider trading and/or market abuse laws, which may affect the Director's ability to accept, acquire, sell or otherwise dispose of Shares, rights to shares (e.g., RSUs) or rights linked to the value of shares (e.g., phantom awards, futures) during such times as the Director is considered to have "inside information" (regarding the Company as defined by the laws or regulations in the Director's country). Local insider trading laws and regulations may prohibit the cancellation or amendment of orders the Director placed before the Director possessed inside information. Furthermore, the Director could be prohibited from (i) disclosing the inside information to any third party (other than on a "need to know") and (ii) "tipping" third parties or causing them otherwise to buy or sell securities. The Director should keep in mind third parties includes fellow directors and employees of the Company. Any restrictions under these laws and regulations are separate from and in addition to any restrictions that that may be imposed under any applicable Company's insider trading policy. The Director

acknowledges that it is his or her responsibility to be informed of and compliant with any such laws and such Company's policies, and is hereby advised to speak to his or her personal legal advisor on this matter.

26. Waiver. The Director acknowledges that a waiver by the Company of a breach of any provision of this Award Certificate shall not operate or be construed as a waiver of any other provision of this Award Certificate, or of a prior or subsequent breach by the Director or any other Director.

[Signature Page Follows]

NASDAQ, INC.

By: _____
Name: Bryan Smith
Title: EVP and Chief People Officer

ADDENDUM

Terms and Conditions

This Addendum includes additional terms and conditions that govern the award of Restricted Stock Units granted to the Director under the Nasdaq, Inc. Equity Incentive Plan (as amended and restated April 24, 2018) (the “Plan”) if the Director is resident and/or primarily performs services in one of the countries listed below. If the Director transfers residency and/or employment to another country reflected below following the Award Date, the additional terms and conditions for such country will apply to the Director’s RSUs to the extent the Company determines, in its sole discretion, that the application of such terms and conditions is necessary or advisable in order to comply with local laws, rules, and regulations or to facilitate the operation and administration of the RSUs and the Plan (or the Company may establish alternative terms and conditions as may be necessary or advisable to accommodate the Director’s transfer). Certain capitalized terms used but not defined in this Addendum have the meanings set forth in the Plan and/or the Restricted Stock Unit Award Certificate (the “Award Certificate”).

Notifications

This Addendum also includes information regarding exchange controls and certain other issues of which the Director should be aware with respect to participation in the Plan. The information is based on the securities, exchange control and other laws in effect in the respective countries as of June 2021. Such laws are often complex and change frequently. As a result, the Company strongly recommends that the Director not rely on the information in this Addendum as the only source of information relating to the consequences of participation in the Plan because the information may be out of date at the time that the RSUs vest or the Director sells Shares acquired under the Plan.

In addition, the information contained herein is general in nature and may not apply to the Director’s particular situation and the Company is not in a position to assure the Director of any particular result. Accordingly, the Director is advised to seek appropriate professional advice as to how the relevant laws in the Director’s country may apply to his or her situation.

SWEDEN

There are no country-specific provisions.

UNITED ARAB EMIRATES

Notifications

1. Securities Law Information. This Award Certificate and the Plan are intended for distribution only to directors, employees or former employees of the Company and its Subsidiaries or affiliates for the purposes of implementing an equity compensation plan. The Emirates Securities and Commodities Authority has no responsibility for reviewing or verifying any documents in connection with this Award Certificate and the Plan. Neither the Ministry of Economy nor the Dubai Department of Economic Development have approved this Award Certificate and/or the Plan nor taken steps to verify the information set out in it, and have no responsibility for it. The securities to which this Award Certificate and the Plan relate may be

illiquid and/or subject to restrictions on their resale. Prospective purchasers of the securities offered should conduct their own due diligence on the securities. If the Director does not understand the contents of this document he is advised to consult an authorized financial adviser.

NASDAQ, INC.
THREE-YEAR PERFORMANCE SHARE UNIT AGREEMENT

This PERFORMANCE SHARE UNIT AGREEMENT (this “Agreement”) between Nasdaq, Inc., a Delaware corporation (the “Company”), and [EMPLOYEE NAME] (the “Grantee”) memorializes the grant by the Management Compensation Committee of the Board of Directors of the Company (the “Committee”) on **April 1, 2022** (the “Grant Date”) of performance share units (the “PSUs”) to the Grantee on the terms and conditions set out below.

RECITALS:

The Company has adopted the Nasdaq, Inc. Equity Incentive Plan (as amended and restated April 24, 2018) (the “Plan”), which Plan is incorporated herein by reference and made a part of this Agreement. Capitalized terms not otherwise defined herein shall have the meaning ascribed to them in the Plan. The Plan in relevant part provides for the issuance of stock-based awards that are subject to the attainment of performance goals as established by the Committee.

The Committee has determined that it is in the best interests of the Company and its shareholders to grant the PSUs provided for herein to the Grantee pursuant to the Plan and under the terms set forth herein as an increased incentive for the Grantee to contribute to the Company’s future success and prosperity.

Capitalized terms not otherwise defined herein shall have the meaning ascribed to them in the Plan.

NOW, THEREFORE, in consideration of the mutual covenants hereinafter set forth, the parties hereto agree as follows:

1. Grant of Performance-Based Award. The Company hereby grants to the Grantee [TARGET NUMBER OF SHARES] PSUs, which PSUs shall entitle the Grantee to receive up to [200% OF TARGET NUMBER OF SHARES] Shares (or a lesser number of Shares, or no Shares whatsoever), subject to the terms and conditions set forth in this Agreement and the Plan. (A complete copy of the Plan, as in effect on the Grant Date, is available to the Grantee upon request.). Shares corresponding to the PSUs granted herein are in all events to be delivered to the Grantee only after the Grantee has become vested in the PSUs pursuant to Section 4, below.

2. Performance Period. For purposes of this Agreement, the term “Performance Period” shall be the period commencing on **January 1, 2022** and ending on **December 31, 2024**.

3. Performance Goal.

(a) Subject to the following sentence, the Performance Goal is set out in Appendix A hereto, which Appendix A is incorporated by reference herein and made a part hereof. Notwithstanding the foregoing, the provisions of Section 13 or any other provision of this Agreement to the contrary, the Committee reserves the right to unilaterally change or

otherwise modify the Performance Goal in any manner whatsoever (including substituting a new Performance Goal). If the Committee exercises such discretionary authority to any extent, the Committee shall provide the Grantee with a new Appendix A in substitution for the Appendix A attached hereto, and such new Appendix A and the Performance Goal set out therein (rather than the Appendix A attached hereto and the Performance Goal set out therein) shall in all events apply for all purposes of this Agreement.

(b) Depending upon the extent, if any, to which the Performance Goal has been achieved, and subject to compliance with the requirements of Section 4, each PSU shall entitle the Grantee to receive, at such time as is determined in accordance with the provisions of Section 5, between 0 and 2.0 Shares for each PSU. The Committee shall, as soon as practicable following the last day of the Performance Period, certify (i) the extent, if any, to which, in accordance with Appendix A, the Performance Goal has been achieved with respect to the Performance Period and (ii) the number of whole and/or partial Shares, if any, which, subject to compliance with the vesting requirements of Section 4, the Grantee shall be entitled to receive with respect to each PSU (with such number of whole and/or partial Shares being hereafter referred to as the “Share Delivery Factor”). Such certification shall be final, conclusive and binding on the Grantee, and on all other persons, to the maximum extent permitted by law.

4. Vesting.

(c) The PSUs are subject to forfeiture to the Company until they become non-forfeitable in accordance with this Section 4. Except as provided in the following sentence, the risk of forfeiture will lapse on the PSUs, and such PSUs shall thereupon become vested, only if the Grantee remains employed by the Company (or a subsidiary) through and on **December 31, 2024** (the “Vest Date”). Notwithstanding the foregoing, if the Grantee’s employment with the Company (or a subsidiary) terminates by reason of death prior to **December 31, 2024**, the risk of forfeiture shall lapse on all PSUs, and all unvested PSUs shall thereupon become vested on the date of death (or, if later, on the date, following the end of the Performance Period on which the Committee determines whether, and to what extent the PSUs are earned in accordance with Section 3(b) of this Agreement).

(d) Subject to any conflicting provisions in any employment agreement between the Company and the Grantee, which shall control in the event of a conflict with this Agreement, in the event that (i) the Company or a subsidiary terminates the Grantee’s employment with the Company or a subsidiary for any reason prior to the Vest Date or (ii) the Grantee terminates employment with the Company or a subsidiary for any reason (other than death) prior to such date, all unvested PSUs shall be cancelled and forfeited, effective as of the Grantee’s separation from service. Notwithstanding anything to the contrary in the Plan or this Agreement, and for purposes of clarity, any separation from service shall be effective as of the date the Grantee’s active employment ends and shall not be extended by any statutory or common law notice period.

5. Delivery of Shares. As soon as practicable following the Vest Date, and compliance with all applicable tax withholding as described in Section 11 hereof, but in no event later than two and one-half months after the end of the calendar year in which the Vest Date occurs, the Company shall instruct the registrar for the Company to make an entry on its books and records evidencing that the Shares underlying such vested PSUs have been duly issued as of that date; provided, however, that the Grantee may, in the alternative, elect in writing prior thereto to receive a stock certificate representing the full number of Shares acquired, which certificate may bear a restrictive legend prohibiting the transfer of such Shares for such period as may be prescribed by the Company. The Company shall not be liable to the Grantee for damages relating to any delays in issuing the certificates. The underlying Shares may be registered in the name of the Grantee's legal representative or estate in the event of the death of the Grantee. In the event of the acceleration of the lapse of forfeiture restrictions upon the death of the Grantee as contemplated by Section 4(a) of this Agreement, this process shall occur as soon as possible following such vesting date, but in no event later than two and one-half months after the end of the calendar year in which such vesting date occurs. Notwithstanding anything in the Agreement, the Company may make delivery of Shares in settlement of PSUs by either (A) delivering certificates representing such Shares to the Grantee, registered in the name of the Grantee, or (B) by depositing such Shares into a stock brokerage account maintained for the Grantee.

6. Electronic Delivery/Acceptance. The Company may, in its sole discretion, decide to deliver any documents related to the PSUs or future Awards granted under the Plan by electronic means or request the Grantee's consent to participate in the Plan by electronic means. By accepting this Award, the Grantee hereby consents and agrees to receive such documents by electronic delivery and agrees to participate in the Plan through an on-line or electronic system established and maintained by the Company or another third party designated by the Company.

7. Transferability.

(e) Except as provided below, or except to the minimal extent required by law, the PSUs are nontransferable and may not be assigned, alienated, pledged, attached, sold or otherwise transferred or encumbered by the Grantee, except by will or the laws of descent and distribution, and upon any such transfer, by will or the laws of descent and distribution (or upon such transfer required by law), the transferee shall hold such PSUs subject to all the terms and conditions that were applicable to the Grantee immediately prior to such transfer. Notwithstanding the foregoing, the Grantee may transfer any vested PSUs to members of his immediate family (defined as his spouse, children or grandchildren) or to one or more trusts for the exclusive benefit of such immediate family members or partnerships in which such immediate family members are the only partners if the transfer is approved by the Committee and the Grantee does not receive any consideration for the transfer. Any such transferred portion of the PSUs shall continue to be subject to the same terms and conditions that were applicable to such portion of the PSUs immediately prior to transfer (except that such transferred PSUs shall not be further transferable by the transferee). No transfer of a portion of the PSUs shall be effective to bind the Company unless the Company shall have been furnished with written notice thereof and a copy of such evidence as the Committee may deem necessary to establish the validity of the transfer and the acceptance by the transferee of the terms and conditions hereof.

(f) Upon any transfer by will or the laws of descent and distribution (or upon any such transfer required by law), such transferee shall take the PSUs and the Shares

delivered in connection therewith (the “Transferee Shares”) subject to all the terms and conditions that were (or would have been) applicable to the PSUs and the Transferee Shares immediately prior to such transfer.

(g) Following settlement and issuance of Shares, in the event the Company permits Grantee to arrange for sale of Shares through a broker or another designated agent of the Company, Grantee acknowledges and agrees that the Company may block any such sale and/or cancel any order to sell placed by the Grantee, in each case if the Grantee is not then permitted under the Company’s insider trading policy to engage in transactions with respect to securities of the Company. If the Committee determines that the ability of the Grantee to sell or transfer shares of Common Stock is restricted, then the Company may notify the Grantee in accordance with Section 18 of this Agreement. The Grantee may only sell such Shares in compliance with such notification from the Company.

8. Rights of Grantee. Prior to the delivery, if any, of Shares to the Grantee pursuant to the provisions of Section 5, the Grantee shall not have any rights of a shareholder of the Company, including, but not limited to, the right to receive dividend payments, on account of the PSUs.

9. Unfunded Nature of PSUs. The Company will not segregate any funds representing the potential liability arising under this Agreement. The Grantee’s rights in respect of this Agreement are those of an unsecured general creditor of the Company. The liability for any payment under this Agreement will be a liability of the Company and not a liability of any of its officers, directors or Affiliates.

10. Securities Laws. The Company may condition delivery of Shares for any vested PSUs upon the prior receipt from the Grantee of any undertakings which it may determine are required to assure that the Shares are being issued in compliance with federal and state securities laws.

11. Withholding. Regardless of any action the Company, any of its Subsidiaries and/or the Grantee's employer takes with respect to any or all income tax, social insurance, payroll tax, payment on account or other tax-related items related to the Grantee’s participation in the Plan and legally applicable to the Grantee (“Tax-Related Items”), the Grantee acknowledges that the ultimate liability for all Tax-Related Items is and remains the Grantee’s responsibility and may exceed the amount actually withheld by the Company or any of its affiliates. The Grantee further acknowledges that the Company and/or its Subsidiaries (i) make no representations or undertakings regarding the treatment of any Tax-Related Items in connection with any aspect of the PSUs, including, but not limited to, the grant, vesting or settlement of the PSUs, the issuance of Shares or cash upon settlement of the PSUs, the subsequent sale of Shares acquired pursuant to such delivery and the receipt of any dividends and/or dividend equivalents; and (ii) do not commit to and are under no obligation to structure the terms of any award to reduce or eliminate the Grantee’s liability for Tax-Related Items or achieve any particular tax result. Further, if the Grantee becomes subject to tax in more than one jurisdiction between the Grant Date and the date of any relevant taxable event, the Grantee acknowledges that the Company and/or its Subsidiaries may be required to withhold or account for Tax-Related Items in more than one jurisdiction.

Prior to any relevant taxable or tax withholding event, as applicable, the Grantee will pay or make adequate arrangements satisfactory to the Company and/or its Subsidiaries to satisfy all Tax-Related Items. In this regard, the Grantee authorizes the Company and/or its Subsidiaries, or their respective agents, at their discretion, to satisfy the obligations with regard to all Tax-Related Items by one or a combination of the following:

- (h) withholding from the Grantee's wages or other cash compensation paid to the Grantee by the Company and/or its Subsidiaries; or
- (i) withholding from proceeds of the Shares acquired following settlement either through a voluntary sale or through a mandatory sale arranged by the Company (on the Grantee's behalf pursuant to this authorization); or
- (j) withholding in Shares to be delivered upon settlement.

To avoid negative accounting treatment, the Company and/or its Subsidiaries may withhold or account for Tax-Related Items by considering applicable statutory withholding amounts or other applicable withholding rates. If the obligation for Tax-Related Items is satisfied by withholding in Shares, for tax purposes, the Grantee is deemed to have been issued the full number of Shares attributable to the awarded PSUs, notwithstanding that a number of Shares are held back solely for the purpose of paying the Tax-Related Items due as a result of any aspect of the Grantee's participation in the Plan.

The Grantee shall pay to the Company and/or its Subsidiaries any amount of Tax-Related Items that the Company and/or its Subsidiaries may be required to withhold or account for as a result of the Grantee's participation in the Plan that are not satisfied by the means previously described. The Company may refuse to issue or deliver the Shares or the proceeds of the sale of Shares, if the Grantee fails to comply with the Grantee's obligations in connection with the Tax-Related Items.

By accepting this grant of PSUs, the Grantee expressly consents to the methods of withholding Tax-Related Items by the Company and/or its subsidiaries as set forth hereunder, including the withholding of Shares and the withholding from the Grantee's wages/salary or other amounts payable to the Grantee. All other Tax-Related Items related to the PSUs and any Shares delivered in satisfaction thereof are the Grantee's sole responsibility.

12. Governing Law. This Agreement shall be governed by and construed in accordance with the laws of the State of Delaware, without giving effect to any principle of law that could result in the application of the law of any other jurisdiction.

13. Amendments. This Agreement may be amended or modified at any time by an instrument in writing signed by the parties hereto, except as otherwise provided in Section 3(a) or Sections 15 or 16 of this Agreement regarding permitted unilateral action by the Committee or in Section 13(a) of the Plan related to amendments or alterations that do not adversely affect the rights of the Grantee in this Award.

14. Administration. This Agreement shall at all times be subject to the terms and conditions of the Plan. The Committee shall have sole and complete discretion with respect to all matters reserved to it by the Plan and decisions of the Committee with respect thereto and this Agreement shall be final and binding upon the Grantee and the Company. In the event of any conflict between the terms and conditions of this Agreement and the Plan, the provisions of this Agreement shall control. The Committee has the authority and discretion to determine any questions which arise in connection with the award of the PSUs hereunder.

15. Compliance with Code Section 409A. It is the intention of the Company and Grantee that this Agreement not result in an unfavorable tax consequences to Grantee under Code Section 409A. Accordingly, Grantee consents to any amendment of this Agreement as the Company may reasonably make in furtherance of such intention, and the Company shall promptly provide, or make available to, Grantee a copy of such amendment. Any such amendments shall be made in a manner that preserves to the maximum extent possible the intended benefits to Grantee. This paragraph does not create an obligation on the part of Company to modify this Agreement and does not guarantee that the amounts or benefits owed under the Agreement will not be subject to interest and penalties under Code Section 409A.

16. Imposition of Other Requirements. The Company reserves the right to impose other requirements on the Grantee's participation in the Plan, on the PSUs and on any Shares acquired under the Plan, to the extent the Company determines it is necessary or advisable in order to comply with local law or facilitate the administration of the Plan, and to require the Grantee to sign any additional agreements or undertakings that may be necessary to accomplish the foregoing. The Grantee agrees, upon demand of the Company or the Committee, to do all acts and execute, deliver and perform all additional documents, instruments and agreements which may be reasonably required by the Company or the Committee, as the case may be, to implement the provisions and purposes of the Plan and this Agreement.

17. No Right to Continued Employment. Neither the plan nor this agreement shall confer on the Grantee any right to be retained, in any position, as an employee, consultant or director of the Company, and nothing in this agreement or the Plan shall be construed to limit the discretion of the Company (or the subsidiary that employs the Grantee) to terminate the Grantee's employment at any time, with or without cause.

18. Notices. Any notice, request, instruction or other document given under this Agreement shall be in writing and may be delivered by such method as may be permitted by the Company, and shall be addressed and delivered, in the case of the Company, to the Secretary of the Company at the principal office of the Company and, in the case of the Grantee, to the Grantee's address as shown in the records of the Company or to such other address as may be designated in writing (or by such other method approved by the Company) by either party.

19. Award Subject to Plan. This Award is subject to the Plan as approved by the shareholders of the Company. In the event of conflict between any term or provision contained herein and a term or provision of the Plan, the applicable terms and provisions of this Agreement will govern and prevail.

20. Severability. The invalidity or unenforceability of any provision of this Agreement shall not affect the validity or enforceability of any other provision of this Agreement and each other provision of this Agreement shall be severable and enforceable to the extent permitted by law.

21. Discretionary Nature of Plan; No Vested Rights. The Plan is discretionary in nature and limited in duration, and may be amended, cancelled, or terminated by the Company, in its sole discretion, at any time. The grant of the Award represented by this Agreement is exceptional, voluntary and occasional and does not create any contractual or other right to receive an award or benefit in lieu of an award in the future, even if awards have been granted repeatedly in the past. Future Awards, if any, will be at the sole discretion of the Company, including, but not limited to, the form and timing of an Award, the number of Shares subject to the Award, and the vesting provisions. Any amendment, modification or termination of the Plan shall not constitute a change or impairment of the terms and conditions of the Grantee's employment with the Company.

22. Termination Indemnities. The Grantee's Award and the Shares subject to the Award, and the income and value of the same, are extraordinary items of compensation outside the scope of the Grantee's employment or services contract, if any. As such, the PSUs are not part of normal or expected compensation for purposes of calculating any severance, resignation, termination, redundancy, dismissal, end of service payments, bonuses, long-service awards, pension, or retirement benefits or welfare benefits or similar payments.

23. English Language. The Grantee acknowledges and agrees that it is the Grantee's express intent that the Plan, this Agreement, any addendum and all other documents, notices and legal proceedings entered into, given or instituted pursuant to the Award, be drawn up in English. Unless specifically indicated, if the Grantee has received the Plan, this Agreement, any addendum or any other documents related to the Award translated into a language other than English, and if the meaning of the translated version is different than the English version, the English version shall control.

24. Nature of Grant. In accepting the Award, the Grantee acknowledges, understands and agrees that:

(i) the Plan is established voluntarily by the Company, it is discretionary in nature, and may be modified, amended, suspended or terminated by the Company at any time, to the extent permitted by the Plan;

(ii) all decisions with respect to future Awards or other grants, if any, will be at the sole discretion of the Company;

(iii) the grant of the PSUs and the Grantee's participation in the Plan shall not create a right to employment or be interpreted as forming an employment or service contract with the Company, the Grantee's employer or any Subsidiary, and shall not interfere with the ability of the Company, the Grantee's employer or any Subsidiary, as applicable, to terminate the Grantee's employment or service relationship (if any);

(iv) the Grantee is voluntarily participating in the Plan;

(v) the PSUs and any Shares issued under the Plan and the income and value of the same are not intended to replace any pension rights or compensation;

(vi) the future value of the Shares underlying the PSUs is unknown and indeterminable;

(vii) unless otherwise agreed with the Company, the Award and the Shares subject to the Award, and the income and value of same, are not granted as consideration for, or in connection with, the service Grantee may provide as a director of a Subsidiary of the Company;

(viii) no claim or entitlement to compensation or damages shall arise from forfeiture of the PSUs resulting from separation from service (for any reason whatsoever, whether or not later found to be invalid or in breach of employment laws in the jurisdiction where the Grantee is employed or the terms of the Grantee's employment agreement, if any), and in consideration of the grant of the PSUs to which the Grantee is otherwise not entitled, the Grantee irrevocably agrees never to institute any claim against the Company, any of its Subsidiaries or the Grantee's employer, waives his ability, if any, to bring any such claim, and releases the Company, its Subsidiaries and the Grantee's employer from any such claim; if, notwithstanding the foregoing, any such claim is allowed by a court of competent jurisdiction, then, by participating in the Plan, the Grantee shall be deemed irrevocably to have agreed not to pursue such claim and agrees to execute any and all documents necessary to request dismissal or withdrawal of such claim; and

(ix) the Grantee acknowledges and agrees that neither the Company, the Grantee's employer nor any Subsidiary shall be liable for any foreign exchange rate fluctuation between the Grantee's local currency and the United States Dollar that may affect the value of the PSUs or of any amounts due to the Grantee pursuant to the vesting and settlement of the PSU or the subsequent sale of any Shares issued upon settlement.

25. Data Protection. Except if the Grantee resides in the European Union, the European Economic Area or other jurisdiction designated by the Company, in which case the Grantee is subject to the special terms and conditions set forth in the Addendum, the Grantee explicitly and unambiguously consents to the collection, use and transfer, in electronic or other form, of the Grantee's personal data as described in the Agreement and any other PSU grant materials by and among, as applicable, the Grantee, the Company, the Grantee's employer, and the Company's Subsidiaries for the exclusive purpose of implementing, administering and managing the Grantee's participation in the Plan.

The Company and its Subsidiaries, including the Grantee's employer hold certain personal information about the Grantee, including, but not limited to, his or her name, home address, email address and telephone number, date of birth, social security number, passport number or other employee identification number, salary, nationality, job title, any Shares or directorships held in the Company, details of all Awards or any other entitlement to Shares awarded, canceled, purchased, vested, unvested or outstanding in Grantee's favor ("Data"), for the exclusive purpose of managing and administering the Plan.

The Company and its Subsidiaries, including the Grantee's employer, will transfer Data amongst themselves as necessary for the purpose of implementation, administration and management of the Grantee's participation in the Plan, and the Company and its Subsidiaries, including the Grantee's employer, may each further transfer Data to a designated Plan broker, administrative agent or such other stock plan service provider as may be selected by the Company presently or in the future (a "Plan Service Provider"), which may be assisting the Company in the implementation, administration and management of the Plan. These recipients may be located in the Grantee's country or elsewhere throughout the world, such as the United States and any recipient's country (e.g., the United States) may have different data privacy laws and protections than the Grantee's country. The Grantee understands that if he or she resides outside the United States, the Grantee may request a list with the names and addresses of any potential recipients of the Data by contacting the Grantee's local human resources representative. The Grantee hereby authorizes (where required under applicable law) the Company, any Plan Service Provider and any other possible recipients which may assist the Company (presently or in the future) to receive, possess, use, retain and transfer the Data, in electronic or other form, for the sole purpose of implementing, administering and managing the Grantee's participation in the Plan. Furthermore, the Grantee acknowledges and understands that the transfer of the Data to the Company or its Subsidiaries, including the Grantee's employer, to any Plan Service Provider, or to any third parties is necessary for the Grantee's participation in the Plan. The Grantee understands that Data will be held only as long as is necessary to implement, administer and manage the Grantee's participation in the Plan. The Grantee understands that if he or she resides outside the United States, the Grantee may, at any time, view the Data, request additional information about the storage and processing of the Data, require any necessary amendments to the Data or refuse or withdraw the consents herein by contacting the Grantee's local human resources representative in writing. The Grantee understands that he or she is providing the consents herein on a purely voluntary basis. If the Grantee does not consent, or if the Grantee later seeks to revoke his or her consent, the Grantee's employment status or service and career with the Company and its Subsidiaries will not be affected. The only consequence of refusing or withdrawing the Grantee's consent is that the Company may not be able to grant the Grantee PSUs or other awards or administer or maintain such awards. Therefore, the Grantee acknowledges that withdrawal of consent may affect the Grantee's ability to vest in or realize benefits from the PSUs, and the Grantee's ability to participate in the Plan, in which case neither the Company nor any of its Subsidiaries, including the Grantee's employer, will have any liability or obligation to the Grantee related to this Award. For more information on the consequences of refusal to consent or withdrawal of consent, the Grantee understands that he or she may contact his or her local human resources representative.

Finally, upon request of the Company or the Grantee's employer, the Grantee agrees to provide an executed data privacy consent form (or any other agreements or consents that may be required by the Company and/or the Grantee's employer) that the Company and/or the Grantee's employer may deem necessary to obtain from the Grantee for the purpose of administering the Grantee's participation in the Plan in compliance with the data privacy laws in the Grantee's country, either now or in the future. The Grantee understands and agrees that the Grantee will not be able to participate in the Plan if the Grantee fails to provide any such consent or agreement requested by the Company and/or the Grantee's employer.

26. Private Placement. The grant of the PSUs is not intended to be a public offering of securities in the Grantee's country of residence (and country of employment, if different). The Company has not submitted any registration statement, prospectus or other filings with the local securities authorities (unless otherwise required under local law), and the grant of the PSUs is not subject to the supervision of the local securities authorities.

27. Addendum to Agreement. Notwithstanding any provisions of this Agreement to the contrary, the Award shall be subject to any special terms and conditions for the Grantee's country of residence (and country of employment, if different), as are set forth in the applicable addendum (the "Addendum") as attached to the Agreement. Further, if the Grantee transfers residence and/or employment to another country reflected in an Addendum to the Agreement, the special terms and conditions for such country will apply to the Grantee to the extent the Company determines, in its sole discretion, that the application of such terms is necessary or advisable in order to comply with local laws, rules and regulations or to facilitate operation and administration of the Plan. Any applicable Addendum shall constitute part of this Agreement.

28. No Advice Regarding Grant. The Company is not providing any tax, legal or financial advice, nor is the Company making any recommendations regarding the Grantee's participation in the Plan, or his acquisition or sale of the underlying Shares. The Grantee acknowledges that he should consult with his own personal tax, legal and financial advisors regarding his participation in the Plan before taking any action related to the Plan.

29. Entire Agreement. This Agreement represents the entire understanding and agreement between the parties with respect to the subject matter of this Agreement and supersedes and replaces all previous agreements, arrangements, understandings, rights, obligations and liabilities between the parties in respect of such matters.

30. Execution. By electronically or otherwise accepting this Agreement, the Grantee acknowledges his or her understanding and acceptance of the terms and conditions of the Award. The Company has no obligation to issue the Grantee Shares under this Agreement if the Grantee does not accept the Award. Further, any acceptance of Shares issued pursuant to this Agreement shall constitute the Grantee's acceptance of the Award and the Grantee's agreement with all terms and conditions of the Award, as set forth in the Plan and this Agreement.

31. Insider Trading / Market Abuse Laws. The Grantee acknowledges that, depending on the Grantee's or the Grantee's broker's country of residence or where the Shares are listed, the Grantee may be subject to insider trading and/or market abuse laws, which may affect the Grantee's ability to accept, acquire, sell or otherwise dispose of Shares, rights to shares (e.g., PSUs) or rights linked to the value of shares (e.g., phantom awards, futures) during such times as the Grantee is considered to have "inside information" regarding the Company as defined by the laws or regulations in the Grantee's country. Local insider trading laws and regulations may prohibit the cancellation or amendment or amendment of orders the Grantee placed before the Grantee possessed inside information. Furthermore, the Grantee could be prohibited from (i) disclosing the inside information to any third party (other than on a "need to know") and (ii) "tipping" third parties or causing them otherwise to buy or sell securities. The Grantee should keep in mind third parties includes fellow employees. The requirements of these laws may or may not be consistent with the terms of any applicable Company's insider trading policy. The Grantee acknowledges that it is his or her responsibility to be informed of and

compliant with any such laws and such Company policies, and is hereby advised to speak to his or her personal legal advisor on this matter.

32. Waiver. The Grantee acknowledges that a waiver by the Company of a breach of any provision of this Agreement shall not operate or be construed as a waiver of any other provision of this Agreement, or of a prior or subsequent breach by the Grantee or any other Grantee.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement on the ___ day of _____, 2022. By execution of this Agreement the Grantee acknowledges receipt of a copy of the Plan, and agrees to the terms and conditions of the Plan and this Agreement.

NASDAQ, INC.

By: Bryan Smith
Title: EVP and Chief People Officer

[EMPLOYEE NAME]

Appendix A

Performance Goals for PSU Grant 2022-2024 Performance Period

This Appendix A to the Agreement sets forth the Performance Goals to be achieved and, depending upon the extent (if any) to which the Performance Goals are achieved, the number of whole and/or partial Shares, if any, which the Grantee shall have the right to receive with respect to each PSU. Capitalized terms not otherwise defined herein shall have the meaning ascribed to them in the Agreement and the Plan.

Certain Definitions

“Closing Price” means the 30-day calendar average closing price of a share of a company’s stock ending on the last trading day of the Performance Period.

“Opening Price” means the 30-day calendar average closing price of a share of a company’s stock ending on the trading day preceding the first day of the Performance Period. The Opening Price shall be adjusted for stock splits and reverse stock splits that occur during the Performance Period.

“Payout Governor” means that regardless of percentile ranking for either Performance Goal, if the Company’s TSR is negative, the Grantee shall be entitled to receive no more than 100% of the PSUs.

“Peer Group” means a group of peer companies consisting of the following global exchanges: (i) ASX Limited, (ii) B3 S.A., (iii) Bolsa Mexicana de Valores, S.A.B. de C.V., (iv) Cboe Global Markets, Inc., (v) CME Group, Inc., (vi) Deutsche Börse AG, (vii) Euronext N.V., (viii) Hong Kong Exchanges and Clearing Limited, (ix) Intercontinental Exchange, Inc. (x) Japan Exchange Group, Inc., (xi) London Stock Exchange Group plc, (xii) Singapore Exchange Limited and (xiii) TMX Group Limited.

“Price Cap” means that regardless of the actual stock price growth over the Performance Period, the final stock price will be limited to 250% of the grant date price for purposes of calculating the final award of PSUs to the Grantee.

“S&P 500” means the companies constituting the Standard & Poor’s 500 Index as of the beginning of the Performance Period. Any component company of the Standard & Poor’s 500 Index that is acquired, taken private, delisted, liquidated or no longer publicly traded due to filing for bankruptcy protection at any time during the Performance Period will be eliminated from the S&P 500 for the entire Performance Period. There will be no adjustments to the S&P 500 to account for any other changes to the Standard & Poor’s 500 Index during the Performance Period.

“TSR” means the total shareholder return during the Performance Period, which will be calculated as the (i) Closing Price minus Opening Price plus cumulative dividends, *divided by* (ii) Opening Price. No adjustments to TSR shall be made for stock issuances or stock buybacks during the Performance Period. Each company’s TSR shall be calculated in the local currency to eliminate foreign exchange fluctuations.

Goal 1: TSR Performance Relative to the S&P 500

The Performance Goal for 50% of the PSUs shall be the Company's three-year TSR percentile rank versus the S&P 500.

For this portion of the award, each PSU shall, subject to the vesting provisions set forth in the Agreement and the Payout Governor, entitle the Grantee to receive Shares based on the levels of achievement in the following table.

Table 1: Levels of Achievement

Percentile Rank of the Company's Three-Year TSR Versus the S&P 500	Resulting Shares Earned (% of Half of Target)
≥85 th Percentile	200%
67.5 th Percentile	150%
50 th Percentile	100%
25 th Percentile	50%
15 th Percentile	30%
0 Percentile	0%

For levels of achievement between points, the resulting Shares earned will be calculated based on straight-line interpolation.

The resulting shares earned will be subject to the 250% Price Cap. If the Nasdaq stock price grows greater than 250% over the Performance Period, the resulting number of shares will be fewer than 200% of target shares. For example: (formulaic resulting shares earned X 250% Price Cap) / (stock price at time of delivery of shares) = resulting actual shares earned.

Goal 2: TSR Performance Relative to a Peer Group

The Performance Goal for 50% of the PSUs shall be the Company's three-year TSR percentile rank versus the Peer Group. For this portion of the award, each PSU shall, subject to the vesting provisions set forth in the Agreement and the Payout Governor, entitle the Grantee to receive Shares based on the levels of achievement in the following table.

Table 2: Levels of Achievement

Percentile Rank of the Company's Three-Year TSR Versus the Peer Group	Resulting Shares Earned (% of Half of Target)
≥85 th Percentile	200%
67.5 th Percentile	150%
50 th Percentile	100%
25 th Percentile	50%
15 th Percentile	30%
0 Percentile	0%

For levels of achievement between points, the resulting Shares earned will be calculated based on straight-line interpolation.

The resulting shares earned will be subject to the 250% Price Cap. If the Nasdaq stock price grows greater than 250% over the Performance Period, the resulting number of shares will be fewer than 200% of target shares. For example: (formulaic resulting shares earned X 250% Price Cap) / (stock price at time of delivery of shares) = resulting actual shares earned.

Other Terms and Conditions

To the extent consistent with the Code and the Plan, the Committee reserves the right to modify any calculation described in this Appendix A to adjust for unanticipated circumstances or situations, as it deems necessary. All actions taken by the Committee pursuant to this Appendix A shall be final, conclusive and binding upon the Grantee, and all other persons, to the maximum extent permitted by law.

EMPLOYMENT AGREEMENT

EMPLOYMENT AGREEMENT (this "*Agreement*"), made and entered into and effective as of June 22, 2022 (the "*Effective Date*"), by and between Nasdaq, Inc. (the "*Company*") and Bradley Peterson (the "*Executive*").

In consideration of the premises and mutual covenants herein and for other good and valuable consideration, the parties hereby agree as follows:

1. *Term of Agreement.* Subject to Section 8 below, the term of this Agreement shall commence on the Effective Date and end on December 31, 2025 (the "*Term*").

2. *Position.*

(a) *Duties.* The Executive shall serve as the Company's Executive Vice President and Chief Information and Chief Technology Officer and shall have such other duties as agreed to by the Executive, the President and Chief Executive Officer, and the Board of Directors of the Company (the "*Board*"). In such position, the Executive shall have such duties and authority as shall be determined from time to time by the President and Chief Executive Officer and the Board and as shall be consistent with the by-laws of the Company as in effect from time to time. During the Term, the Executive shall devote his full time and best efforts to his duties hereunder. The Executive shall report directly to the President and Chief Executive Officer. The scope, duties and responsibilities of the role will be evaluated at least annually and increased, as appropriate, based on performance in the role.

(b) *Company Code of Ethics.* The Executive shall comply in all respects with the Company's Code of Ethics and all applicable corporate policies referenced in the Code of Ethics, as may be amended from time to time (the "*Code of Ethics*"). The Executive may, in accordance with the Code of Ethics, (i) engage in personal activities involving charitable, community, educational, religious or similar organizations and (ii) manage his personal investments; provided, however, that, in each case, such activities are in all respects consistent with applicable law, the Continuing Obligations Agreement attached as Exhibit A ("*Continuing Obligations Agreement*") and Section 9 below.

3. *Base Salary.* During the Term, the Company shall pay the Executive a base salary (the "*Base Salary*") at an annual rate of not less than \$650,000. The Base Salary shall be payable in regular payroll installments in accordance with the Company's payroll practices as in effect from time to time (but no less frequently than monthly). The Management Compensation Committee of the Board (the "*Compensation Committee*") shall review the Base Salary at least annually and may (but shall be under no obligation to) increase (but not decrease) the Base Salary on the basis of such review.

4. *Annual Bonus.*

(a) *Annual Bonus.* For each calendar year during the Term, the Executive shall be eligible to participate in the Executive Incentive Plan of the Company (the "*Bonus Program*") in accordance with the terms and provisions of such Bonus Program as established from time to time by the Compensation Committee and pursuant to which the Executive will be eligible to earn an annual cash bonus (the "*Annual Bonus*"). Pursuant to the terms of the Bonus Program, the Executive shall be eligible to earn, for each full calendar year during the Term, a target Annual Bonus of not less than \$975,000 (the "*Target Bonus*") based upon the achievement of one or more performance goals established for such year by the President and Chief Executive Officer and the Compensation Committee. The Executive shall have the opportunity to make suggestions to the President and Chief Executive Officer and the Compensation Committee prior to the determination of the performance goals for the Bonus Program for each performance period, but the Compensation Committee will have final power and authority concerning the establishment of such goals. The President and Chief Executive Officer and the Compensation Committee shall review the Target Bonus at least annually and may (but shall be under no obligation to) increase (but shall not decrease) the Target Bonus on the basis of such review. The Target Bonus for each year during the Term shall never be less than the Target Bonus for the immediately preceding year.

(b) *Timing and Deferral of Annual Bonus.* The Annual Bonus for each year shall be paid to the Executive as soon as reasonably practicable following the end of such year, but in no event later than March 15th following the end of the calendar year to which such Annual Bonus relates.

5. *Equity Compensation.* The Executive shall be eligible for a target equity compensation award of not less than \$2,500,000 (the "*Target Equity Incentive*"), in accordance with the terms and provisions of the Company's Equity Incentive Plan (the "*Stock Plan*"), which has been adopted by the Board and may from time to time be amended. The applicable provisions of the Company's Stock Plan or each equity award agreement executed by the Executive and the Company shall govern the treatment of the equity awards.

6. *Employee Benefits.* During the Term, the Company shall provide the Executive with benefits on the same basis as benefits are generally made available to other senior executives of the Company, including, without limitation, medical, dental, vision, disability and life insurance, financial and tax planning services and retirement benefits. The Executive shall be entitled to four weeks of paid vacation to be used in accordance with the Company's then current vacation policy; provided, however, that, in the event the Executive's employment ends for any reason, the Executive shall be paid only for unused vacation that accrued in the calendar year his employment terminated and any unused vacation for any prior year shall be forfeited.

7. *Business and Other Expenses.*

(a) *Business Expenses.* During the Term, the Company shall reimburse the Executive for reasonable business expenses incurred by his in the performance of his duties hereunder in accordance with the policy established by the Company.

8. *Termination.* Notwithstanding any other provision of this Agreement, subject to the further provisions of this Section 8, the Company may terminate the Executive's employment or the Executive may resign such employment for any reason or no stated reason at any time, subject to the notice and other provisions set forth below:

(a) *Generally.* In the event of the termination of the Executive's employment for any reason, the Executive shall receive payment of (i) any unpaid Base Salary through the Date of Termination (as defined below), to be paid in accordance with Section 3 above, (ii) subject to Section 6 above, any accrued but unpaid vacation through the Date of Termination payable within 14 days of the Date of Termination (iii) any earned but unpaid Annual Bonus with respect to the calendar year ended prior to the Date of Termination, payable in accordance with Section 4(b) (the "*Base Obligations*"). In addition, in the event of the Executive's termination of employment, the applicable provisions of the Company's Stock Plan or each equity award agreement executed by the Executive and the Company shall govern the treatment of the equity awards.

For purposes of this Agreement, "*Date of Termination*" means (i) in the event of a termination of the Executive's employment by the Company for Cause or by the Executive for Good Reason, the date specified in a written notice of termination (or, if not specified therein, the date of delivery of such notice), but in no event earlier than the expiration of the cure periods set forth in Section 8(b)(ii) or 8(b)(iii) below, respectively; (ii) in the event of a termination of the Executive's employment by the Company without Cause, the date specified in a written notice of termination (or if not specified therein, the date of delivery of such notice); (iii) in the event of a termination of the Executive's employment by the Executive without Good Reason, the date specified in a written notice of termination, but in no event less than 60 days following the date of delivery of such notice; (iv) in the event of a termination of the Executive's employment due to Permanent Disability (as defined below), the date the Company terminates the Executive's employment following the certification of the Executive's Permanent Disability; or (v) in the event of a termination of employment due to the Executive's death, the date of the Executive's death.

(b) *Termination Without Cause, Termination by the Executive for Good Reason (other than Change in Control), or Retirement at end of Term.*

(i) The Executive's employment hereunder may be terminated by the Company without Cause, by the Executive for Good Reason (other than Change in Control), or by the Executive for Retirement at the end of the Term. Upon the termination of the Executive's employment pursuant to this Section 8(b), the Executive shall, subject to Section 8(h) below, be entitled to receive, in addition to the Base Obligations, the following payments and benefits (the "*Severance Benefits*"):

(A) *Payments.* The Executive shall, subject to Section 8(h), be entitled to receive, in addition to the Base Obligations, a pro-rata Target Bonus with respect to the calendar year in which the Date of Termination occurs, determined in accordance with the Pro Rata Target Bonus Calculation and payable in substantially equal monthly installments for the twelve month period following the Executive's Date of Termination with the first installment to be paid in the month following the month in which the Release Effective Date occurs (provided that if the 60 day period described in Section 8(h) below begins in one calendar year and ends in another, the pro rata Target Bonus shall be paid not earlier than January 1 of the calendar year following the Date of Termination), the equity awards described in Section 5 and continued vesting of outstanding performance share units, and/or other forms of equity compensation issued prior to the Date of Termination as though the Executive were employed through all applicable performance periods ("Continued Vesting Period"), based on actual performance

during the respective performance periods. Any vested stock options shall remain exercisable until the expiration date specified in the applicable award agreement.

The Pro Rata Target Bonus is intended to be a fixed severance payment and not a performance-contingent payment dependent on current year or prior year performance. “*Pro-Rata Target Bonus Calculation*” is determined by multiplying the Target Bonus by a fraction, the numerator of which is the number of days in the fiscal year in which the Date of Termination occurs through the Date of Termination and the denominator of which is three hundred sixty-five.

The Executive acknowledges and agrees that the compensation paid under this Section 8(b) is fair and reasonable, and are his sole and exclusive remedy, in lieu of all other remedies at law or in equity, with respect to the termination of his employment hereunder, and is subject to the Executive complying in all material respects with his obligations under Section 9 or the Continuing Obligations Agreement. All other benefits, if any, due the Executive following termination pursuant to this Section 8(b) shall be determined in accordance with the plans, policies and practices of the Company; provided, however, that the Executive shall not participate in any severance plan, policy or program of the Company.

(B) *Benefits*. The Executive will receive \$40,000 to offset the cost of premiums associated with the Executive’s post-retirement health benefits. The Executive will receive this amount in one lump sum payment, minus applicable taxes and withholdings, within 60 days of the last day of his employment.

The Company will continue to provide, for a period of 24 months following the Date of Termination, financial and tax services (currently provided by Ayco) and executive physical exams (currently provided by EHE International).

All other benefits, if any, due the Executive following termination pursuant to this Section 8(b) shall be determined in accordance with the plans, policies and practices of the Company; provided, however, that the Executive shall not participate in any severance plan, policy or program of the Company. The Severance Benefits are payments and benefits to which the Executive is not otherwise entitled, are given in consideration for the Release (as described in Section 8(h) below) and are in lieu of any severance plan, policy or program of the Company or any of its subsidiaries that may now or hereafter exist. The payments and benefits to be provided pursuant to this Section 8(b)(i) shall constitute liquidated damages and shall be deemed to satisfy and be in full and final settlement of all obligations of the Company to the Executive under this Agreement. The Executive acknowledges and agrees that such amounts are fair and reasonable, and are his sole and exclusive remedy, in lieu of all other remedies at law or in equity, with respect to the termination of his employment hereunder. If, during the Continued Vesting Period, the Executive breaches in any material respect any of his obligations under Section 9, or the Continuing Obligations Agreement, the Company may, upon written notice to the Executive terminate the Continued Vesting Period and cease any benefits continuation coverage or payments, except in each case as required by applicable law.

(ii) For purposes of this Agreement, "*Cause*" shall mean (A) the Executive's conviction of, or pleading nolo contendere to, any crime, whether a felony or misdemeanor, involving the purchase or sale of any security, mail or wire fraud, theft, embezzlement, moral turpitude, or Company property (with the exception of minor traffic violations or similar misdemeanors); (B) the Executive's repeated neglect of his duties to the Company; or (C) the Executive's willful misconduct in connection with the performance of his duties or other material breach by the Executive of this Agreement provided that the Company may not terminate the Executive's employment for Cause unless (x) the Company first gives the Executive written notice of its intention to terminate and of the grounds for such termination within 90 days following the date the Board is informed of such grounds at a meeting of the Board and (y) the Executive has not, within 30 days following receipt of such notice, cured such Cause (if capable of cure) in a manner that is reasonably satisfactory to the Board.

(iii) For purposes of this Agreement, "*Good Reason*" shall mean the Company (A) reducing the Executive's position, duties, or authority; (B) failing to secure the agreement of any successor entity to the Company that the Executive shall continue in his position without reduction in position, duties or authority; (C) relocating the Executive's principal work location, excluding working from home remotely, beyond a 50 mile radius of his work location as of the Effective Date (provided that this Clause (C) shall apply only to a relocation that occurs during the two year period beginning upon a Change of Control, as defined below, and ending two years thereafter); or (D) committing any other material breach of this Agreement; provided, however, that the occurrence of a Change in Control, following which the Company continues to have its common stock publicly traded and the Executive is offered continued employment as an executive officer with substantially the same duties and authority as she has hereunder of such publicly traded entity, shall not be deemed to give rise to an event or condition constituting Good Reason; and provided further that no event or condition shall constitute Good Reason unless (x) the Executive gives the Company a Notice of Termination specifying his objection to such event or condition within 90 days following the occurrence of such event or condition, (y) such event or condition is not corrected, in all material respects, by the Company in a manner that is reasonably satisfactory to the Executive within 30 days following the Company's receipt of such notice and (z) the Executive resigns from his employment with the Company not more than 30 days following the expiration of the 30-day period described in the foregoing clause (y).

(c) *Permanent Disability.*

(i) The Executive's employment hereunder shall terminate upon his Permanent Disability. Upon termination of the Executive's employment due to Permanent Disability, the Executive shall, subject to Section 8(h) below, be entitled to receive, in addition to the Base Obligations, (A) a pro rata Target Bonus with respect to the calendar year in which the Date of Termination occurs, determined in accordance with the Pro Rata Target Bonus Calculation and payable in a lump sum within 30 days following the Release Effective Date (provided that if the 60 day period described in Section 8(h) below begins in one calendar year and ends in another, the pro rata Target Bonus shall be paid not earlier than January 1 of the calendar year following the Date of Termination) and (B) accelerated vesting of all unvested equity compensation awarded to the Executive by the Company as of the Effective Date and, in accordance with Section 5, each equity award agreement executed by the Executive and the Company shall describe the treatment of the equity awards under this Section 8(c). All other benefits, if any, due the Executive following termination pursuant to this Section 8(c) shall be determined in accordance with the plans, policies and practices of the Company; *provided, however*, that the Executive shall not participate in any other severance plan, policy or program of the Company.

(ii) For purposes of this Agreement, "*Permanent Disability*" means either (i) the inability of the Executive to engage in any substantial gainful activity by reason of any medically determinable physical or mental impairment that can be expected to result in death or can be expected to last for a continuous period of not less than 12 months or (ii) the Executive is, by reason of any medically determinable physical or mental impairment that can be expected to result in death or can be expected to last for a continuous period of not less than 12 months, receiving income replacement benefits for a period of not less than three months under an accident and health plan covering employees of the Company. The Executive shall be deemed Permanently Disabled if she is determined to be (i) totally disabled by the Social Security Administration or (ii) disabled in accordance with a disability insurance program, provided such definition of disabled under the program complies with the definition of Permanent Disability hereunder. Otherwise, such Permanent Disability shall be certified by a physician chosen by the Company and reasonably acceptable to the Executive (unless she is then legally incapacitated, in which case such physician shall be reasonably acceptable to the Executive's authorized legal representative).

(d) *Death.* The Executive's employment hereunder shall terminate due to his death. Upon termination of the Executive's employment hereunder due to death, the Executive's estate shall, subject to Section 8(h) below, be entitled to receive, in addition to the Base Obligations, (A) a pro rata Target Bonus with respect to the calendar year in which the Date of Termination occurs, determined in accordance with the Pro Rata Target Bonus Calculation and payable in a lump sum within 30 days following the Release Effective Date (provided that if the 60 day period described in Section 8(h) below begins in one calendar year and ends in another, the pro rata Target Bonus shall be paid not earlier than January 1 of the calendar year following the Date of Termination) and (B) accelerated vesting of all unvested equity compensation awarded to the Executive by the Company as of the Effective Date and, in accordance with Section 5, each equity award agreement executed by the Executive and the Company shall describe the treatment of the equity awards under this Section 8(d). All other benefits, if any, due the Executive's estate following termination pursuant to this Section 8(d) shall be determined in accordance with the plans, policies and practices of the Company.

(e) *For Cause by the Company or Resignation, not for Good Reason, by Executive.*

Upon termination of the Executive's employment for Cause or resignation by the Executive, not for Good Reason, pursuant to this Section 8(e), the Executive shall have no further rights to any compensation (including any Annual Bonus) or any other benefits under this Agreement other than the Base Obligations. All other benefits, if any, due the Executive following the Executive's termination of employment pursuant to this Section 8(e) shall be determined in accordance with the plans, policies and practices of the Company; provided, however, that the Executive shall not participate in any severance plan, policy, or program of the Company.

(f) *Termination in Connection with Change in Control by the Company Without Cause or by the Executive for Good Reason.*

(i) If, within the period beginning on a Change in Control (as defined herein below), and ending two (2) years following such Change in Control, the Executive's employment is terminated by the Company without Cause or by the Executive for Good Reason, the Executive shall, subject to Section 8(h) below, be entitled to receive, in addition to the Base Obligations, the following payments and benefits (the "*CIC Severance Benefits*"):

(A) *CIC Severance Payment.* On the first day of the seventh (7th) month following the Executive's Date of Termination, the Company shall pay the Executive a lump sum cash payment equal to the sum of (I) two times the Base Salary paid to the Executive with respect to the calendar year immediately preceding the Executive's Date of Termination, (II) the Target Bonus and (III) a pro rata portion of the Target Bonus for the calendar year in which Executive's Date of Termination occurs and determined in accordance with the Pro Rata Target Bonus Calculation. Target Bonus for severance purposes is defined under the Executive Corporate Incentive Plan for the calendar year which precedes the year in which occurs the Executive's Date of Termination. Target Bonus is intended to be a fixed severance payment equal to the prior year Target Bonus and not a performance-contingent payment dependent on current year or prior year performance. "*Pro-Rata Target Bonus Calculation*" is determined by multiplying the Target Bonus by a fraction, the numerator of which is the number of days in the fiscal year in which the Date of Termination occurs through the Date of Termination and the denominator of which is three hundred sixty-five. Pro-rata Target Bonus with respect to the calendar year in which Executive's Date of Termination occurs shall be paid only in the event the performance goals established under the ECIP for that calendar year with respect to such Target Bonus have been satisfied. Payment of the pro-rata Target Bonus shall be delayed until following the date the Company's Compensation Committee determines that such performance goals have been satisfied, in accordance with the rules under the ECIP (the "*Performance Goal Determination Date*"). Payment of the pro-rata portion of the Severance Payment shall be paid in a lump sum on the date described above or, if later, within 30 days of the Performance Goal Determination Date with respect to such Performance-Conditioned Portion.

If (i) any amounts payable to the Executive under this Agreement or otherwise are characterized as excess parachute payments pursuant to Section 4999 of the Internal Revenue Code of 1986, as amended (the "*Section 4999*"), and (ii) the Executive thereby would be subject to any United States federal excise tax due to that characterization, the Executive's termination benefits hereunder will be reduced to an amount so that none of the amounts payable constitute excess parachute amounts payments if this would result, after taking into account the applicable federal, state and local income taxes and the excise tax imposed by Section 4999, in Executive's receipt on an after-tax basis of the greatest amount of termination and other benefits. The determination of any reduction required pursuant to this section (including the determination as to which

specific payments shall be reduced) shall be made by a neutral party designated by the Company and such determination shall be conclusive and binding upon the Company or any related corporation for all purposes.

(B) *Health and Welfare Benefits.* The Company shall pay to Executive on a monthly basis during the CIC Coverage Period a taxable monthly cash payment equal to the COBRA premium for the highest level of coverage available under the Company's group health plans, but reduced by the monthly amount that Executive would pay for such coverage if the Executive was an active employee. "*CIC Coverage Period*" shall mean the period (I) commencing on the first day of the month following the Release Effective Date (provided that if the 60 day period described in Section 8(h) below begins in one calendar year and ends in another, the CIC Coverage Period shall commence not earlier than January 1 of the calendar year following the Date of Termination) and (II) ending on the earlier of (x) the expiration of 24 months from the first day of the CIC Coverage Period, and (y) the date that the Executive is eligible for coverage under the health care plans of a subsequent employer. The payments provided by this Section shall be conditioned upon the Executive being covered by the Company's health care plans immediately prior to the Date of Termination. The foregoing payments are not intended to limit or otherwise reduce any entitlements that Executive may have under COBRA. In addition, the Company shall continue to provide the Executive with the same level of accident (AD&D) and life insurance benefits upon substantially the same terms and conditions (including contributions required by the Executive for such benefits) as existed immediately prior to the Executive's Date of Termination (or, if more favorable to the Executive, as such benefits and terms and conditions existed immediately prior to the Change in Control) for the same period for which the Company shall provide the Executive with continued health care coverage payments.

All other benefits, if any, due the Executive following termination pursuant to this Section 8(g) shall be determined in accordance with the plans, policies and practices of the Company; provided, however, that the Executive shall not participate in any severance plan, policy or program of the Company. The payments and other benefits provided for in this Section 8(g) are payments and benefits to which the Executive is not otherwise entitled, are given in consideration for the Release and are in lieu of any severance plan, policy or program of the Company or any of its subsidiaries that may now or hereafter exist. The payments and benefits to be provided pursuant to this Section 8(g)(i) shall constitute liquidated damages and shall be deemed to satisfy and be in full and final settlement of all obligations of the Company to the Executive under this Agreement. The Executive acknowledges and agrees that such amounts are fair and reasonable, and are his sole and exclusive remedy, in lieu of all other remedies at law or in equity, with respect to the termination of his employment hereunder. If, during the CIC Coverage Period, the Executive breaches in any material respect any of his obligations under Section 9 or the Confidentiality Agreement, the Company may, upon written notice to the Executive, (x) terminate the CIC Coverage Period and cease to make any further payments of the CIC Severance Payment and (y) cease any health and welfare benefits and payments, except in each case as required by applicable law.

(ii) For purposes of this Agreement “Change in Control” means the first to occur of any one of the following events:

(A) any “Person,” as such term is used in Sections 13(d) and 14(d) of the Securities Exchange Act of 1934 (the “*Exchange Act*”) (other than (1) the Company, (2) any Person who becomes the “beneficial owner” (as defined in Rule 13d-3 under the Exchange Act) of more than 50% of the Company’s then outstanding securities eligible to vote in the election of the Board (“*Voting Securities*”) as a result of a reduction in the number of Voting Securities outstanding due to the repurchase of Voting Securities by the Company unless and until such Person, after becoming aware that such Person has become the beneficial owner of more than 50% of the then outstanding Voting Securities, acquires beneficial ownership of additional Voting Securities representing 1% or more of the Voting Securities then outstanding, (3) any trustee or other fiduciary holding securities under an employee benefit plan of the Company, and (4) any entity owned, directly or indirectly, by the stockholders of the Company in substantially the same proportions as their ownership of Voting Securities), is or becomes the beneficial owner, directly or indirectly, of more than 50% of the Voting Securities (not including any securities acquired directly (or through an underwriter) from the Company or the Companies);

(B) the date on which, within any twelve (12) month period (beginning on or after the Effective Date), a majority of the directors then serving on the Board are replaced by directors not endorsed by at least two-thirds (2/3) of the members of the Board before the date of appointment or election;

(C) there is consummated a merger or consolidation of the Company with any other corporation or entity or the Company issues Voting Securities in connection with a merger or consolidation of any direct or indirect subsidiary of the Company with any other corporation, other than (1) a merger or consolidation that would result in the Voting Securities outstanding immediately prior thereto continuing to represent (either by remaining outstanding or by being converted into Voting Securities of the surviving or parent entity) more than 50% of the Company’s then outstanding Voting Securities or more than 50% of the combined voting power of such surviving or parent entity outstanding immediately after such merger or consolidation or (2) a merger or consolidation effected to implement a recapitalization of the Company (or similar transaction) in which no Person, directly or indirectly, acquired more than 50% of the Company’s then outstanding Voting Securities (not including any securities acquired directly (or through an underwriter) from the Company or the Companies); or

(D) the consummation of an agreement for the sale or disposition by the Company of all or substantially all of the Company’s assets (or any transaction having a similar effect), provided that such agreement or transaction of similar effect shall in all events require the disposition, within any twelve (12) month period, of at least 40% of the gross fair market value of all of the Company’s then assets; other than a sale or disposition by the Company of all or substantially all of the Company’s assets to an entity, at least 50% of the combined voting power of the voting securities of which are owned directly or indirectly by stockholders of the Company in substantially the same proportions as their ownership of the Company immediately prior to such sale.

Notwithstanding the foregoing, in no event shall a Change in Control be deemed to occur hereunder unless such event constitutes a change in ownership of the Company, a change in effective control of the Company or a change in ownership of a substantial portion of the Company’s assets within the meaning of Section 409A.

(g) *Mitigation; Offset.* Following the termination of his employment under any of the above clauses of this Section 8, the Executive shall have no obligation or duty to seek subsequent employment or engagement as an employee (including self-employment) or as a consultant or otherwise mitigate the Company's obligations hereunder; nor shall the payments provided by this Section 8 be reduced by the compensation earned by the Executive as an employee or consultant from such subsequent employment or consultancy.

(h) *Release.* Notwithstanding anything to the contrary in this Agreement, receipt of the Severance Benefits and the CIC Severance Benefits or other compensation or benefits under this Section 8 (other than the Base Obligations), if any, by the Executive is subject to the Executive executing and delivering to the Company a general release of claims following the Date of Termination, in substantially the form attached as Exhibit B (the "*Release*"), that, within 60 days following the Executive's Date of Termination, has become irrevocable by the Executive (such date the Release becomes irrevocable being the "*Release Effective Date*"). If the Executive dies or becomes legally incapacitated prior to the Release Effective Date, then the Release requirements described in the preceding sentence shall apply with respect to the Executive's estate and the Release shall be modified as reasonably necessary to allow for execution and delivery by the personal representative of the Executive's estate or the Executive's authorized legal representative, as applicable.

9. *Non-Competition.* The Executive acknowledges and recognizes the highly competitive nature of the businesses of the Company and accordingly agrees as follows:

(a) *Non-Competition.* For a period of two years following the Date of Termination (the "*Restricted Period*"), regardless of the circumstances surrounding such termination of employment, the Executive will not, directly or indirectly (i) engage in any "Competitive Business" (as defined below) for the Executive's own account while she is in self-employment or acting as a sole proprietor, (ii) enter the employ of, or render any services to, any person engaged in a Competitive Business, (iii) acquire a financial interest in, or otherwise become actively involved with, any person engaged in a Competitive Business, directly or indirectly, as an individual, partner, shareholder, officer, director, principal, agent, trustee or consultant, or (iv) interfere with business relationships (whether formed before or after the Effective Date) between the Company and customers or suppliers of the Company. For purposes of this Agreement, "*Competitive Business*" shall mean (x) any national securities exchange registered with the Securities and Exchange Commission, (y) any alternative trading system that trades listed stocks and other exchange-traded products or (z) any other entity that engages in, or is considering engaging in, substantially the same business as the Company, in each case in North America or in any other location in which the Company operates. For purposes of this Agreement, "*person*" shall mean an individual, corporation, partnership, limited partnership, limited liability company, syndicate, person (including, without limitation, a "person" as defined in Section 13(d)(3) of the Securities Exchange Act of 1934, as amended), trust, association or entity or government, political subdivision, agency or instrumentality of a government.

(b) *Securities Ownership.* Notwithstanding anything to the contrary in this Agreement, the Executive may, directly or indirectly, own, solely as an investment, securities of any person engaged in the business of the Company which are publicly traded on a national or regional stock exchange or on the over-the-counter market if the Executive (i) is not a controlling person of, or a member of a group which controls, such person and (ii) does not, directly or indirectly, own five percent or more of any class of securities of such person.

(c) *Severability.* It is expressly understood and agreed that, although the Executive and the Company consider the restrictions contained in this Section 9 to be reasonable, if a final judicial determination is made by a court of competent jurisdiction that the time or territory or any other restriction contained in this Agreement is an unenforceable restriction against the Executive, the provisions of this Agreement shall not be rendered void, but shall be deemed amended to apply as to such maximum time and territory and to such maximum extent as such court may judicially determine or indicate to be enforceable. Alternatively, in the event that any one or more of the provisions of this Agreement shall be or become invalid, illegal or unenforceable in any respect, the validity, legality and enforceability of the remaining provisions of this Agreement shall not be affected thereby.

10. *Specific Performance* The Executive acknowledges and agrees that the Company's remedies at law for a breach or threatened breach of Section 9 above would be inadequate and, in recognition of this fact, the Executive agrees that, in the event of such a breach or threatened breach, in addition to any remedies at law, the Company, without posting any bond, shall be entitled to obtain equitable relief in the form of specific performance, temporary restraining order, temporary or permanent injunction or any other equitable remedy which may then be available.

11. *Disputes.* Except as provided in Section 10 above, any dispute arising between the parties under this Agreement, under any statute, regulation, or ordinance, under any other agreement between the parties, and/or in way relating to the Executive's employment, shall be submitted to binding arbitration before the American Arbitration Association ("AAA") for resolution. Such arbitration shall be conducted in New York, New York, and the arbitrator will apply New York law, including federal law as applied in New York courts. The arbitration shall be conducted in accordance with the AAA's Employment Arbitration Rules as modified herein. The arbitration shall be conducted by a panel of three arbitrators that is mutually agreeable to both the Executive and the Company, all in accordance with AAA's Employment Arbitration Rules then in effect. If the Executive and the Company cannot agree upon the panel of arbitrators, the arbitration shall be settled before a panel of three arbitrators, one to be selected by the Company, one by the Executive, and the third to be selected by the two persons so selected, all in accordance with AAA's Employment Arbitration Rules. With respect to any and all costs and expenses associated with any such arbitration that are not assignable to one of the parties by the arbitrator, each party shall pay their own costs and expenses, including without limitation, attorney's fees and costs, except that the Company shall pay the cost of the arbitrators and the filing fees charged to Executive by the AAA, provided she is the claimant or counter claimant in such arbitration and is the prevailing party. The award of the arbitrators shall be final and binding on the parties, and judgment on the award may be confirmed and entered in any state or federal court in the State and City of New York. The arbitration shall be conducted on a strictly confidential basis, and Executive shall not disclose the existence of a claim, the nature of a claim, any documents, exhibits, or information exchanged or presented in connection with such a claim, or the result of any action (collectively, "*Arbitration Materials*"), to any third party, with the sole exception of the Executive's legal counsel, who also shall be bound by confidentiality obligations no less protective than the provisions set forth in the Confidentiality Agreement. In the event of any court proceeding to challenge or enforce an arbitrators' award, the parties

hereby consent to the exclusive jurisdiction of the state and federal courts in New York, New York and agree to venue in that jurisdiction. The parties agree to take all steps necessary to protect the confidentiality of the Arbitration Materials in connection with any such proceeding, agree to file all Confidential Information, as defined in the Confidentiality Agreement (and documents containing Confidential Information) under seal, subject to court order and agree to the entry of an appropriate protective order encompassing the confidentiality terms of this Agreement. Nothing contained in this Section 11 shall be construed to preclude the Company from exercising its rights under Section 10 above.

12. *Miscellaneous.*

(a) *Acceptance.* The Executive hereby represents and warrants, as a material inducement to the Company's agreement to enter into this Agreement, that there are no legal, contractual or other impediments precluding the Executive from entering into this Agreement or from performing the services with the Company contemplated hereby. Any violation of this representation and warranty by the Executive shall render all of the obligations of the Company under this Agreement void *ab initio* and of no force and effect.

(b) *Entire Agreement; Amendments.* This Agreement, together with the equity award agreements between the Executive and the Company contain the entire understanding of the parties with respect to the employment of the Executive by the Company, and shall supersede any and all previous contracts, arrangements or understandings between the Company and the Executive with respect to the subject matter set forth herein. There are no restrictions, agreements, promises, warranties, or covenants by and between the Company and the Executive and undertakings between the parties with respect to the subject matter herein other than those expressly set forth herein. This Agreement may not be altered, modified or amended except by written instrument signed by the parties hereto.

(c) *No Waiver.* The failure of a party to insist upon strict adherence to any term of this Agreement on any occasion shall not be considered a waiver of such party's rights or deprive such party of the right thereafter to insist upon strict adherence to that term or any other term of this Agreement.

(d) *Successor; Assignment.* This Agreement is confidential and personal and neither of the parties hereto shall, without the consent of the other, assign or transfer this Agreement or any rights or obligations hereunder. Without limiting the foregoing, the Executive's right to receive payments hereunder shall not be assignable or transferable whether by pledge, creation of a security interest or otherwise, other than a transfer by the Executive's will or by the laws of descent and distribution. In the event of any attempted assignment or transfer contrary to this Section 12(d), the Company shall have no liability to pay the assignee or transferee any amount so attempted to be assigned or transferred. The Company shall cause this Agreement to be assumed by any entity that succeeds to all or substantially all of the Company's business or assets and this Agreement shall be binding upon any successor to all or substantially all of the Company's business or assets; provided, however, that no such assumption shall release the Company of its obligations hereunder, to the extent not satisfied by such successor, without the Executive's prior written consent.

(e) *Confidentiality of Tax Treatment and Structure.* Notwithstanding anything herein to the contrary, each party and its representatives may consult any tax advisor regarding the tax treatment and tax structure of this Agreement and may disclose to any person, without limitation of any kind, the tax treatment and tax structure of this Agreement and all materials (including opinions or other tax analyses) that are provided relating to such treatment or structure.

(f) *Notice.* For the purpose of this Agreement, notices and all other communications provided for in this Agreement shall be in writing and shall be deemed to have been duly given when delivered or mailed by United States registered mail, return receipt requested, postage prepaid, addressed to the respective addresses set forth on the execution page of this Agreement, provided that all notices to the Company shall be directed to the attention of the General Counsel or to such other address as either party may have furnished to the other in writing in accordance herewith, except that notice of change of address shall be effective only upon receipt:

if to the Company:

The Office of the General Counsel
Nasdaq, Inc.
151 West 42nd Street
New York, NY 100366

if to the Executive:

his address as shown in the records of the Company

(g) *Withholding Taxes.* The Company may withhold from any amounts payable under this Agreement such federal, state and local taxes as may be required to be withheld pursuant to any applicable law or regulation.

(h) *Section 409A.* Notwithstanding any other provision of this Agreement, any payment, settlement or benefit triggered by termination of the Executive's employment with the Company shall not be made until six months and one day following Date of Termination if such delay is necessary to avoid the imposition of any tax, penalty or interest under Section 409A of the Internal Revenue Code of 1986, as amended (Section "409A"). Any installment payments that are delayed pursuant to this Section 12(h) shall be accumulated and paid in a lump sum on the day that is six months and one day following the Date of Termination (or, if earlier, upon the Executive's death) and the remaining installment payments shall begin on such date in accordance with the schedule provided in this Agreement. For purposes of this Agreement, termination or severance of employment will be read to mean a "separation from service" within the meaning of Section 409A where it is reasonably anticipated that no further services would be performed after that date or that the level of services the Executive would perform after that date (whether as an employee or independent contractor) would permanently decrease to no more than 20 percent of the average level of bona fide services performed over the immediately preceding thirty-six (36) month period. Additionally, the amount of expenses eligible for reimbursement or in-kind benefits to be provided during one calendar year may not affect the expenses eligible for reimbursement or any in-kind benefits to be provided in any other calendar year and the right to reimbursement or in-kind benefits is not subject to liquidation or exchange for another benefit. All reimbursements shall be made no later than the last day of the calendar year following the calendar year in which the Executive incurs the reimbursable expense. This Agreement is intended to comply with the requirements of Section 409A (including the exceptions thereto), to the extent applicable, and the Agreement shall be administered and interpreted in accordance with such intent. If any provision contained in the Agreement conflicts with the requirements of Section 409A (or the exemptions intended to apply under the Agreement), the Agreement shall be deemed to be reformed to comply with the requirements of Section 409A (or the applicable exemptions thereto). The Company, after consulting with the Executive, may amend this Agreement or the terms of any award provided for herein in any manner that the Company considers necessary or advisable to ensure that cash compensation,

equity awards or other benefits provided for herein are not subject to United States federal income tax, state or local income tax or any equivalent taxes in territories outside the United States prior to payment, exercise, vesting or settlement, as applicable, or any tax, interest or penalties pursuant to Section 409A. Any such amendments shall be made in a manner that preserves to the maximum extent possible the intended benefits to the Executive. This Section 12(h) does not create an obligation on the part of the Company to modify this Agreement and does not guarantee that the amounts or benefits owed under the Agreement will not be subject to interest and penalties under Section 409A. For purposes of this Agreement, all rights to payments and benefits hereunder shall be treated as rights to receive a series of separate payments and benefits to the fullest extent allowed by Section 409A.

(i) *Clawback.* The Executive agrees that compensation and benefits provided by the Company under this Agreement or otherwise will be subject to recoupment or clawback by the Company under any applicable clawback or recoupment policy of the Company that is generally applicable to the Company's executives, as may be in effect from time-to-time, or as required by applicable law.

(j) *Audit Rights.* Any and all equity compensation of any kind due hereunder to Executive after the Date of Termination shall be accompanied by a detailed statement from the Company showing the calculation for such compensation for the period being measured. Within thirty (30) days after the delivery of such statement, the Executive may notify the Company of any objections or changes thereto, specifying in reasonable detail any such objections or changes. If the Executive does not notify the Company of any objections or changes thereto or if within twenty (20) days of the delivery of an objection notice the Executive and the Company agree on the resolution of all objections or changes, then such statements delivered by the Company, with such changes as are agreed upon, shall be final and binding. If the parties shall fail to reach an agreement with respect to all objections or changes within such twenty (20) day period, then all disputed objections or changes shall, be subject to resolution in accordance with Section 11 above.

(k) *Counterparts.* This Agreement may be signed in counterparts, each of which shall be an original, with the same effect as if the signatures thereto and hereto were upon the same instrument.

(l) *Governing Law.* This Agreement shall be governed by and construed in accordance with the laws of the State of New York.

* * *

IN WITNESS WHEREOF, the parties hereto have duly executed this Agreement as of the day and year first above written.
EXECUTIVE

/s/ Bradley J. Peterson

Bradley J. Peterson

Nasdaq, Inc.

By: /s/ Bryan E. Smith

Name: Bryan E. Smith

Title: Executive Vice President and Chief People Officer

Exhibit A

NASDAQ CONTINUING OBLIGATIONS AGREEMENT

During the course of my employment or engagement with Nasdaq and/or its subsidiaries and affiliates (collectively, the “*Company*”), I understand that I will have or be given access to, and/or receive, certain non-public, confidential, and proprietary information and or specialized training and trade secrets pertaining to the business of the Company and Company’s customers or prospective customers (“*Company Parties*”). Any unauthorized disclosure or use of such information would cause grave harm to the Company Parties. Therefore, to assure the confidentiality and proper use of Confidential Information and other Company Property (each as defined herein), and in consideration of my engagement with the Company, my access to confidential information, training and trade secrets, and the compensation paid or to be paid for my services during that engagement, and the mutual covenants and promises contained herein, I agree to the following:

1. Confidentiality and Company Property.

All Confidential Information and Company Property (as those terms are defined below) is owned by and for the Company Parties exclusively; is intended solely for authorized, work-related purposes on behalf of the Company Parties; and shall not be used for personal or other non-work related purposes. Specifically, without limitation, I shall not, directly or indirectly, at any time during or after engagement with the Company, without prior express written authorization from the Company (i) divulge, disclose, transmit, reproduce, convey, summarize, quote, share, or make accessible to any other person or entity Confidential Information or non-public Company Property; (ii) use any Confidential Information or Company Property for any purpose outside the course of performing the authorized duties of my work with the Company; (iii) remove Company Property or Confidential Information from the Company Parties’ premises without obtaining prior express written authorization from the Company; or (iv) review or seek to access any Confidential Information or Company Property except as required in connection with my work for the Company.

2. Non-Solicitation.

I agree that, for a period of 24 months following my separation from service for any reason, I shall not, directly or indirectly, without express written consent from Company’s Office of General Counsel:

- a) Interfere with any customer relationship the Company has with any of its current customers or potential customers that I had any involvement with, directly or indirectly, during the last twelve (12) months of my employment; or
- b) Solicit, or induce to enter into any business arrangement with, any employee or contractor of the Company with whom I had any contact or a relationship with during the last twelve (12) months of my employment; or
- c) Solicit, or induce to enter into any business arrangement with, any employee or contractor of the Company’s customers that I knew, or reasonably could be expected to know, was solicited by the Company for any technology, operations, sales or business role during the last twelve (12) months of my employment with the Company.

Nothing in this Section shall be construed to prohibit me from becoming employed or engaged by another entity after my termination of employment from the Company, as long as I am not engaged in duties that violate the non-solicitation provisions in this Section. Other non-competition provisions in other Company agreements signed by me may apply depending on the law of the applicable jurisdiction.

3. Inventions Assignment.

I will promptly disclose to the Company, or its designee, all Nasdaq Inventions (as defined below). All Nasdaq Inventions shall be the exclusive property of the Company, and I acknowledge that all Nasdaq Inventions shall be considered as “works made for hire” belonging to the Company. To the extent that any Nasdaq Inventions may not be considered works made for hire, I hereby assign to the Company, without any further consideration, all right, title, and interest in and to all such Nasdaq Inventions, including, without limitation, all copyrights, all patents, all patent applications all provisional applications, divisional applications, continuation applications, continuation in-part applications, and all patents that may issue therefrom and all reissues, reexaminations and extensions thereof, all other intellectual property rights, all moral rights, all contract and licensing rights, and all claims and causes of action of any kind with respect to such rights, including, without limitation, the right to sue and recover damages or other compensation and/or obtain equitable relief for any past, present, or future infringement or misappropriation thereof. The assignment to the Company herein of all rights to the Nasdaq Inventions is without additional compensation to me. At the Company’s expense, I will assist in every proper way to perfect the Company’s rights in the Nasdaq Inventions and to protect the Nasdaq Inventions throughout the world, including, without limitation, (i) executing in favor of the Company or its designee(s) documents confirming patent, copyright, and other applications’ assignment to the Company relating to the Nasdaq Inventions and (ii) the filing by the Company of such assignment in the United States Patent and Trademark Office, and any corresponding entities in any applicable foreign countries or multinational authorities, to record the Company or its designee(s) of the Company’s patents or patent applications as the assignee and owner of the patents or patent applications. I agree not to challenge the validity of the Nasdaq Inventions or the ownership by the Company or its designee(s) of the Nasdaq Inventions.

4. Non-Disparagement.

I agree that I shall not issue, circulate, publish or utter any false or disparaging, statement, remarks, opinions or rumors about the Company or its shareholders unless giving truthful testimony under subpoena or court order. Notwithstanding, I understand that I may provide truthful information to any governmental agency or self-regulatory organization with or without subpoena or court order. With the exception of communications made in a private corporate communication as an employee or consultant with regard to a listing decision of my employer or my consulting client, I agree that public communications regarding a preference for listing a security on a market other than the Company, that the quality of the Company as a securities market is in any way inferior to any other securities market or exchange, and/or that the regulatory efforts and programs of the Company are or have been lax in any way, are specifically defined as disparaging and will constitute a material breach of this Agreement. Nothing in this paragraph, however, shall prevent me from making good faith, factual and truthful statements related to listing with the Company as long as my statements are not based on proprietary information.

5. Cooperation.

If I receive a subpoena or process from any person or entity (including, but not limited to, any governmental agency) which may or will require me to disclose documents or information or provide testimony (in a deposition, court proceeding, or otherwise) regarding, in whole or in part, any of the Company Parties or any Confidential Information or Company Property, I shall: (i) to the extent permissible by law, notify Nasdaq’s Office of the General Counsel of the subpoena or other process within twenty-four (24) hours of receiving it; and (ii) to the maximum extent possible, not make any disclosure until the Company Parties have had a reasonable opportunity to contest the right of the requesting person or entity to such disclosure, limit the scope or nature of such disclosure, and/or seek to participate in the proceeding or matter in which the disclosure is sought.

6. Definitions.

“**Confidential Information**” shall mean any non-public, proprietary information regarding the Company Parties, whether in writing or not, whether in digital, hardcopy, or another format, including all personal

information, all personnel information, financial data, commercial data, trade secrets, business plans, business models, organizational structures and models, business strategies, pricing and advertising techniques and strategies, research and development activities, software development, market development, exchange registration, studies, market penetration plans, listing retention plans and strategies, marketing plans and strategies, communication and/or public relations products, plans, programs, recruiting strategies, databases, processes, work product or inventions, financial formulas and methods relating to Company Parties' business, computer software programs, accounting policies and practices, and all strategic plans or other matters, strategies, and financial or operating information pertaining to current or potential customers or transactions (including information regarding each Company Party's current or prospective customers, customer names, and customer representatives), templates and agreements, and all other information about or provided by the Company Parties, including information regarding any actual or prospective business opportunities, employment opportunities, finances, investments, and other proprietary information and trade secrets. Notwithstanding the above, Confidential Information shall not include any information that: (i) was known to me prior to my engagement with the Company as evidenced by written records in my possession prior to such disclosure; or (ii) is generally and publicly available and known to all persons in the industries where the Company conducts business, other than because of any unauthorized disclosure by me.

"Company Property" shall mean all property and resources of the Company Parties, or any Company Party, including, without limitation, Confidential Information, each Company Party's products, each Company Party's computer systems and all software, E-mail, web pages and databases, telephone and facsimile services, and all other administrative and/or support services provided by the Company Parties. I further agree that "Company Property" shall include processes, data, works of authorship, methods, Inventions (as that term is defined below), developments, and improvements that I conceive, originate, develop, author, or create, solely or jointly with others, during or as a result of my employment with the Company, or using Company Property, and without regard to whether any of the foregoing also may be included within "Confidential Information" as defined under this Agreement.

"Nasdaq Inventions" shall mean all ideas, improvements, trade secrets, know-how, confidential technical or business information, sales and other commercial relationships, potential sales and other commercial relationships, business methods or processes, copyrightable expression, research, marketing plans, computer software (including, without limitation, source code(s)), computer programs, original works of authorship, industrial designs, trade dress, developments, discoveries, trading systems, trading strategies and methodologies, improvements, modifications, technology, algorithms and designs, (regardless of whether any of the foregoing are subject to patent or copyright protection), that are (i) made, conceived, expressed, developed, or reduced to practice by me (solely or jointly with others) during or as a result of my employment with the Company or using Company Property and (ii) which relate in any manner to the Company, the business of the Company (including without limitation the services the Company provides to any of the Company Parties), or my engagement by the Company.

7. Return Of Confidential Information And Company Property.

Upon my termination of engagement with the Company, for any reason, or if the Company so requests, I shall promptly deliver to the Company all Confidential Information and Company Property, including Nasdaq Inventions in my possession or under my control, as well as all documents, disks, tapes, or other electronic, digital, or computer means of storage, and all copies of such information and property.

8. Injunctive Action.

I acknowledge that the foregoing provisions and restrictions are reasonable and necessary for the protection of the Company Parties and their respective businesses. These obligations are not limited in time to the duration of my engagement and rather shall survive the termination of my engagement by the Company, regardless of the reason for its termination. I agree that my breach of any of the foregoing provisions will result in irreparable injury to the Company Parties, that monetary relief alone will be inadequate to redress such a breach, and further that the Company shall be entitled to obtain an injunction to prevent and/or remedy such a breach (without first having to post a bond).

- (a) In any proceeding for an injunction and upon any motion for a temporary or permanent injunction (“Injunctive Action”), the Company’s right to receive monetary damages shall not be a bar or interposed as a defense to the granting of such injunction. The Company’s right to an injunction is in addition to, and not in lieu of, any other rights and remedies available to the Company under law or in equity, including any remedy the Company may seek in any arbitration brought pursuant to Paragraph 9 of this Agreement.
- (b) I hereby irrevocably submit to the jurisdiction of the courts of New York in any Injunctive Action and waive any claim or defense of inconvenient or improper forum or lack of personal jurisdiction under any applicable law or decision. Upon the issuance (or denial) of an injunction, the underlying merits of any such dispute shall be resolved in accordance with Paragraph 9 of this Agreement.

9. Arbitration.

Except as provided in Section 8 of this Agreement, any dispute arising between the Parties under this Agreement, under any statute, regulation, or ordinance, under any other agreement between the Parties, and/or in way relating to my engagement by the Company, shall be submitted to binding arbitration before the American Arbitration Association (“AAA”) for resolution. Such arbitration shall be conducted in New York, New York, and the arbitrator will apply New York law, including federal law as applied in New York courts. The arbitration shall be conducted in accordance with the AAA’s Employment Arbitration Rules as modified herein. The arbitration shall be conducted by a single arbitrator, who shall be an attorney who specializes in the field of employment law and who shall have prior experience arbitrating employment disputes. The award of the arbitrator shall be final and binding on the Parties, and judgment on the award may be confirmed and entered in any state or federal court in the State of New York and City of New York. In the event of any court proceeding to challenge or enforce an arbitrator’s award, the Parties hereby consent to the exclusive jurisdiction of the state and federal courts in New York, New York and agree to venue in that jurisdiction.

The arbitration shall be conducted on a strictly confidential basis, and I shall not disclose the existence of a claim, the nature of a claim, any documents, exhibits, or information exchanged or presented in connection with such a claim, or the result of any action (collectively, “**Arbitration Materials**”), to any third party, with the sole exception of my legal counsel, who also shall be bound by these confidentiality terms. The Parties agree to take all steps necessary to protect the confidentiality of the Arbitration Materials in connection with any such proceeding, agree to file all Confidential Information (and documents containing Confidential Information) under seal, and agree to the entry of an appropriate protective order encompassing the confidentiality terms of this Agreement.

10. Governing Law; Amendment; Waiver; Severability.

This Agreement shall be construed in accordance with and shall be governed by the laws of the State of New York, excluding any choice of law principles. This Agreement constitutes the entire agreement between the Parties with respect to the subject matter hereof, and may not be amended, discharged, or terminated, nor may any of its provisions be waived, except upon the execution of a valid written instrument executed by me and the Company.

- (a) If any term or provision of this Agreement (or any portion thereof) is determined by an arbitrator or a court of competent jurisdiction to be invalid, illegal, or incapable of being enforced, all other terms and provisions of this Agreement shall nevertheless remain in full force and effect.
- (b) Upon a determination that any term or provision (or any portion thereof) is invalid, illegal, or incapable of being enforced, the Company and I agree that an arbitrator or reviewing court shall have the authority to amend or modify this Agreement so as to render it enforceable and effect the original intent of the Parties to the fullest extent permitted by applicable law.

11. Miscellaneous.

This Agreement (i) may be executed in identical counterparts, which together shall constitute a single agreement; (ii) shall be fairly interpreted in accordance with its terms and without any strict construction

in favor of or against either Party, notwithstanding which Party may have drafted it; and (iii) the headings herein are included for reference only and are not intended to affect the meaning or interpretation of the Agreement. This Agreement is binding upon, and shall inure to the benefit of, me and the Company and our respective heirs, executors, administrators, successors and assigns.

Without limiting the scope or generality of the terms of this Agreement in any way, I acknowledge and agree that the terms of this Agreement and all discussions regarding this Agreement are confidential, and accordingly I agree not to disclose any such information to any third party, except to my attorney(s), or as otherwise may be required by law. Notwithstanding the foregoing, I may disclose to any prospective employer the fact and existence of this Agreement, and provide copies of this Agreement to such entity. The Company also has the right to apprise any prospective employer or other entity or person of the terms of this Agreement and provide copies to any such persons or entities.

12. Other Terms of My Engagement.

Nothing in this Agreement alters the at-will nature of my employment or engagement with the Company. I acknowledge and agree that my employment or engagement is at-will, which means that both I and the Company shall have the right to terminate such engagement at any time, for any reason, with or without cause and with or without prior notice.

To the extent I am signing this Agreement in any capacity other than as an employee (e.g., consultant, independent contractor), the written terms of my engagement supersede the terms of this Paragraph. Moreover, I acknowledge that my engagement with the Company requires undivided attention and effort. Therefore, I will not, during my engagement with the Company, engage in any other employment or business, other than for the Company, or assist in any manner any business that is competitive with the business or the future business plans of the Company, unless I receive prior express written consent from the Company's Global Ethics Team.

I hereby acknowledge and accept the terms of this Agreement as of the Effective Date, by signature below.

/s/ Bradley Peterson

Date: 6/22/22

Print Name: Bradley Peterson

Exhibit B

Release of Claims

GENERAL RELEASE

WHEREAS, Bradley Peterson (hereinafter referred to as the "*Executive*") and Nasdaq, Inc. (hereinafter referred to as "*Employer*") are parties to an Employment Agreement, dated October 1, 2020 (the "*Employment Agreement*"), which provided for the Executive's employment with Employer on the terms and conditions specified therein; and

WHEREAS, the Executive has agreed to execute a release of the type and nature set forth herein as a condition to his entitlement to certain payments and benefits upon his termination of employment with Employer.

NOW, THEREFORE, in consideration of the premises and mutual promises herein contained and for other good and valuable consideration received or to be received by the Executive in accordance with the terms of the Employment Agreement, it is agreed as follows:

1. Excluding enforcement of the covenants, promises and/or rights reserved herein, the Executive hereby irrevocably and unconditionally releases, acquits and forever discharges Employer and each of Employer's owners, stockholders, predecessors, successors, assigns, directors, officers, employees, divisions, subsidiaries, affiliates (and directors, officers and employees of such companies, divisions, subsidiaries and affiliates) and all persons acting by, through, under or in concert with any of them (collectively "*Releasees*"), or any of them, from any and all charges, complaints, claims, liabilities, obligations, promises, agreements, controversies, damages, actions, causes of action, suits, rights, demands, costs, losses, debts and expenses (including attorneys' fees and costs actually incurred) of any nature whatsoever, known or unknown, suspected or unsuspected, including, but not limited to, rights arising out of alleged violations of any contracts, express or implied, any covenant of good faith and fair dealing, express or implied, or any tort or any legal restrictions on Employer's right to terminate employees, or any Federal, state or other governmental statute, regulation or ordinance, including, without limitation, Title VII of the Civil Rights Act of 1964, as amended, the Federal Age Discrimination In Employment Act of 1967 ("*ADEA*"), as amended, the Employee Retirement Income Security Act ("*ERISA*"), as amended, the Civil Rights Act of 1991, as amended, the Rehabilitation Act of 1973, as amended, the Older Workers Benefit Protection Act ("*OWBPA*"), as amended, the Worker Adjustment Retraining and Notification Act ("*WARN*"), as amended, the Fair Labor Standards Act ("*FLSA*"), as amended, the Occupational Safety and Health Act of 1970 ("*OSHA*"), the New York State Human Rights Law, as amended, the New York Labor Act, as amended, the New York Equal Pay Law, as amended, the New York Civil Rights Law, as amended, the New York Rights of Persons With Disabilities Law, as amended, and the New York Equal Rights Law, as amended, that the Executive now has, or has ever had, or ever will have, against each or any of the Releasees, by reason of any and all acts, omissions, events, circumstances or facts existing or occurring up through the date of the Executive's execution hereof that directly or indirectly arise out of, relate to, or are connected with, the Executive's services to, or employment by Employer (any of the foregoing being a "*Claim*" or, collectively, the "*Claims*"); *provided, however*, that this release shall not apply to any of the obligations of Employer or any other Releasee under the Employment Agreement, or under any agreements, plans, contracts, documents or programs described or referenced in the Employment Agreement; and *provided, further*, that this release shall not apply to any rights the Executive may have to obtain contribution or indemnity against Employer or any other Releasee pursuant to contract, Employer's certificate of incorporation and by-laws or otherwise.

2. The Executive expressly waives and relinquishes all rights and benefits afforded by California Civil Code Section 1542 and does so understanding and acknowledging the significance of such specific waiver of Section 1542. Section 1542 states as follows:

"A GENERAL RELEASE DOES NOT EXTEND TO CLAIMS WHICH THE CREDITOR DOES NOT KNOW OR SUSPECT TO EXIST IN HIS OR HER FAVOR AT THE TIME OF EXECUTING THE RELEASE, WHICH IF KNOWN BY HIM OR HER MUST HAVE MATERIALLY AFFECTED HIS OR HER SETTLEMENT WITH THE DEBTOR."

Thus, notwithstanding the provisions of Section 1542, and for the purpose of implementing a full and complete release and discharge of the Releasees, the Executive expressly acknowledges that this Agreement is intended to include in its effect, without limitation, all Claims that the Executive does not know or suspect to exist in the Executive's favor at the time of execution hereof, and that this Agreement contemplates the extinguishment of any such Claim or Claims.

3. The Executive understands that she has been given a period of 21 days to review and consider this General Release before signing it pursuant to the Age Discrimination In Employment Act of 1967, as amended. The Executive further understands that she may use as much of this 21-day period as the Executive wishes prior to signing.

4. The Executive acknowledges and represents that she understands that she may revoke the waiver of his rights under the Age Discrimination In Employment Act of 1967, as amended, effectuated in this Agreement within 7 days of signing this Agreement. Revocation can be made by delivering a written notice of revocation to Office of the General Counsel, Nasdaq, Inc., 151 West 42nd Street, New York, New York 10036. For this revocation to be effective, written notice must be received by the General Counsel no later than the close of business on the seventh day after the Executive signs this Agreement. If the Executive revokes the waiver of his rights under the Age Discrimination In Employment Act of 1967, as amended, Employer shall have no obligations to the Executive under Section 8 (other than the Base Obligations) of the Employment Agreement.

5. The Executive and Employer respectively represent and acknowledge that in executing this Agreement neither of them is relying upon, and has not relied upon, any representation or statement not set forth herein made by any of the agents, representatives or attorneys of the Releasees with regard to the subject matter, basis or effect of this Agreement or otherwise.

6. This Agreement shall not in any way be construed as an admission by any of the Releasees that any Releasee has acted wrongfully or that the Executive has any rights whatsoever against any of the Releasees except as specifically set forth herein, and each of the Releasees specifically disclaims any liability to any party for any wrongful acts.

7. It is the desire and intent of the parties hereto that the provisions of this Agreement be enforced to the fullest extent permissible under law. Should there be any conflict between any provision hereof and any present or future law, such law will prevail, but the provisions affected thereby will be curtailed and limited only to the extent necessary to bring them within the requirements of law, and the remaining provisions of this Agreement will remain in full force and effect and be fully valid and enforceable.

8. The Executive represents and agrees (a) that the Executive has to the extent she desires discussed all aspects of this Agreement with his attorney, (b) that the Executive has carefully read and fully understands all of the provisions of this Agreement, and (c) that the Executive is voluntarily entering into this Agreement.

9. This General Release shall be governed by, and construed in accordance with, the laws of the State of New York, without giving effect to the conflicts of laws principles thereof or to those of any other jurisdiction which, in either case, could cause the application of the laws of any jurisdiction other than the State of New York. This General Release is binding on the successors and assigns of, and sets forth the entire agreement between, the parties hereto; fully supersedes any and all prior agreements or understandings between the parties hereto pertaining to the subject matter hereof; and may not be changed except by explicit written agreement to that effect subscribed by the parties hereto.

PLEASE READ CAREFULLY. THIS GENERAL RELEASE INCLUDES A RELEASE OF ALL KNOWN AND UNKNOWN CLAIMS.

This General Release is executed by the Executive and Employer as of the 22nd day of June 2022.

/s/ Bradley Peterson
Bradley Peterson

Nasdaq, Inc.

By: /s/ Bryan E. Smith
Name: Bryan E. Smith
Title: EVP and Chief People Officer

CERTIFICATION

I, Adena T. Friedman, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Nasdaq, Inc.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, 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;
 - (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

/s/ Adena T. Friedman
Name: Adena T. Friedman
Title: President and Chief Executive Officer

Date: August 3, 2022

CERTIFICATION

I, Ann M. Dennison, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Nasdaq, Inc.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, 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;
 - (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

/s/ Ann M. Dennison

Name: Ann M. Dennison
Title: Executive Vice President and Chief Financial Officer

Date: August 3, 2022

**Certification of CEO and CFO Pursuant to
18 U.S.C. Section 1350
as Adopted Pursuant to
Section 906 of the Sarbanes-Oxley Act of 2002**

In connection with the Quarterly Report on Form 10-Q of Nasdaq, Inc. (the "Company") for the period ended June 30, 2022 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), Adena T. Friedman, as President and Chief Executive Officer of the Company, and Ann M. Dennison, as Executive Vice President and Chief Financial Officer of the Company, each hereby certifies, pursuant to 18 U.S.C. § 1350, as adopted pursuant to § 906 of the Sarbanes-Oxley Act of 2002, that, to the best of her knowledge:

- (1) The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and
- (2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of the operations of the Company.

/s/ Adena T. Friedman

Name: Adena T. Friedman
Title: President and Chief Executive Officer
Date: August 3, 2022

/s/ Ann M. Dennison

Name: Ann M. Dennison
Title: Executive Vice President and Chief Financial Officer
Date: August 3, 2022

This certification accompanies the Report pursuant to § 906 of the Sarbanes-Oxley Act of 2002 and shall not, except to the extent required by the Sarbanes-Oxley Act of 2002, be deemed filed by the Company for purposes of § 18 of the Securities Exchange Act of 1934, as amended.