

NEW YORK, January 25, 2023 - Nasdaq, Inc. (Nasdaq: NDAQ) today reported financial results for the fourth quarter and year 2022.

- 2022 net revenues¹ were **\$3,582** million, an increase of **5%** over 2021. Solutions businesses² revenues increased **9%**, including **10%** organic growth and 1% from the net impact of an acquisition, partially offset by a negative 2% FX impact. Trading Services net revenues decreased **2%**, including a negative 3% FX impact, partially offset by **1%** organic growth.
- Fourth quarter 2022 net revenues¹ increased **2%** compared to the fourth quarter of 2021. Solutions businesses² revenues increased **3%**, including **5%** organic growth, partially offset by a negative 2% FX impact. Trading Services net revenues increased **1%** including **4%** organic growth, partially offset by a negative 3% FX impact.
- Annualized Recurring Revenue (ARR)³ increased **8%** compared to the fourth quarter of 2021. Annualized SaaS revenues increased **13%** and represented **36%** of ARR.
- GAAP diluted earnings per share decreased **4%** in 2022 and **6%** in the fourth quarter 2022.
- Non-GAAP⁴ diluted earnings per share increased **6%** in 2022 and was unchanged in the fourth quarter 2022.
- The company returned **\$1,016** million to shareholders in 2022: **\$633** million in share repurchases and **\$383** million in dividends.

Fourth Quarter and Year 2022 Highlights

(US\$ millions, except per share)	4Q22	% Change (YoY)	2022	% Change (YoY)
Solutions Businesses Revenues	\$652	3%	\$2,552	9%
Trading Services Net Revenues	\$253	1%	\$1,019	(2)%
Net Revenues*	\$906	2%	\$3,582	5%
ARR	\$2,007	8%		
GAAP Diluted EPS	\$0.48	(6)%	\$2.26	(4)%
Non-GAAP Diluted EPS	\$0.64	—%	\$2.66	6%

*Net revenues include Other revenues of \$1 million in the fourth quarter of 2022 and \$11 million in 2022.

Adena Friedman, Chair and CEO said, “We delivered another year of strong growth against an uncertain macroeconomic backdrop, illustrating the strength of our diversified business and our ability to deliver on our longer-term objectives.”

As we look to 2023, our new corporate structure positions us to deliver greater liquidity, transparency, and integrity solutions to our clients throughout the financial system.”

Ann Dennison, Executive Vice President and CFO said, “In 2022 we successfully executed our capital plan to minimize the impact of rising rates, reduce net leverage and support our long-term growth strategy. We enter 2023 with a strong capital position and the flexibility to adapt to varying operating environments.”

Additionally, we raised our dividend growth potential with an expectation for a rising payout ratio over the next five years, amplifying our ability to continue delivering a compelling dividend growth story.”

FINANCIAL REVIEW

- 2022 net revenues were \$3,582 million, an increase of \$162 million, or 5% over 2021. Net revenues reflected a \$239 million, or 7%, positive impact from organic growth, a \$70 million decrease from the impact of changes in FX rates and a \$7 million decrease from the net impact of acquisitions and divestitures.
- Fourth quarter 2022 net revenues were \$906 million, an increase of \$21 million, or 2%, from \$885 million in the prior year period. Net revenues reflected a \$41 million, or 5%, positive impact from organic growth, including positive contributions from all segments, partially offset by an \$18 million decrease from the impact of changes in FX rates and a \$2 million decrease from the net impact of an acquisition and divestiture.
- Solutions businesses revenues were \$652 million in the fourth quarter of 2022, an increase of \$21 million, or 3%. The increase reflects a \$30 million, or 5%, positive impact from organic growth, and a \$1 million increase from an acquisition, partially offset by a \$10 million decrease from the impact of changes in FX rates.
- Trading Services net revenues were \$253 million in the fourth quarter of 2022, an increase of \$3 million, or 1%. The increase reflects an \$11 million, or 4%, positive impact from organic growth, partially offset by an \$8 million decrease from the impact of changes in FX rates.
- 2022 GAAP operating expenses were \$2,018 million, an increase of \$39 million, or 2% over 2021. Fourth quarter 2022 GAAP operating expenses increased \$16 million, or 3%, versus the prior year period. The increases in both periods primarily reflect increased expenses associated with the continued investment in our people and our businesses, and higher travel costs. The increase in 2022 GAAP operating expenses are partially offset by lower regulatory and amortization expenses reflecting one-time charges in 2021 as well as lower restructuring charges for the year. The increase in fourth quarter 2022 GAAP operating expense includes higher merger and strategic initiatives expense and restructuring charges.
- 2022 non-GAAP operating expenses were \$1,721 million, an increase of \$105 million or 6%, over 2021. Fourth quarter 2022 non-GAAP operating expenses increased \$26 million, or 6% versus the prior year period. The increase in both periods primarily reflects increased expenses associated with the continued investment in our people and our businesses, and higher travel costs, partially offset by lower marketing and advertising expense due to lower capital markets activity and changes in FX rates.
- The company repurchased \$633 million in shares of its common stock during 2022. As of December 31, 2022, there was \$650 million remaining under the board authorized share repurchase program, following an approval by the Board of Directors in December 2022 to increase the authorized amount of the share repurchase program.

INITIATING 2023 EXPENSE AND TAX GUIDANCE⁵

- The company is initiating its 2023 non-GAAP operating expense guidance to a range of \$1,770 to \$1,850 million. Nasdaq expects its 2023 non-GAAP tax rate to be in the range of 24% to 26%.

STRATEGIC AND BUSINESS UPDATES

- **Nasdaq implemented its new corporate structure during the fourth quarter of 2022 to amplify strategy.** Nasdaq's new corporate structure took effect during the fourth quarter of 2022 with business units organized into three divisions: Market Platforms, Capital Access Platforms, and Anti-Financial Crime. The new structure aligns the company more closely with evolving client needs and global financial system.
- **Nasdaq's annualized SaaS revenues in the fourth quarter of 2022 increased 13% year over year.** Annualized SaaS revenues totaled \$725 million in the fourth quarter of 2022, representing 36% of total company ARR, up from 34% in the fourth quarter of 2021. The 13% year over year increase in annualized SaaS revenues primarily reflects strong growth in the fraud detection and anti-money laundering solutions and Workflow and Insights businesses.
- **Nasdaq maintained listings leadership in the U.S. and Nordics during 2022.** The Nasdaq Stock Market led U.S. exchanges for operating company IPOs with a 92% total win rate during 2022 and 100% win rate in the fourth quarter of 2022. During 2022, the Nasdaq Stock Market featured six of the largest ten U.S. IPOs by capital raised, attracted 74% of all proceeds raised through U.S. IPOs and welcomed 14 listing switches. In the Nordic and Baltic regions, Nasdaq maintained its leadership positioning with 38 IPOs.
- **Nasdaq led all exchanges in total multiply-listed options traded and set a record for U.S. equities trading during the December expiration.** In the fourth quarter and full year 2022 periods, Nasdaq led all exchanges during the period in total volume traded for multiply-listed equity options, and in December, achieved record U.S. equities volume for a triple witch expiration event during the fourth quarter.
- **Nasdaq cloud progress continued with completing a migration of one of our options exchanges and further customer adoption.** Nasdaq successfully completed the migration of Nasdaq MRX options market onto our new global derivative platform and Amazon Web Services (AWS), our preferred cloud provider. The migration marks a major milestone in Nasdaq's journey to modernize and build the next-generation infrastructure for the world's capital markets. Nasdaq also signed an agreement with Bolsa Electronica de Chile in January 2023 to upgrade its current on-premise Nasdaq trading technology to Nasdaq's SaaS-based Marketplace Services Platform through a full cloud migration strategy.
- **Nasdaq named to the Dow Jones Sustainability North America Index and received approval by The Science Based Targets Initiative for net-zero targets.** Nasdaq received key recognitions by several third-party validators during 2022, including being named for the seventh consecutive year to the Dow Jones Sustainability North America Index. Additionally, Nasdaq's near and long-term science-based emissions reductions targets were approved by The Science Based Targets initiative. Nasdaq has pledged to reduce absolute Scope 1 and Scope 2 greenhouse gas emissions 100% and absolute Scope 3 GHG emissions 50% by 2030, and pledged to reduce Scope 3 GHG emissions 95% to reach net-zero by 2050.

¹ Represents revenues less transaction-based expenses.

² Constitutes revenues from our Capital Access Platforms and Anti-Financial Crime segments and Marketplace Technology business within Market Platforms.

³ Annualized Recurring Revenue (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 currently 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.

⁴ Refer to our reconciliations of U.S. GAAP to non-GAAP net income, diluted earnings per share, operating income and operating expenses, included in the attached schedules.

⁵ U.S. GAAP operating expense and tax rate guidance are not provided due to the inherent difficulty in quantifying certain amounts due to a variety of factors including the unpredictability in the movement in foreign currency rates, as well as future charges or reversals outside of the normal course of business.

ABOUT NASDAQ

Nasdaq (Nasdaq: NDAQ) is a global technology company serving the capital markets and other industries. Our diverse offering of data, analytics, software and services enables clients to optimize and execute their business vision with confidence. To learn more about the company, technology solutions and career opportunities, visit us on [LinkedIn](#), on Twitter [@Nasdaq](#), or at www.nasdaq.com.

NON-GAAP INFORMATION

In addition to disclosing results determined in accordance with U.S. GAAP, Nasdaq also discloses certain non-GAAP results of operations, including, but not limited to, non-GAAP net income attributable to Nasdaq, non-GAAP diluted earnings per share, non-GAAP operating income, and non-GAAP operating expenses, that include certain adjustments or exclude certain charges and gains that are described in the reconciliation table of U.S. GAAP to non-GAAP information provided at the end of this release. 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 results as the items described below in the reconciliation tables do not reflect 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 a comparative measure. Investors should not rely on any single financial measure when evaluating our business. This 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 earnings release. When viewed in conjunction with our U.S. GAAP results and the accompanying reconciliations, 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 those noted above, to assess operating performance. We use these measures 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.

Organic revenue and expense growth, organic change and organic impact are non-GAAP measures that reflect adjustments for: (i) the impact of period-over-period changes in foreign currency exchange rates, and (ii) the revenues, expenses and operating income associated with acquisitions and divestitures for the twelve month period following the date of the acquisition or divestiture. Reconciliations of these measures are described within the body of this release.

Foreign exchange impact: In countries with currencies other than the U.S. dollar, revenues and expenses are translated using monthly average exchange rates. Certain discussions in this release isolate the impact of year-over-year foreign currency fluctuations to better measure the comparability of operating results between periods. Operating results excluding the impact of foreign currency fluctuations are calculated by translating the current period's results by the prior period's exchange rates.

Divisional alignment program: In October 2022, following our September announcement to realign our segments and leadership, we initiated a divisional alignment program with a focus on realizing the full potential of this structure. In connection with the program, we expect to incur pre-tax charges principally related to employee-related costs, consulting, asset impairments and contract terminations over a two-year period. We expect to achieve benefits in the form of both increased customer engagement and operating efficiencies. Costs related to the divisional alignment program will be recorded as “restructuring” in our consolidated statements of income. We will exclude charges associated with this program for purposes of calculating non-GAAP measures as they are not reflective of ongoing operating performance or comparisons in Nasdaq's performance between periods.

CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS

Information set forth in this communication contains forward-looking statements that involve a number of risks and uncertainties. Nasdaq cautions readers that any forward-looking information is not a guarantee of future performance and that actual results could differ materially from those contained in the forward-looking information. Such forward-looking statements include, but are not limited to (i) projections relating to our future financial results, total shareholder returns, growth, dividend program, trading volumes, products and services, ability to transition to new business models or implement our new corporate structure, taxes and achievement of synergy targets, (ii) statements about the closing or implementation dates and benefits of certain acquisitions, divestitures and other strategic, restructuring, technology, environmental, de-leveraging and capital allocation initiatives, (iii) statements about our integrations of our recent acquisitions, (iv) statements relating to any litigation or regulatory or government investigation or action to which we are or could become a party, and (v) other statements that are not historical facts. Forward-looking statements involve a number of risks, uncertainties or other factors beyond Nasdaq's control. These factors include, but are not limited to, Nasdaq's ability to implement its strategic initiatives, economic, political and market conditions and fluctuations, geopolitical instability, government and industry regulation, interest rate risk, U.S. and global competition, and other factors detailed in Nasdaq's filings with the U.S. Securities and Exchange Commission, including its annual reports on Form 10-K and quarterly reports on Form 10-Q which are available on Nasdaq's investor relations website at <http://ir.nasdaq.com> and the SEC's website at www.sec.gov. Nasdaq undertakes no obligation to publicly update any forward-looking statement, whether as a result of new information, future events or otherwise.

WEBSITE DISCLOSURE

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.

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

	Three Months Ended		Year Ended	
	December 31, 2022 (unaudited)	December 31, 2021 (unaudited)	December 31, 2022 (unaudited)	December 31, 2021
Revenues:				
Market Platforms	\$ 1,079	\$ 975	\$ 4,225	\$ 4,048
Capital Access Platforms	420	420	1,684	1,568
Anti-Financial Crime	82	68	306	231
Other Revenues	1	4	11	39
Total revenues	<u>1,582</u>	<u>1,467</u>	<u>6,226</u>	<u>5,886</u>
Transaction-based expenses:				
Transaction rebates	(488)	(526)	(2,092)	(2,168)
Brokerage, clearance and exchange fees	(188)	(56)	(552)	(298)
Revenues less transaction-based expenses	<u>906</u>	<u>885</u>	<u>3,582</u>	<u>3,420</u>
Operating Expenses:				
Compensation and benefits	252	238	1,003	938
Professional and contract services	43	43	140	144
Computer operations and data communications	56	49	207	186
Occupancy	26	28	104	109
General, administrative and other	32	19	125	85
Marketing and advertising	20	26	51	57
Depreciation and amortization	63	80	258	278
Regulatory	9	41	33	64
Merger and strategic initiatives	41	17	82	87
Restructuring charges	15	—	15	31
Total operating expenses	<u>557</u>	<u>541</u>	<u>2,018</u>	<u>1,979</u>
Operating income	<u>349</u>	<u>344</u>	<u>1,564</u>	<u>1,441</u>
Interest income	4	—	7	1
Interest expense	(33)	(31)	(129)	(125)
Net gain on divestiture of business	—	—	—	84
Other (loss) income	(6)	39	2	81
Net income (loss) from unconsolidated investees	8	(38)	31	52
Income before income taxes	<u>322</u>	<u>314</u>	<u>1,475</u>	<u>1,534</u>
Income tax provision	82	55	352	347
Net income	<u>240</u>	<u>259</u>	<u>1,123</u>	<u>1,187</u>
Net loss attributable to noncontrolling interests	1	—	2	—
Net income attributable to Nasdaq	<u>\$ 241</u>	<u>\$ 259</u>	<u>\$ 1,125</u>	<u>\$ 1,187</u>
Per share information:				
Basic earnings per share	<u>\$ 0.49</u>	<u>\$ 0.52</u>	<u>\$ 2.28</u>	<u>\$ 2.38</u>
Diluted earnings per share	<u>\$ 0.48</u>	<u>\$ 0.51</u>	<u>\$ 2.26</u>	<u>\$ 2.35</u>
Cash dividends declared per common share	<u>\$ 0.20</u>	<u>\$ 0.18</u>	<u>\$ 0.78</u>	<u>\$ 0.70</u>
Weighted-average common shares outstanding for earnings per share:				
Basic	491.3	501.2	492.4	497.7
Diluted	497.0	509.1	497.9	505.1

Nasdaq, Inc.
Revenue Detail
(in millions)

	Three Months Ended		Year Ended	
	December 31,	December 31,	December 31,	December 31,
	2022	2021	2022	2021
	(unaudited)	(unaudited)	(unaudited)	
MARKET PLATFORMS				
Trading Services revenues	\$ 929	\$ 832	\$ 3,663	\$ 3,503
Transaction-based expenses:				
Transaction rebates	(488)	(526)	(2,092)	(2,168)
Brokerage, clearance and exchange fees	(188)	(56)	(552)	(298)
Total net Trading Services revenues	253	250	1,019	1,037
Marketplace Technology	150	143	562	545
Total Market Platforms revenues	403	393	1,581	1,582
CAPITAL ACCESS PLATFORMS				
Data and Listing Services revenues	183	178	729	680
Index revenues	116	130	486	459
Workflow and Insights revenues	121	112	469	429
Total Capital Access Platforms revenues	420	420	1,684	1,568
ANTI-FINANCIAL CRIME	82	68	306	231
OTHER REVENUES	1	4	11	39
REVENUES LESS TRANSACTION-BASED EXPENSES	\$ 906	\$ 885	\$ 3,582	\$ 3,420

Nasdaq, Inc.
Condensed Consolidated Balance Sheets
(in millions)

	December 31,	December 31,
	2022	2021
	(unaudited)	
Assets		
Current assets:		
Cash and cash equivalents	\$ 502	\$ 393
Restricted cash and cash equivalents	22	29
Default funds and margin deposits	7,021	5,911
Financial investments	181	208
Receivables, net	677	588
Other current assets	201	294
Total current assets	8,604	7,423
Property and equipment, net	532	509
Goodwill	8,099	8,433
Intangible assets, net	2,581	2,813
Operating lease assets	444	366
Other non-current assets	608	571
Total assets	\$ 20,868	\$ 20,115
Liabilities		
Current liabilities:		
Accounts payable and accrued expenses	\$ 185	\$ 185
Section 31 fees payable to SEC	243	62
Accrued personnel costs	243	252
Deferred revenue	357	329
Other current liabilities	122	115
Default funds and margin deposits	7,021	5,911
Short-term debt	664	1,018
Total current liabilities	8,835	7,872
Long-term debt	4,735	4,812
Deferred tax liabilities, net	456	406
Operating lease liabilities	452	386
Other non-current liabilities	226	234
Total liabilities	14,704	13,710
Commitments and contingencies		
Equity		
Nasdaq stockholders' equity:		
Common stock	5	5
Additional paid-in capital	1,445	1,949
Common stock in treasury, at cost	(515)	(437)
Accumulated other comprehensive loss	(1,991)	(1,587)
Retained earnings	7,207	6,465
Total Nasdaq stockholders' equity	6,151	6,395
Noncontrolling interests	13	10
Total equity	6,164	6,405
Total liabilities and equity	\$ 20,868	\$ 20,115

Nasdaq, Inc.
Reconciliation of U.S. GAAP Net Income, Diluted Earnings Per Share, Operating Income and
Operating Expenses to Non-GAAP Net Income, Diluted Earnings Per Share, Operating Income, and Operating Expenses
(in millions, except per share amounts)
(unaudited)

	Three Months Ended		Year Ended	
	December 31, 2022	December 31, 2021	December 31, 2022	December 31, 2021
U.S. GAAP net income attributable to Nasdaq	\$ 241	\$ 259	\$ 1,125	\$ 1,187
Non-GAAP adjustments:				
Amortization expense of acquired intangible assets ⁽¹⁾	38	54	153	170
Merger and strategic initiatives expense ⁽²⁾	41	17	82	87
Restructuring charges ⁽³⁾	15	—	15	31
Net gain on divestiture of business ⁽⁴⁾	—	—	—	(84)
Net (income) loss from unconsolidated investees ⁽⁵⁾	(7)	37	(29)	(52)
Regulatory matters ⁽⁶⁾	1	33	1	33
Extinguishment of debt ⁽⁷⁾	—	—	16	33
Other ⁽⁸⁾	8	(36)	27	(71)
Total non-GAAP adjustments	96	105	265	147
Non-GAAP adjustment to the income tax provision ⁽⁹⁾	(20)	(36)	(66)	(61)
Total non-GAAP adjustments, net of tax	76	69	199	86
Non-GAAP net income attributable to Nasdaq	\$ 317	\$ 328	\$ 1,324	\$ 1,273
U.S. GAAP diluted earnings per share	\$ 0.48	\$ 0.51	\$ 2.26	\$ 2.35
Total adjustments from non-GAAP net income above	0.16	0.13	0.40	0.17
Non-GAAP diluted earnings per share	\$ 0.64	\$ 0.64	\$ 2.66	\$ 2.52
Weighted-average diluted common shares outstanding for earnings per share:	497.0	509.1	497.9	505.1

(1) 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.

(2) 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. The frequency and amount of such expenses vary significantly based on the size, timing and complexity of the transaction.

(3) The 2022 charges relate to our divisional alignment program that was initiated in October 2022, following our September announcement to realign our segments and leadership, with a focus on realizing the full potential of this structure. In connection with the program, we expect to incur pre-tax charges principally related to employee-related costs, consulting, asset impairments and contract terminations over a two-year period. The charges in 2019, 2020 and 2021 are associated with our restructuring program initiated in September 2019 with the goal of transitioning certain technology platforms to advance Nasdaq's strategic opportunities as a technology and analytics provider and continuing our re-alignment of certain business areas. The 2019 program was completed as of June 30, 2021.

(4) For the year ended December 31, 2021, we recorded a pre-tax net gain of \$84 million on the sale of our U.S. Fixed Income business, which is included in net gain on divestiture of business in the Condensed Consolidated Statements of Income.

(5) Represents the earnings and losses recognized from our equity interest in the Options Clearing Corporation, or OCC. We will continue to exclude the earnings and losses related to our share of OCC's earnings for purposes of calculating non-GAAP measures as our income on this investment may vary significantly period to period. This provides a more meaningful analysis of Nasdaq's ongoing operating performance or comparisons in Nasdaq's performance between periods.

(6) In December 2021, we recorded a \$33 million charge related to a decision made by the Swedish Administrative court rejecting an appeal by Nasdaq Clearing to dismiss an administrative fine imposed by the Swedish Financial Supervisory Authority, or SFSA, associated with the default of a member of the Nasdaq Clearing commodities market that occurred in 2018. Nasdaq Clearing has appealed the court's recent decision and firmly believes in the merits of its appeal. The charge was recorded to regulatory expense in our Condensed Consolidated Statements of Income.

(7) For the years ended December 31, 2022 and December 31, 2021, we recorded a loss on early extinguishment of debt. The charge for both periods is recorded in general, administrative and other expense in our Condensed Consolidated Statements of Income.

(8) 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 months and year ended December 31, 2022 and the three months and year ended December 31, 2021, other significant items included net gains and losses from strategic investments entered into through our corporate venture program recorded in other income in our Condensed Consolidated Statements of Income. For the year ended December 31, 2022, other significant items also included accruals related to legal matters recorded in general, administrative and other expense in our Condensed Consolidated Statements of Income.

(9) The non-GAAP adjustment to the income tax provision primarily includes the tax impact of each non-GAAP adjustment. In addition, for the three months and year ended December 31, 2021, we recorded a tax benefit related to state and local provision to return adjustments and a release of tax reserves due to statute of limitation expiration. For the year ended December 31, 2021, we also recorded a prior year tax benefit, net of reserve.

Nasdaq, Inc.
Reconciliation of U.S. GAAP Net Income, Diluted Earnings Per Share, Operating Income and
Operating Expenses to Non-GAAP Net Income, Diluted Earnings Per Share, Operating Income, and Operating Expenses
(in millions)
(unaudited)

	Three Months Ended		Year Ended	
	December 31, 2022	December 31, 2021	December 31, 2022	December 31, 2021
U.S. GAAP operating income	\$ 349	\$ 344	\$ 1,564	\$ 1,441
Non-GAAP adjustments:				
Amortization expense of acquired intangible assets ⁽¹⁾	38	54	153	170
Merger and strategic initiatives expense ⁽²⁾	41	17	82	87
Restructuring charges ⁽³⁾	15	—	15	31
Extinguishment of debt ⁽⁴⁾	—	—	16	33
Regulatory matters ⁽⁵⁾	1	33	1	33
Other ⁽⁶⁾	2	3	30	9
Total non-GAAP adjustments	97	107	297	363
Non-GAAP operating income	\$ 446	\$ 451	\$ 1,861	\$ 1,804
Revenues less transaction-based expenses	\$ 906	\$ 885	\$ 3,582	\$ 3,420
U.S. GAAP operating margin ⁽⁷⁾	39 %	39 %	44 %	42 %
Non-GAAP operating margin ⁽⁸⁾	49 %	51 %	52 %	53 %

(1) 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.

(2) 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. The frequency and amount of such expenses vary significantly based on the size, timing and complexity of the transaction.

(3) The 2022 charges relate to our divisional alignment program that was initiated in October 2022, following our September announcement to realign our segments and leadership, with a focus on realizing the full potential of this structure. In connection with the program, we expect to incur pre-tax charges principally related to employee-related costs, consulting, asset impairments and contract terminations over a two-year period. The charges in 2019, 2020 and 2021 are associated with our restructuring program initiated in September 2019 with the goal of transitioning certain technology platforms to advance Nasdaq's strategic opportunities as a technology and analytics provider and continuing our re-alignment of certain business areas. The 2019 program was completed as of June 30, 2021.

(4) For the years ended December 31, 2022 and December 31, 2021, we recorded a loss on early extinguishment of debt. The charge for both periods is recorded in general, administrative and other expense in our Condensed Consolidated Statements of Income.

(5) In December 2021, we recorded a \$33 million charge related to a decision made by the Swedish Administrative court rejecting an appeal by Nasdaq Clearing to dismiss an administrative fine imposed by the SFSA, associated with the default of a member of the Nasdaq Clearing commodities market that occurred in 2018. Nasdaq Clearing has appealed the court's recent decision and firmly believes in the merits of its appeal. The charge was recorded to regulatory expense in our Condensed Consolidated Statements of Income.

(6) 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 year ended December 31, 2022, other significant items primarily included accruals related to legal matters recorded in general, administrative and other expense in our Condensed Consolidated Statements of Income.

(7) U.S. GAAP operating margin equals U.S. GAAP operating income divided by revenues less transaction-based expenses.

(8) Non-GAAP operating margin equals non-GAAP operating income divided by revenues less transaction-based expenses.

Nasdaq, Inc.
Reconciliation of U.S. GAAP Net Income, Diluted Earnings Per Share, Operating Income and
Operating Expenses to Non-GAAP Net Income, Diluted Earnings Per Share, Operating Income, and Operating Expenses
(in millions)
(unaudited)

	Three Months Ended		Year Ended	
	December 31,	December 31,	December 31,	December 31,
	2022	2021	2022	2021
U.S. GAAP operating expenses	\$ 557	\$ 541	\$ 2,018	\$ 1,979
Non-GAAP adjustments:				
Amortization expense of acquired intangible assets ⁽¹⁾	(38)	(54)	(153)	(170)
Merger and strategic initiatives expense ⁽²⁾	(41)	(17)	(82)	(87)
Restructuring charges ⁽³⁾	(15)	—	(15)	(31)
Extinguishment of debt ⁽⁴⁾	—	—	(16)	(33)
Regulatory matters ⁽⁵⁾	(1)	(33)	(1)	(33)
Other ⁽⁶⁾	(2)	(3)	(30)	(9)
Total non-GAAP adjustments	(97)	(107)	(297)	(363)
Non-GAAP operating expenses	\$ 460	\$ 434	\$ 1,721	\$ 1,616

(1) 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.

(2) 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. The frequency and amount of such expenses vary significantly based on the size, timing and complexity of the transaction.

(3) The 2022 charges relate to our divisional alignment program that was initiated in October 2022, following our September announcement to realign our segments and leadership, with a focus on realizing the full potential of this structure. In connection with the program, we expect to incur pre-tax charges principally related to employee-related costs, consulting, asset impairments and contract terminations over a two-year period. The charges in 2019, 2020 and 2021 are associated with our restructuring program initiated in September 2019 with the goal of transitioning certain technology platforms to advance Nasdaq's strategic opportunities as a technology and analytics provider and continuing our re-alignment of certain business areas. The 2019 program was completed as of June 30, 2021.

(4) For the years ended December 31, 2022 and December 31, 2021, we recorded a loss on early extinguishment of debt. The charge for both periods is recorded in general, administrative and other expense in our Condensed Consolidated Statements of Income.

(5) In December 2021, we recorded a \$33 million charge related to a decision made by the Swedish Administrative court rejecting an appeal by Nasdaq Clearing to dismiss an administrative fine imposed by the SFSA, associated with the default of a member of the Nasdaq Clearing commodities market that occurred in 2018. Nasdaq Clearing has appealed the court's recent decision and firmly believes in the merits of its appeal. The charge was recorded to regulatory expense in our Condensed Consolidated Statements of Income.

(6) 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 year ended December 31, 2022, these significant items primarily included accruals related to legal matters recorded in general, administrative and other expense in our Condensed Consolidated Statements of Income.

Nasdaq, Inc.
Quarterly Key Drivers Detail
(unaudited)

	Three Months Ended		Year Ended	
	December 31, 2022	December 31, 2021	December 31, 2022	December 31, 2021
Market Platforms				
Annualized recurring revenues (in millions) ⁽¹⁾	\$ 503	\$ 479	\$ 503	\$ 479
<i>Trading Services</i>				
Equity Derivative Trading and Clearing				
<i>U.S. equity options</i>				
Total industry average daily volume (in millions)	39.3	38.6	38.2	37.2
Nasdaq PHLX matched market share	12.0 %	11.8 %	11.6 %	12.4 %
The Nasdaq Options Market matched market share	7.0 %	8.1 %	8.0 %	8.1 %
Nasdaq BX Options matched market share	3.3 %	2.0 %	2.8 %	1.4 %
Nasdaq ISE Options matched market share	6.0 %	6.6 %	5.7 %	6.6 %
Nasdaq GEMX Options matched market share	2.2 %	2.5 %	2.3 %	4.3 %
Nasdaq MRX Options matched market share	1.4 %	1.8 %	1.6 %	1.6 %
Total matched market share executed on Nasdaq's exchanges	31.9 %	32.8 %	32.0 %	34.4 %
<i>Nasdaq Nordic and Nasdaq Baltic options and futures</i>				
Total average daily volume of options and futures contracts ⁽²⁾	277,521	288,327	296,626	287,182
Cash Equity Trading				
<i>Total U.S.-listed securities</i>				
Total industry average daily share volume (in billions)	11.2	10.8	11.9	11.4
Matched share volume (in billions)	121.7	118.6	522.8	491.9
The Nasdaq Stock Market matched market share	16.1 %	16.0 %	16.2 %	15.8 %
Nasdaq BX matched market share	0.5 %	0.6 %	0.5 %	0.6 %
Nasdaq PSX matched market share	0.7 %	0.6 %	0.8 %	0.7 %
Total matched market share executed on Nasdaq's exchanges	17.3 %	17.2 %	17.5 %	17.1 %
Market share reported to the FINRA/Nasdaq Trade Reporting Facility	36.6 %	34.8 %	35.2 %	34.9 %
Total market share ⁽³⁾	53.9 %	52.0 %	52.7 %	52.0 %
<i>Nasdaq Nordic and Nasdaq Baltic securities</i>				
Average daily number of equity trades executed on Nasdaq's exchanges	778,057	1,045,996	908,813	1,036,523
Total average daily value of shares traded (in billions)	\$ 4.6	\$ 6.5	\$ 5.4	\$ 6.4
Total market share executed on Nasdaq's exchanges	69.7 %	75.6 %	71.5 %	76.9 %
Fixed Income and Commodities Trading and Clearing				
<i>Fixed Income</i>				
Total average daily volume of Nasdaq Nordic and Nasdaq Baltic fixed income contracts	97,405	119,738	111,901	115,308
<i>Commodities</i>				
Power contracts cleared (TWh) ⁽⁴⁾	76	181	413	813
<i>Marketplace Technology</i>				
Order intake (in millions) ⁽⁵⁾	\$ 106	\$ 123	\$ 264	\$ 304
Capital Access Platforms				
Annualized recurring revenues (in millions) ⁽¹⁾	\$ 1,192	\$ 1,113	\$ 1,192	\$ 1,113
<i>Initial public offerings</i>				
The Nasdaq Stock Market ⁽⁶⁾	18	195	161	752
Exchanges that comprise Nasdaq Nordic and Nasdaq Baltic	5	63	38	174
<i>Total new listings</i>				
The Nasdaq Stock Market ⁽⁶⁾	74	266	366	1,000
Exchanges that comprise Nasdaq Nordic and Nasdaq Baltic ⁽⁷⁾	10	75	63	207
<i>Number of listed companies</i>				
The Nasdaq Stock Market ⁽⁸⁾	4,230	4,178	4,230	4,178
Exchanges that comprise Nasdaq Nordic and Nasdaq Baltic ⁽⁹⁾	1,251	1,235	1,251	1,235
<i>Index</i>				
Number of licensed exchange traded products (ETPs)	379	362	379	362
Period end ETP assets under management (AUM) tracking Nasdaq indexes (in billions)	\$ 315	\$ 424	\$ 315	\$ 424
Quarterly average ETP assets under management (AUM) tracking Nasdaq indexes (in billions)	\$ 326	\$ 400	\$ 326	\$ 400
TTM ⁽¹⁰⁾ net inflows ETP AUM tracking Nasdaq indexes (in billions)	\$ 34	\$ 74	\$ 34	\$ 74
TTM ⁽¹⁰⁾ net (depreciation) appreciation ETP AUM tracking Nasdaq indexes (in billions)	\$ (142)	\$ 83	\$ (142)	\$ 83
Anti-Financial Crime				
Annualized recurring revenues (in millions) ⁽¹⁾	\$ 312	\$ 269	\$ 312	\$ 269
Total signed ARR ⁽¹¹⁾	\$ 338	\$ 288	\$ 338	\$ 288

(1) Annualized Recurring Revenue, or ARR, for a given period is the annualized revenue of support services and SaaS subscription contracts. ARR is currently 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 during the reporting period used in calculating ARR may or may not be extended or renewed by our customers.

(2) Includes Finnish option contracts traded on Eurex for which Nasdaq and Eurex have a revenue sharing arrangement.

(3) Includes transactions executed on The Nasdaq Stock Market's, Nasdaq BX's and Nasdaq PSX's systems plus trades reported through the Financial Industry Regulatory Authority/Nasdaq Trade Reporting Facility.

(4) Transactions executed on Nasdaq Commodities or OTC and reported for clearing to Nasdaq Commodities measured by Terawatt hours (TWh).

(5) Total contract value of orders signed during the period.

(6) New listings include IPOs, including issuers that switched from other listing venues, closed-end funds and separately listed ETPs. For the three months ended December 31, 2022 and 2021, IPOs included 8 and 123 SPACs, respectively. For the years ended December 31, 2022 and 2021, IPOs included 74 and 433 SPACs, respectively.

(7) 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.

(8) Number of total listings on The Nasdaq Stock Market at period end, includes 528 ETPs as of December 31, 2022 and 441 as of December 31, 2021.

(9) Represents companies listed on the Nasdaq Nordic and Nasdaq Baltic exchanges and companies on the alternative markets of Nasdaq First North.

(10) Trailing 12-months.

(11) Signed ARR includes ARR recognized as revenue in the current period as well as ARR for new contracts signed but not yet commenced.