ank=20250627-20250701011411

Nasdaq

Årsredovisning för

OMX Treasury Euro Holding AB

556438-8089

Räkenskapsåret

1 januari 2024 - 31 december 2024

Fastställelseintyg

Undertecknad styrelseordförande i OMX Treasury Euro Holding AB intygar härmed dels att denna kopia av årsredovisningen överensstämmer med originalet, dels att resultat- och balansräkningen fastställts på årsstämma 2025 - 06-16

Stämman beslutade också att godkänna styrelsens förslag till resultatdisposition.

Stockholm 2025 - 06-16

Frida Tidqvist
Styrelseordförande

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OMX Treasury Euro Holding AB
556438-8089

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OMX Treasury Euro Holding AB
556438-8089

Förvaltningsberättelse

Styrelsen för OMX Treasury Euro Holding AB, 556438-8089, med säte i Stockholm, får härmed avge årsredovisning för räkenskapsåret 2024.

Bolagets funktionella och redovisningsvaluta är svenska kronor (SEK).

Information om verksamheten
Bolagets verksamhet består av att direkt eller indirekt bedriva finansrörelse, äga och förvalta fast och lös egendom hantera valutakursexponeringar på egendom i olika valutor. Bolagets verksamhet har under året framförallt bestått i att äga dotterföretag som har redovisningsvaluta i andra valutor än svenska kronor.

Förväntad framtida utveckling samt risker och osäkerhetsfaktorer
OMX Treasury Euro Holding AB's framtida utveckling är i stort beroende av den övriga Nasdaqkoncernens aktiviteter. OMX Treasury Euro Holding AB hanterar finansiella risker, såsom valuta-, ränte-, kredit och likviditetsrisker för koncernen utanför USA. Verksamheten bedrivs utifrån ett finanspolicyramverk som fastställs av Nasdaqkoncernens styrelse och revideras årligen.

Väsentliga händelser under räkenskapsåret
Inga väsentliga händelser i bolagets verksamhet har identifierats under räkenskapsåret.

Ägarförhållanden
OMX Treasury Euro Holding AB är ett helägt dotterbolag till Nasdaq Treasury AB, organisationsnummer 556211-6854, med säte i Stockholm. OMX Treasury Euro Holding AB äger dotterbolaget OMX Treasury Euro AB, organisationsnummer 556691-3785, med säte i Stockholm. Moderbolaget i Nasdaqkoncernen är Nasdaq, Inc. Corporate id; 52-1165937, med säte i Delaware, USA. Koncernredovisning, vari OMX Treasury Euro Holding AB med dotterbolag ingår, har upprättats av Nasdaq, Inc.

Flerårsöversikt
Belopp i tSEK

	2024	2023	2022	2021	2020
Resultat efter finansiella poster	100 405	113 444	41 946	16 627	21 054
Avkastning på eget kapital	3,2%	3,8%	1,0%	0,4%	0,5%
Balansomslutning	3 145 663	3 064 068	4 175 170	4 150 737	4 115 869
Soliditet	99,0%	98,4%	99,3%	99,6%	99,8%

*Nyckeltalsdefinitioner finns beskrivna i not 9.

Förslag till resultatdisposition
Styrelsen föreslår att till förfogande stående medel (SEK)

Balanserat resultat	3 005 643 720
Årets resultat	100 331 418
	3 105 975 138

disponeras så att:

till aktieägare utdelas	(— kronor per aktie)	—
i ny räkning överföres		3 105 975 138
		3 105 975 138

OMX Treasury Euro Holding AB
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Resultaträkning
(tSEK)

	Not	2024	2023
Övriga externa kostnader	2	-6	-6
Summa rörelsekostnader		**-6**	**-6**
Rörelseresultat		**-6**	**-6**
Övriga ränteintäkter och liknande intäkter	3	100 589	113 504
Räntekostnader och liknande kostnader	4	-178	-54
Summa resultat från finansiella poster		**100 411**	**113 450**
Resultat efter finansiella poster		**100 405**	**113 444**
Skatt på årets resultat		-74	-23 370
Årets resultat		**100 331**	**90 074**

OMX Treasury Euro Holding AB
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Balansräkning
(tSEK)

	Not	2024-12-31	2023-12-31
Tillgångar			
Anläggningstillgångar			
Andelar i koncernföretag	5	694 447	694 447
Summa finansiella anläggningstillgångar		**694 447**	**694 447**
Summa anläggningstillgångar		**694 447**	**694 447**
Omsättningstillgångar			
Fordringar hos koncernföretag	6	2 427 918	2 367 835
Aktuella skattefordringar		23 298	1 735
Kassa och bank		—	51
Summa omsättningstillgångar		**2 451 216**	**2 369 621**
Summa tillgångar		**3 145 663**	**3 064 068**

OMX Treasury Euro Holding AB
556438-8089

Balansräkning
(tSEK)

	Not	2024-12-31	2023-12-31
Eget kapital och skulder			
Eget kapital			
Aktiekapital		8 000	8 000
Reservfond		1 600	1 600
Summa bundet eget kapital		**9 600**	**9 600**
Balanserat resultat		3 005 644	2 915 570
Årets resultat		100 331	90 074
Summa fritt eget kapital		**3 105 975**	**3 005 644**
Summa eget kapital		**3 115 575**	**3 015 244**
Kortfristiga skulder			
Skulder till koncernföretag		30 088	30 000
Aktuella skatteskulder		—	18 824
Summa kortfristiga skulder		**30 088**	**48 824**
Summa eget kapital och skulder		**3 145 663**	**3 064 068**

OMX Treasury Euro Holding AB
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Rapport över förändringar i eget kapital
(tSEK)

	Bundet eget kapital		Fritt eget kapital	
	Aktiekapital	**Reservfond**	**Balanserat resultat**	**Summa**
Ingående balans 2023-01-01	**8 000**	**1 600**	**4 135 570**	**4 145 170**
Lämnad utdelning			-1 220 000	-1 220 000
Årets resultat	—	—	90 074	90 074
Utgående balans 2023-12-31	**8 000**	**1 600**	**3 005 644**	**3 015 244**
Ingående balans 2024-01-01	**8 000**	**1 600**	**3 005 644**	**3 015 244**
Årets resultat	—	—	100 331	100 331
Utgående balans 2024-12-31	**8 000**	**1 600**	**3 105 975**	**3 115 575**

OMX Treasury Euro Holding AB
556438-8089

Noter

Belopp i tSEK om inget annat anges

Not 1 Redovisningsprinciper

Allmänna redovisningsprinciper
Årsredovisningen har upprättats i enligt med årsredovisningslagen (1995:1554) och BFNAR 2012:1 Årsredovisning och koncernredovisning (K3). Redovisningsprinciperna är oförändrade mot föregående år.

Bedömningar och uppskattningar
Följande av styrelsens bedömningar har en betydande effekt på redovisade belopp i årsredovisningen:

Aktier i dotterbolag
Värdet på dotterbolag bedöms årligen samt när indikation finns att värdet understiger redovisat värde. Något nedskrivningsbehov har inte identifierats under 2024.

Koncerntillhörighet
Närmast överordnade moderbolag som upprättar koncernredovisning i vilken bolaget ingår är Nasdaq Inc., Delaware, USA (org. nr.52-1165937). Kopior av koncernredovisningen för Nasdaq Inc. kan beställas på följande adress: Nasdaq, Inc. 151 W. 42nd Street, New York, USA.

Koncernredovisning
Bolaget är ett moderbolag men upprättar ingen koncernredovisning med hänvisning till undantagsregeln i årsredovisningslagen 7 kap. 2 §.

Intäktsredovisning
Ersättning i form av ränta, royalty eller utdelning redovisas som intäkt när det är sannolikt att företaget kommer att få de ekonomiska fördelar som är förknippade med transaktionen och när inkomsten kan beräknas på ett tillförlitligt sätt. Ränta redovisas som intäkt enligt den s.k. effektivräntemetoden.

Finansiella instrument
Finansiella instrument redovisas till anskaffningsvärde enligt kap 11. BFNAR 2012:1. Bolagets finansiella instrument avser långfristiga värdepappersinnehav, fordringar och skulder på koncernföretag, upplupna intäkter och kostnader som alla redovisas till anskaffningsvärde. Andelar i dotter- och intresseföretag är undantaget kap 11. BFNAR 2012:1 och redovisas till anskaffningsvärde.

Omräkning av poster i utländsk valuta
Bolaget följer 30 kap. BFNAR 2012:1 gällande omräkning av poster i utländsk valuta. Fordringar och skulder i utländsk valuta har värderats till balansdagens kurs. Resultaträkningen har värderats till den genomsnittliga månadskursen. Kursvinster och kursförluster på rörelsefordringar och rörelseskulder redovisas i rörelseresultatet medan kursvinster och kursförluster på finansiella fordringar och skulder redovisas som finansiella poster.

Koncernbidrag
Erhållna och lämnade koncernbidrag redovisas som bokslutsdisposition i resultaträkningen.

Skatt
Under rubriken "Skatt på årets resultat" i resultaträkningen redovisas aktuell och uppskjuten inkomstskatt. Den statliga inkomstskatten i Sverige beräknas på bokfört resultat med tillägg för ej avdragsgilla poster och med avdrag för ej skattepliktiga intäkter samt övriga avdrag. Uppskjutna skattefordringar redovisas för avdragsgilla temporära skillnader och outnyttjade underskottsavdrag, i den utsträckning det är sannolikt att framtida skattepliktiga vinster kommer att finnas tillgängliga mot vilka de temporära skillnaderna eller outnyttjade underskottsavdragen kan utnyttjas. De uppskjutna skattefordringarnas redovisade värden prövas vid varje balansdag och justeras i den utsträckning det

inte längre är sannolikt att tillräckligt stor beskattningsbar vinst kommer att finnas tillgänglig för att utnyttja hela eller delar av de uppskjutna skattefordringarna. Uppskjutna skattefordringar och skatteskulder beräknas med hjälp av de skattesatser som förväntas gälla för den period då fordringarna avräknas eller skulderna regleras, baserat på de skattesatser (och den skattelagstiftning) som föreligger eller i praktiken föreligger på balansdagen.

Fordringar, skulder och avsättningar
Om inget annat anges ovan värderas kortfristiga fordringar till det lägsta av dess anskaffningsvärde och det belopp varmed de beräknas bli reglerade. Långfristiga fordringar och långfristiga skulder värderas efter det första värderingstillfället till upplupet anskaffningsvärde. Övriga skulder och avsättningar värderas till de belopp varmed de beräknas bli reglerade. Övriga tillgångar redovisas till anskaffningsvärde om inget annat anges ovan.

Not 2 Anställda och personalkostnader

Bolaget har inte någon egen personal. Ingen ersättning till styrelsen har utgått under året.

Not 3 Ränteintäkter och liknande resultatposter

	2024	2023
Ränteintäkter från koncernföretag	100 543	113 466
Övriga ränteintäkter	46	38
Summa	**100 589**	**113 504**

Not 4 Räntekostnader och liknande kostnader

	2024	2023
Räntekostnader till koncernföretag	177	54
Summa	**177**	**54**

OMX Treasury Euro Holding AB
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Not 5 Andelar i koncernföretag

Namn	Kapitalandel	Rösträttsandel	Antal andelar	Bokfört värde
OMX Treasury Euro AB	100%	100%	41 238 627	694 447

Specifikation av andelar i koncernföretag

Namn	Org.nr.	Säte	Resultat 2024	Eget kapital 2024
OMX Treasury Euro AB	556691-3785	Stockholm, Sweden	2 010	128 432

Rörelsen av andelar i koncernföretag

	2024	2023
Ingående anskaffningsvärden	4 100 919	4 100 919
Utgående ackumulerade anskaffningsvärden	**4 100 919**	**4 100 919**
Ingående nedskrivningar	-3 406 472	-3 406 472
Utgående ackumulerade nedskrivningar	**-3 406 472**	**-3 406 472**
Utgående redovisat värde	**694 447**	**694 447**

Not 6 Fordringar hos koncernföretag

	2024	2023
Tillgodohavanden på internbank	156 575	137 123
Fordringar avseende räntor	1 481	5 395
Skuldebrev från koncernbolag	2 269 862	2 225 317
Summa	**2 427 918**	**2 367 835**

Not 7 Eventualförpliktelser

Bolaget har inga ställda säkerheter eller eventualförpliktelser.

Not 8 Väsentliga händelser efter räkenskapsårets utgång

Det har ej förekommit några väsentliga händelser att rapportera sedan räkenskapsårets slut.

OMX Treasury Euro Holding AB
556438-8089

Not 9 Nyckeltalsdefinitioner

Resultat efter finansiella poster
Resultat efter finansiella intäkter och kostnader, men före extraordinära intäkter och kostnader.

Rörelsemarginal
Rörelseresultat i procent av nettoomsättningen.

Avkastning på eget kapital
Resultat efter finansiella poster i procent av genomsnittligt justerat eget kapital.

Balansomslutning
Totala tillgångar.

Soliditet
Justerat eget kapital i procent av balansomslutning.

OMX Treasury Euro Holding AB
556438-8089

Underskrifter

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Building a better working world

Revisionsberättelse

Till bolagsstämman i OMX Treasury Euro Holding AB:s, org.nr 556438-8089

Rapport om årsredovisningen

Uttalanden

Vi har utfört en revision av årsredovisningen för OMX Treasury Euro Holding AB:s för räkenskapsåret 2024.

Enligt vår uppfattning har årsredovisningen upprättats i enlighet med årsredovisningslagen och ger en i alla väsentliga avseenden rättvisande bild av OMX Treasury Euro Holding AB:s finansiella ställning per den 31 december 2024 och av dess finansiella resultat och kassaflöde för året enligt årsredovisningslagen. Förvaltningsberättelsen är förenlig med årsredovisningens övriga delar.

Vi tillstyrker därför att bolagsstämman fastställer resultaträkningen och balansräkningen.

Grund för uttalanden

Vi har utfört revisionen enligt International Standards on Auditing (ISA) och god revisionssed i Sverige. Vårt ansvar enligt dessa standarder beskrivs närmare i avsnittet *Revisorns ansvar*. Vi är oberoende i förhållande till OMX Treasury Euro Holding AB:s enligt god revisorssed i Sverige och har i övrigt fullgjort vårt yrkesetiska ansvar enligt dessa krav.

Vi anser att de revisionsbevis vi har inhämtat är tillräckliga och ändamålsenliga som grund för våra uttalanden.

Styrelsens ansvar

Det är styrelsen som har ansvaret för att årsredovisningen upprättas och att den ger en rättvisande bild enligt årsredovisningslagen. Styrelsen ansvarar även för den interna kontroll som de bedömer är nödvändig för att upprätta en årsredovisning som inte innehåller några väsentliga felaktigheter, vare sig dessa beror på oegentligheter eller misstag.

Vid upprättandet av årsredovisningen ansvarar styrelsen för bedömningen av bolagets förmåga att fortsätta verksamheten. De upplyser, när så är tillämpligt, om förhållanden som kan påverka förmågan att fortsätta verksamheten och att använda antagandet om fortsatt drift. Antagandet om fortsatt drift tillämpas dock inte om styrelsen avser att likvidera bolaget, upphöra med verksamheten eller inte har något realistiskt alternativ till att göra något av detta.

Revisorns ansvar

Våra mål är att uppnå en rimlig grad av säkerhet om att årsredovisningen som helhet inte innehåller några väsentliga felaktigheter, vare sig dessa beror på oegentligheter eller misstag, och att lämna en revisionsberättelse som innehåller våra uttalanden. Rimlig säkerhet är en hög grad av säkerhet, men är ingen garanti för att en revision som utförs enligt ISA och god revisionssed i Sverige alltid kommer att upptäcka en väsentlig felaktighet om en sådan finns. Felaktigheter kan uppstå på grund av oegentligheter eller misstag och anses vara väsentliga om de enskilt eller tillsammans rimligen kan förväntas påverka de ekonomiska beslut som användare fattar med grund i årsredovisningen.

Som del av en revision enligt ISA använder vi professionellt omdöme och har en professionellt skeptisk inställning under hela revisionen. Dessutom:

- identifierar och bedömer vi riskerna för väsentliga felaktigheter i årsredovisningen, vare sig dessa beror på oegentligheter eller misstag, utformar och utför granskningsåtgärder bland annat utifrån dessa risker och inhämtar revisionsbevis som är tillräckliga och ändamålsenliga för att utgöra en grund för våra uttalanden. Risken för att inte upptäcka en väsentlig felaktighet till följd av oegentligheter är högre än för en väsentlig felaktighet som beror på misstag, eftersom oegentligheter kan innefatta agerande i maskopi, förfalskning, avsiktliga utelämnanden, felaktig information eller åsidosättande av intern kontroll.
- skaffar vi oss en förståelse av den del av bolagets interna kontroll som har betydelse för vår revision för att utforma granskningsåtgärder som är lämpliga med hänsyn till omständigheterna, men inte för att uttala oss om effektiviteten i den interna kontrollen.
- utvärderar vi lämpligheten i de redovisningsprinciper som används och rimligheten i styrelsens uppskattningar i redovisningen och tillhörande upplysningar.
- drar vi en slutsats om lämpligheten i att styrelsen använder antagandet om fortsatt drift vid upprättandet av årsredovisningen. Vi drar också en slutsats, med grund i de inhämtade revisionsbevisen, om det finns någon väsentlig osäkerhetsfaktor som avser sådana händelser eller förhållanden som kan leda till betydande tvivel om bolagets förmåga att fortsätta verksamheten. Om vi drar slutsatsen att det finns en väsentlig osäkerhetsfaktor, måste vi i revisionsberättelsen fästa uppmärksamheten på upplysningarna i årsredovisningen om den väsentliga osäkerhetsfaktorn eller, om sådana upplysningar är otillräckliga, modifiera uttalandet om årsredovisningen. Våra slutsatser baseras på de revisionsbevis som inhämtas fram till datumet för revisionsberättelsen. Dock kan framtida händelser eller förhållanden göra att ett bolag inte längre kan fortsätta verksamheten.
- utvärderar vi den övergripande presentationen, strukturen och innehållet i årsredovisningen, däribland upplysningarna, och om årsredovisningen återger de underliggande transaktionerna och händelserna på ett sätt som ger en rättvisande bild.

Vi måste informera styrelsen om bland annat revisionens planerade omfattning och inriktning samt tidpunkten för den. Vi måste också informera om betydelsefulla iakttagelser under revisionen, däribland de eventuella betydande brister i den interna kontrollen som vi identifierat.

Penneo dokumentnyckel: 2VWZ6-1SIRF-IRC0G-K52SS-PLF5U-2EOTL

Building a better working world

Rapport om andra krav enligt lagar och andra författningar

Uttalanden

Utöver vår revision av årsredovisningen har vi även utfört en revision av styrelsens förvaltning av OMX Treasury Euro Holding AB:s för år räkenskapsåret 2024 samt av förslaget till dispositioner beträffande bolagets vinst eller förlust.

Vi tillstyrker att bolagsstämman disponerar vinsten enligt förslaget i förvaltningsberättelsen och beviljar styrelsens ledamöter ansvarsfrihet för räkenskapsåret.

Grund för uttalanden

Vi har utfört revisionen enligt god revisionssed i Sverige. Vårt ansvar enligt denna beskrivs närmare i avsnittet *Revisorns ansvar*. Vi är oberoende i förhållande OMX Treasury Euro Holding AB:s enligt god revisorssed i Sverige och har i övrigt fullgjort vårt yrkesetiska ansvar enligt dessa krav.

Vi anser att de revisionsbevis vi har inhämtat är tillräckliga och ändamålsenliga som grund för våra uttalanden.

Styrelsens ansvar

Det är styrelsen som har ansvaret för förslaget till dispositioner beträffande bolagets vinst eller förlust. Vid förslag till utdelning innefattar detta bland annat en bedömning av om utdelningen är försvarlig med hänsyn till de krav som bolagets verksamhetsart, omfattning och risker ställer på storleken av bolagets egna kapital, konsolideringsbehov, likviditet och ställning i övrigt.

Styrelsen ansvarar för bolagets organisation och förvaltningen av bolagets angelägenheter. Detta innefattar bland annat att fortlöpande bedöma bolagets ekonomiska situation och att tillse att bolagets organisation är utformad så att bokföringen, medelsförvaltningen och bolagets ekonomiska angelägenheter i övrigt kontrolleras på ett betryggande sätt.

Revisorns ansvar

Vårt mål beträffande revisionen av förvaltningen, och därmed vårt uttalande om ansvarsfrihet, är att inhämta revisionsbevis för att med en rimlig grad av säkerhet kunna bedöma om någon styrelseledamot i något väsentligt avseende:

- företagit någon åtgärd eller gjort sig skyldig till någon försummelse som kan föranleda ersättningsskyldighet mot bolaget, eller
- på något annat sätt handlat i strid med aktiebolagslagen, årsredovisningslagen eller bolagsordningen.

Vårt mål beträffande revisionen av förslaget till dispositioner av bolagets vinst eller förlust, och därmed vårt uttalande om detta, är att med rimlig grad av säkerhet bedöma om förslaget är förenligt med aktiebolagslagen.

Rimlig säkerhet är en hög grad av säkerhet, men ingen garanti för att en revision som utförs enligt god revisionssed i Sverige alltid kommer att upptäcka åtgärder eller försummelser som kan föranleda ersättningsskyldighet mot bolaget, eller att ett förslag till dispositioner av bolagets vinst eller förlust inte är förenligt med aktiebolagslagen.

Som en del av en revision enligt god revisionssed i Sverige använder vi professionellt omdöme och har en professionellt skeptisk inställning under hela revisionen. Granskningen av förvaltningen och förslaget till dispositioner av bolagets vinst eller förlust grundar sig främst på revisionen av räkenskaperna. Vilka tillkommande granskningsåtgärder som utförs baseras på vår professionella bedömning med utgångspunkt i risk och väsentlighet. Det innebär att vi fokuserar granskningen på sådana åtgärder, områden och förhållanden som är väsentliga för verksamheten och där avsteg och överträdelser skulle ha särskild betydelse för bolagets situation. Vi går igenom och prövar fattade beslut, beslutsunderlag, vidtagna åtgärder och andra förhållanden som är relevanta för vårt uttalande om ansvarsfrihet. Som underlag för vårt uttalande om styrelsens förslag till dispositioner beträffande bolagets vinst eller förlust har vi granskat om förslaget är förenligt med aktiebolagslagen.

Stockholm den dag som framgår av vår elektroniska underskrift.

Ernst & Young AB

Daniel Eriksson
Auktoriserad revisor

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"Med min signatur bekräftar jag innehållet och alla datum i detta dokumentet."

DANIEL ERIKSSON
Auktoriserad revisor
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UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM 10-K

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

For the fiscal year ended December 31, 2024

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	**52-1165937**
(State or Other Jurisdiction of Incorporation or Organization)	**(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

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**
4.500% Senior Notes due 2032	**NDAQ32**	**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**

Securities registered pursuant to Section 12(g) of the Act: None

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

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

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

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

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

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

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

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

If securities are registered pursuant to Section 12(b) of the Act, indicate by check mark whether the financial statements of the registrant included in the filing reflect the correction of an error to previously issued financial statements. ☐

Indicate by check mark whether any of those error corrections are restatements that required a recovery analysis of incentive-based compensation received by any of the registrant's executive officers during the relevant recovery period pursuant to §240.10D-1(b). ☐

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

As of June 30, 2024, the aggregate market value of the registrant's common stock held by non-affiliates of the registrant was approximately $22.3 billion (this amount represents approximately 370.0 million shares of Nasdaq, Inc.'s common stock based on the last reported sales price of $60.26 of the common stock on The Nasdaq Stock Market on such date).

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

Class	**Outstanding at February 12, 2025**
Common Stock, $0.01 par value per share	575,145,323 shares

Documents Incorporated by Reference: Certain portions of the Definitive Proxy Statement for the 2025 Annual Meeting of Shareholders are incorporated by reference into Part III of this Form 10-K.

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About this Form 10-K

Throughout this Form 10-K, 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 Annual Report on Form 10-K.

2022 Revolving Credit Facility: $1.25 billion senior unsecured revolving credit facility, which matures on December 16, 2027

2025 Notes: $500 million aggregate principal amount issued of 5.650% senior unsecured notes due June 28, 2025

2026 Notes: $500 million aggregate principal amount issued of 3.850% senior unsecured notes due June 30, 2026

2028 Notes: $1 billion aggregate principal amount issued of 5.350% senior unsecured notes due June 28, 2028

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

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

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

2032 Notes: €750 million aggregate principal amount issued of 4.500% senior unsecured notes due February 15, 2032

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

2034 Notes: $1.25 billion aggregate principal amount issued of 5.550% senior unsecured notes due February 15, 2034

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

2050 Notes: $500 million aggregate principal amount issued of 3.250% senior unsecured notes due April 28, 2050

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

2053 Notes: $750 million aggregate principal amount issued of 5.950% senior unsecured notes due August 15, 2053

2063 Notes: $750 million aggregate principal amount issued of 6.100% senior unsecured notes due June 28, 2063

Adenza: Adenza Holdings, Inc.

AI: Artificial Intelligence

AML: Anti-money Laundering

ARR: Annualized Recurring Revenue

ASC: Accounting Standards Codification

ASR: Accelerated Share Repurchase

ASU: Accounting Standards Update

ATS: Alternative Trading System

AUM: Assets Under Management

AWS: Amazon Web Services

CAT: A market-wide consolidated audit trail established under an SEC approved plan by Nasdaq and other exchanges

CCP: Central Counterparty

CFTC: U.S. Commodity Futures Trading Commission

EBITDA: Earnings Before Interest, Taxes, Depreciation and Amortization

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

Euro Notes: The 2029, 2030, 2032 and 2033 Notes

Exchange Act: Securities Exchange Act of 1934, as amended

FASB: Financial Accounting Standards Board

FICC: Fixed Income and Commodities Trading and Clearing

FINRA: Financial Industry Regulatory Authority

GICS: Global Industry Classification Standard

IPO: Initial Public Offering

MiFID II: Update to the Markets in Financial Instruments Directive

MiFIR: Markets in Financial Instruments Regulation

NPM: Nasdaq Private Market, LLC

NSCC: National Securities Clearing Corporation

OCC: The Options Clearing Corporation

OTC: Over-the-Counter

PCS: Post-contract Customer Support

Proxy Statement: Nasdaq's Definitive Proxy Statement for the 2025 Annual Meeting of Shareholders

PSU: Performance Share Unit

Regulation NMS: Regulation National Market System

Regulation SCI: Regulation Systems Compliance and Integrity

SaaS: Software as a Service

SEC: U.S. Securities and Exchange Commission

SERP: Supplemental Executive Retirement Plan

SFSA: Swedish Financial Supervisory Authority

SOFR: Secured Overnight Financing Rate

SPAC: Special Purpose Acquisition Company

S&P: Standard & Poor's

S&P 500: S&P 500 Stock Index

SRO: Self-regulatory Organization

SSMA: Swedish Securities Markets Act 2007:528

TSR: Total Shareholder Return

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

U.S. Tape plans: U.S. cash equity and U.S. options industry data

UTP: Unlisted Trading Privileges

UTP Plan: Joint SRO Plan Governing the Collection, Consolidation, and Dissemination of Quotation and Transaction Information for Nasdaq-Listed Securities Traded on Exchanges on a UTP Basis

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This Annual Report on Form 10-K includes market share and industry data that we obtained from industry publications and surveys, reports of governmental agencies and internal company surveys. Industry publications and surveys generally state that the information they contain has been obtained from sources believed to be reliable, but we cannot assure you that this information is accurate or complete. We have not independently verified any of the data from third-party sources nor have we ascertained the underlying economic assumptions relied upon therein. Statements as to our market position are based on the most currently available market data. For market comparison purposes, The Nasdaq Stock Market data in this Annual Report on Form 10-K for IPOs and new listings of equity securities (including issuers that switched from other listings venues, closed-end funds and ETPs) is based on data generated internally by us; therefore, the data may not be comparable to other publicly-available IPO data. Data in this Annual Report on Form 10-K 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, including those discussed in "Part I, Item 1A. Risk Factors" section in this Annual Report on Form 10-K.

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 Annual Report on Form 10-K contains these types of statements. Words such as "may," "will," "could," "should," "anticipates," "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, including changes to our corporate structure;*
- *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, sustainability, de-leveraging and capital return initiatives;*
- *our products and services;*
- *the impact of pricing changes;*
- *tax matters;*
- *the cost and availability of liquidity and capital; and*
- *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 any potential settlements of litigation, regulatory or governmental investigations or actions.*

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;*
- *our ability to keep up with rapid technological advances, including our ability to effectively manage the development and use of AI in certain of our products and offerings, and adequately address cybersecurity risks;*
- *economic, political, regulatory and market conditions and fluctuations, including inflation, tariffs, interest rate and foreign currency risk inherent in U.S. and international operations, and geopolitical instability;*
- *the performance and reliability of our technology and technology of third parties on which we rely;*
- *any significant systems failures or errors 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 discussed under the caption "Part I. Item 1A. Risk Factors" in this Annual Report on Form 10-K. You are cautioned not to place undue reliance on these forward-looking statements, which speak only as of the date of this Annual Report on Form 10-K. You should carefully read this entire Annual Report on Form 10-K, including "Part II. Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations" and the 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

Item 1. Business

OVERVIEW

Nasdaq is a global technology company serving corporate clients, investment managers, banks, brokers, and exchange operators as they navigate and interact with the global capital markets and the broader financial system. We aspire to deliver world-leading platforms that improve the liquidity, transparency, and integrity of the global economy. Our diverse offering of data, analytics, software, exchange capabilities, and client-centric services enables clients to optimize and execute their business vision with confidence.

We manage, operate and provide our products and services in three business segments: Capital Access Platforms, Financial Technology and Market Services.

HISTORY

Nasdaq was founded in 1971 as a wholly-owned subsidiary of FINRA. Beginning in 2000, FINRA restructured and broadened ownership in Nasdaq by selling shares to FINRA members, investment companies and issuers listed on The Nasdaq Stock Market. In connection with this restructuring, FINRA fully divested its ownership of Nasdaq in 2006, and The Nasdaq Stock Market became an independent registered national securities exchange in 2007.

In February 2008, Nasdaq and OMX AB combined their businesses, and we changed our corporate name to The NASDAQ OMX Group, Inc. This transformational combination resulted in the expansion of our business from a U.S.-based exchange operator to a global exchange company offering technology that powers our own exchanges and markets as well as many other marketplaces around the world. We operated as the NASDAQ OMX Group until we rebranded our business as Nasdaq, Inc. in 2015.

In November 2023, we accelerated our transformation as a leading technology provider to the global financial system through the acquisition of Adenza and its two flagship solutions, AxiomSL and Calypso.

GROWTH STRATEGY

To enable success in the evolving global financial system, we have established our purpose, vision, and value proposition together with a focused growth strategy:

Our Purpose: We advance economic progress for all.

Our Vision: We will be the trusted fabric of the world's financial system.

Our Value Proposition: We deliver world-leading platforms that improve the liquidity, transparency and integrity of the global economy.

Our Strategy: In 2017, we implemented a new strategic direction with the aim of optimizing the deployment of resources, human capital, and financial assets towards our most promising growth opportunities. These opportunities, which we identified as substantial and expanding opportunities, included solutions for combating financial crime, compliance solutions, marketplace technology, workflow for investment managers and asset owners as well as insight solutions. Our strengths in technology, proprietary data, analytics, and capital markets expertise, in conjunction with our broad client base and innovative brand has positioned us favorably to meet the evolving demands of our clientele and deliver in a sustainable way.

In order to amplify our strategy, we aligned our company more closely with the evolving client needs with an aim to drive growth across our key pillars of liquidity, transparency and integrity:

- *Liquidity:* Within our Financial Technology and Market Services segments, we continue to modernize markets by utilizing technology to maximize the liquidity of the global economy. New technologies, including cloud, blockchain, machine learning and AI, present significant opportunities to further enhance market resiliency and scalability and make markets even more accessible. We believe that these technologies will enable more opportunities for market participants and new asset classes to be integrated across markets globally.
- *Transparency*: With nearly 10,000 corporate clients and 5,000 clients across the investment management ecosystem, our Capital Access Platforms segment is a trusted partner to enable the corporate and investment communities in making more informed decisions. Leveraging the insights and capabilities across our listings, advisory, data, index, and analytics teams, we believe that Capital Access Platforms segment serves as a bridge between the investor and corporate communities, focused on enhancing the client experience by providing efficient routes to capital, delivering more holistic, actionable insights and intelligence, modernizing workflows, and navigating the climate and sustainability landscape.
- *Integrity:* Financial Crime Management Technology and Regulatory Technology, within our Financial Technology segment, include Nasdaq's fraud detection, anti-money laundering, surveillance and risk data management and regulatory reporting solutions businesses. These businesses remain focused on capturing the opportunities arising from protecting the integrity of the financial system by fighting financial crime and helping our clients solve their most complex risk and compliance challenges.

PRODUCTS AND SERVICES

Capital Access Platforms

Our Capital Access Platforms segment delivers liquidity, transparency and integrity to the corporate issuer and investment community by empowering our clients to effectively navigate the capital markets, achieve their sustainability goals, and drive governance excellence. We offer a suite of products to assist companies in managing corporate governance standards.

Our Capital Access Platforms segment comprises Data & Listing Services, Index and Workflow & Insights.

Data & Listing Services

Our North American and European data products enhance transparency of market activity within our exchanges and provide critical information to professional and non-professional investors globally. Our Data business distributes historical and real-time market data to sell-side customers, the institutional investing community, retail online brokers, proprietary trading firms, and other venues, as well as internet portals and data distributors.

We collect, process, and create information and earn revenues as a distributor of our own, as well as select third-party, content. We provide varying levels of quote and trade information to market participants and to data distributors who in turn provide subscriptions for this information. Our systems enable distributors to gain access to our market depth, order imbalances, market sentiment and other analytical data.

We distribute this proprietary market information to both market participants and non-participants through a number of proprietary products, including Nasdaq TotalView, our flagship market depth quote product. We offer TotalView products for The Nasdaq Stock Market and our Nasdaq BX, Nasdaq PSX and Nordic markets. We also offer Nordic Equity TotalView, Nordic Derivatives TotalView and Nordic Fixed Income TotalView for Nordic markets.

We operate several other proprietary services and data products to provide market information, including Nasdaq Basic, a lower cost alternative to the industry Level 1 feed and Nasdaq Canada Basic, a lower cost alternative to other data feeds. We also provide various other data, including data relating to our U.S. equities and options exchanges and Nordic equities, derivatives, fixed income and futures.

We operate a variety of listing platforms around the world to provide multiple global capital raising solutions for public companies. Companies listed on our markets represent a diverse array of industries including, among others, healthcare, consumer products, telecommunication services, information technology, financial services, industrials and energy. Our main listing markets are The Nasdaq Stock Market and the Nasdaq Nordic and Nasdaq Baltic exchanges.

Companies seeking to list securities on The Nasdaq Stock Market may do so on one of the three market tiers: The Nasdaq Global Select Market, The Nasdaq Global Market, or The Nasdaq Capital Market. To qualify, companies must meet minimum listing requirements, including specified financial and corporate governance criteria. Once listed, companies must maintain rigorous listing and corporate governance standards.

As of December 31, 2024, a total of 5,249 companies listed securities on our U.S., Nasdaq Nordic, Nasdaq Baltic and Nasdaq First North exchanges. As of December 31, 2024, a total of 4,075 companies listed securities on The Nasdaq Stock Market, with 1,383 listings on The Nasdaq Global Select Market, 1,366 on The Nasdaq Global Market and 1,326 on The Nasdaq Capital Market.

We seek new listings from companies conducting IPOs, including SPACs, and direct listings as well as companies looking to switch from alternative exchanges. The 2024 new listings were comprised of the following:

Operating company IPOs	130
SPAC IPOs	50
Switches from the New York Stock Exchange LLC, or NYSE, and the NYSE American LLC, or NYSE American	17
Upgrades from OTC	22
ETPs and Other Listings	244
Total	463

The Nasdaq Stock Market eligible IPO win rates:

2024 total	82 %
Operating companies	80 %

During 2024, we had 17 new listings resulting from operating companies switching their listings from NYSE or NYSE American to join The Nasdaq Stock Market as well as 13 ETP switches, included in ETPs and other listings in the table above. More than $180 billion in global equity market capitalization switched to The Nasdaq Stock Market. Eligible IPO win rate only includes companies that meet quantitative Nasdaq listing standards.

We also offer listings on the exchanges that comprise Nasdaq Nordic and Nasdaq Baltic. For smaller companies and growth companies, we offer access to the financial markets through the Nasdaq First North alternative marketplaces. As of December 31, 2024, a total of 1,174 companies listed securities on our Nordic and Baltic exchanges.

Our European listing customers include companies, funds and governments. Customers issue securities in the form of cash equities, depository receipts, warrants, ETPs, convertibles, rights, options, bonds or fixed-income related products. In 2024, a total of 31 new companies listed on our Nordic and Baltic exchanges.

Index

Our Index business develops and licenses Nasdaq-branded indices and financial products. License fees for our trademark licenses vary by product based on a percentage of underlying assets, dollar value of a product issuance, number of products or number of contracts traded. We also license cash-settled options, futures and options on futures on our indices.

As of December 31, 2024, 401 ETPs listed on 28 exchanges in over 20 countries tracked a Nasdaq index and accounted for $647 billion in AUM. Our flagship index, the Nasdaq-100 Index, or NDX, includes the top 100 non-financial companies listed on The Nasdaq Stock Market. More than 150 ETPs worldwide track indices in the NDX ecosystem, which had over $520 billion in assets tracking the indices as of December 31, 2024, or 80% of total AUM.

We provide index data products based on Nasdaq indices. Index data products include our Global Index Data Service, which delivers real-time index values throughout the trading day, and Global Index Watch/Global Index File Delivery Service, which delivers daily and historical weightings and components data, corporate actions and a breadth of additional data for the indices that we operate.

Workflow & Insights

Workflow & Insights includes our analytics and corporate solutions products.

Our analytics products provide asset managers, investment consultants and institutional asset owners with information and analytics to make data-driven investment decisions, deploy their resources more productively, and provide liquidity solutions for private funds. Through our eVestment and Solovis platforms, 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.

The Nasdaq Fund Network and Nasdaq Data Link are additional platforms in our suite of investment data analytics offerings and data management tools. Nasdaq Fund Network gathers and distributes daily net asset values from over 50,000 funds and other investment vehicles across North America. Nasdaq Data Link strengthens our position as a leading source for financial, economic, and alternative datasets.

Corporate solutions serves both public and private companies and organizations through our Investor Relations Intelligence, Governance Solutions and Sustainability Solutions products. 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, and various non-profit organizations to hospitals and healthcare systems.

Our Investor Relations Intelligence offerings include a global team of expert consultants that deliver advisory services including Equity Surveillance & Shareholder Analysis, Investor Engagement and Perception Studies, as well as an industry-leading platform, Nasdaq IR Insight, to investor relations professionals and executive teams. These solutions allow investor relations officers and executives to better manage their investor relations programs, understand their investor base, target new investors, manage meetings and consume key data such as investor profiles, equity research, consensus estimates and news.

Through our Governance Solutions products, we provide an industry-leading board meeting management platform, Nasdaq Boardvantage, and consulting services that streamline the meeting process for board of directors and executive leadership teams and enable them to accelerate decision making and strengthen governance.

Our Sustainability Solutions includes consulting services and purpose built sustainability reporting software. Our advisory practice helps companies analyze, assess and action best practices as it relates to their sustainability programs. Nasdaq Metrio is our SaaS-based end-to-end sustainability reporting platform that enables corporates to collect, measure, disclose and communicate investor-grade, audited ESG data efficiently across dozens of raters, rankers and framework organizations to drive strategic outcomes and attract investors.

Financial Technology

The Financial Technology segment delivers world leading platforms that improve the liquidity, transparency and integrity of the global economy by architecting and operating the world's best markets. This segment comprises Financial Crime Management Technology, Regulatory Technology and Capital Markets Technology businesses.

We are a leading global technology solutions provider and partner to exchanges, clearing organizations, central securities depositories, banks, brokers, buy-side firms and corporate businesses, and power more than 135 marketplaces (including those operated by Nasdaq) and regulators, in more than 55 countries. Our solutions can handle 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 by non-capital markets customers, as discussed further below.

Financial Crime Management Technology

Financial Crime Management Technology includes our Nasdaq Verafin solution which delivers a leading anti-financial crime platform improving the integrity and transparency of the financial world. Nasdaq Verafin provides a SaaS solution to financial institutions for fraud detection and management, AML and countering the financing of terrorism compliance and management, high-risk customer management, sanctions screening and management, and information sharing.

Nasdaq Verafin has leveraged AI for more than 20 years to deliver industry-leading financial crime management solutions, combining deep domain and technical expertise with consortium data. Nasdaq Verafin's comprehensive solutions help financial institutions tackle complex problems, including payments fraud targeting all payment channels.

Our innovative AI-based Targeted Typology Analytics solution examines a range of behavioral, transactional, third-party, and consortium insights for more effective detection of crimes with fewer false positives and high quality results.

Our Nasdaq Verafin solution provides the tools to help more than 2,600 North American financial institutions with regulatory compliance as well as detect, investigate and report money laundering and financial fraud.

Regulatory Technology

Regulatory Technology includes AxiomSL and surveillance solutions.

AxiomSL is a global leader in risk data management and regulatory reporting solutions for the financial industry, including banks, broker dealers and asset managers. Its unique enterprise data management platform delivers data lineage, risk aggregation, analytics, workflow automation, reconciliation, validation and audit functionality, as well as disclosures.

AxiomSL's platform supports compliance across a wide range of global and local regulations and delivers solutions and services for financial regulatory reporting, liquidity, capital and credit, operations, trade and transaction reporting, and ESG reporting.

Our surveillance solutions include a SaaS platform designed for banks, brokers and other market participants to assist in complying with market rules, regulations and internal market surveillance policies and serves more than 170 clients. We also provide a solution to regulators and exchanges with a robust platform to manage cross-market, cross-asset and multi-venue surveillance. This offering powers surveillance for more than 50 exchanges and 18 regulators.

Capital Markets Technology

Capital Markets Technology includes our Calypso and market technology solutions as well as trade management services.

Calypso is a leading platform providing cross-asset, front-to-back trading, treasury, risk and collateral management solutions. The Calypso solution provides customers with a single platform designed to enable consolidation, innovation and growth. The platform supports front, middle and back office activities in exchange-traded and OTC instruments and supports multiple financial asset classes and the associated financial instruments. Calypso's software application specializes in capital markets, investment management, risk management, clearing, collateral, treasury and liquidity management.

The Calypso platform, leveraging modern technology, is versatile and serves customers across different industries, including banks, central banks, buy-side clients, government-sponsored entities and corporate clients, and can quickly adapt to changing paradigms including new asset classes, regulations, trading venues, and trading and processing workflows.

Nasdaq's market technology solutions are utilized by leading markets in North America, Europe, Asia, Middle East, Latin America and Africa. These solutions can handle 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 by non-capital markets customers. We continue to develop our SaaS business portfolio by extending and migrating our current offerings to SaaS.

We provide and deliver mission-critical solutions to market infrastructure operators, which include exchanges, regulators, clearinghouses and central securities depositories. These solutions are designed to cover all aspects of a market operator's needs, from trading and clearing to risk management, index development, data, management, testing and quality assurance.

In addition to serving the market operators in the core capital markets, there is a demand for mission critical solutions to enable robust operation of new emerging asset classes such as crypto currencies and native digital markets. Our market technology business currently offers its services to several digital assets exchanges, and the SaaS-based Marketplace Services Platform provides next-generation marketplace capabilities spanning the transaction lifecycle to facilitate the exchange of assets, services and information across various types of market ecosystems and machine-to-machine transactions.

Our market technology business also provides complex delivery management and systems integration. Through our integration services, we can assume responsibility for projects that involve migration to a new system and the establishment of entirely new marketplaces. We also offer operation and support for the applications, systems platforms, networks and other components included in an information technology solution, as well as advisory services.

Our trade management services provide market participants with a wide variety of alternatives for connecting to and accessing our markets for a fee. Our marketplaces may be accessed via a number of different protocols used for quoting, order entry, trade reporting and connectivity to various data feeds. WorkX, a web-based, front-end interface allows market participants to view data, utilize risk management tools, and submit and review trade reports. WorkX enables a seamless workflow and enhanced trade intelligence. In addition, we offer a variety of add-on compliance tools to help market participants 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 certain data centers using millimeter wave and microwave technology.

Market Services

Our Market Services segment includes our equity derivative trading and clearing, cash equity trading, fixed income, currency and commodities trading. We operate 19 exchanges across several asset classes, including derivatives, commodities, cash equity, debt, structured products and ETPs.

We provide trading services in North America and Europe. In the U.S., we operate six options exchanges: Nasdaq PHLX, The Nasdaq Options Market, Nasdaq BX Options, Nasdaq ISE, Nasdaq GEMX and Nasdaq MRX. These exchanges facilitate the trading of equity, ETF, index and foreign currency options. Our combined options market share in 2024 represented the largest share of the U.S. market for multi-listed equity options. Our options trading platforms provide trading opportunities to retail investors, algorithmic trading firms and market makers, who tend to prefer electronic trading, and institutional investors, who typically require high touch services to execute their trades, which are often performed on our trading floor in Philadelphia.

We also operate three cash equity exchanges: The Nasdaq Stock Market, Nasdaq BX and Nasdaq PSX. Our U.S. cash equity exchanges offer trading of both Nasdaq-listed and non-Nasdaq-listed securities. The Nasdaq Stock Market is the largest single venue of liquidity for trading U.S.-listed cash equities. Market participants include market makers, broker-dealers, ATSs, institutional investors, and registered securities exchanges. We also operate a U.S. corporate bond exchange for the listing of corporate bonds.

Our Market Services segment also includes revenues from U.S. Tape plans. The plan administrators sell quotation and last sale information for all transactions, whether traded on The Nasdaq Stock Market or other exchanges, to market participants and to data distributors, who then provide the information to subscribers. After deducting costs, the plan administrators distribute the tape revenues to the respective plan participants based on a formula required by Regulation NMS that takes into account both trading and quoting activity.

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 Tallinn (Estonia), Riga (Latvia) and Vilnius (Lithuania) as Nasdaq Baltic and exchanges in Stockholm (Sweden), Copenhagen (Denmark), Helsinki (Finland), and Reykjavik (Iceland) together with the clearing operations of Nasdaq Clearing, as Nasdaq Nordic.

Collectively, the Nasdaq Nordic and Nasdaq Baltic exchanges offer trading in cash equities, depository receipts, warrants, convertibles, rights, fund units and ETFs, as well as trading and clearing of derivatives and clearing of resale and repurchase agreements. Our platform allows the exchanges to share the same trading system, which enables efficient cross-border trading and settlement, cross-exchange membership and a single source for Nordic data products. Settlement and registration of cash equity trading takes place in Sweden, Finland, and Denmark via the local central securities depositories. In addition, Nasdaq owns a central securities depository that provides notary, settlement, central maintenance and other services in the Baltic countries and Iceland.

In Europe, Nasdaq Nordic offers trading in derivatives, such as stock options and futures and index options and futures. Nasdaq Clearing offers CCP clearing services for stock options and futures and index options and futures.

Nasdaq Fixed Income, or NFI, 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 is the largest bond listing venue in the Nordics, with more than 5,600 listed retail and institutional bonds. In addition, Nasdaq Nordic facilitates the trading and clearing of Nordic fixed income derivatives in a unique market structure. Buyers and sellers agree to trades in fixed income derivatives through bilateral negotiations and then report those trades to Nasdaq Clearing. Nasdaq Clearing offers CCP clearing services for fixed-income options and futures and interest rate swaps. Nasdaq Clearing also operates a clearing service for the resale and repurchase agreement market.

Nasdaq Commodities is the brand name for Nasdaq's European commodity-related products and services such as trading and clearing. Nasdaq Commodities' offerings include derivatives in power, natural gas and carbon emission

markets, seafood and electricity certificates. These products are listed on Nasdaq Oslo ASA, except for seafood, which is listed on Fish Pool, a third-party platform. In June 2023, we entered into an agreement to sell our Nordic power trading and clearing business, which was subsequently terminated in June 2024. In January 2025, we entered into a new agreement to transfer existing open positions in our Nordic power derivatives trading and clearing business to a European exchange. The completion of this transaction is subject to customary regulatory approvals. Additionally, beginning in January 2025, Nasdaq no longer offered seafood derivatives clearing.

Nasdaq Oslo ASA is the commodity derivatives exchange for European products. All trades with Nasdaq Oslo ASA are subject to clearing with Nasdaq Clearing, which offers CCP clearing services for commodities options and futures.

We also own a majority stake in Puro.earth, a Finnish-based leading platform for carbon removal. Puro.earth offers engineered carbon removal instruments that are verified and tradable through an open, online platform. Puro.earth's marketplace capabilities add to our suite of sustainability-focused technologies and workflow solutions and give our clients further resources to achieve their sustainability objectives.

ENABLERS, DIFFERENTIATORS AND COMPETITION

Technology

Technology plays a key role in ensuring the growth, reliability and regulation of financial markets. We have established a technology risk program to evaluate the resiliency of critical systems, including risks associated with cybersecurity. This program is focused on identifying areas for improvement in systems, and implementing changes and upgrades to technology and processes to minimize future risk. We have continued our focus on improving the security of our technology with an emphasis on employee awareness through training, targeted phishing education campaigns, and new tool deployment for our securities operations team. See "Item 1A. Risk Factors" in this Annual Report on Form 10-K for further discussion.

We are focused on amplifying the impact that AI has on the business and in our products. We continue to develop products and services using AI, including generative AI, and the use of AI in product development remains a priority for us in 2025. We are currently leveraging AI to further develop products and solutions in areas such as investment analytics, investor relations and fraud and anti-money laundering, as well as to modernize markets with the SEC approval of the first AI-powered order type. For example, we are working on developing AI systems to track financial transactions across the ecosystem to determine potential fraud, money laundering, or other actions. These solutions can be utilized by our clients, including banks, other exchanges and brokers firms that use our solutions to reduce or eliminate threats.

We are committed to the ethical and responsible use of AI in our products, services and business operations. Our AI governance structure aligns the application of AI with our core values through a framework that addresses the new and unique risks that AI technology presents, while enabling us to explore innovation and take advantage of opportunities that AI presents to better serve our customers, advance our business objectives and bring value to our shareholders. Our AI governance framework applies risk management across AI-related product development and business usage in the company through a multi-disciplinary approach. The framework puts into practice Nasdaq's responsible AI usage principles and considers the U.S. National Institute of Standards and Technology AI Risk Management Framework. It is administered through company-wide policies, procedures and supporting preventative and detective controls.

We believe that our focus on AI to enhance features of our existing offerings and in the development of new solutions, together with our significant proprietary data sets and our use of AI to drive internal operating efficiencies, provides us with a competitive advantage.

During 2024, Nasdaq continued its shift from traditional on-premises deployments by utilizing and deploying cloud infrastructure. We believe that migrating our exchanges to the cloud, through our partnership with AWS, will result in improved performance and increased flexibility for our customers. We expect to move additional markets to the cloud with AWS during the next several years. The shift to cloud-based markets enables Nasdaq to provide its clients access to enhanced capabilities, including virtual connectivity services, market analytics and machine learning. We also expect to continue to leverage the cloud-based infrastructure for our market technology clients, assisting such clients in developing their own platforms and customizing their offerings for their local, rapidly changing industry dynamics. Additionally, we expanded our existing colocation facility to meet the growing demand of market participants that seek proximity to the Nasdaq trading systems. Our expanded and enhanced facility is designed to provide the optimal environment for the next generation of compute workloads and offer clients access to a wider range of services and capabilities.

To facilitate the exchange migration to AWS, Nasdaq will also leverage its Fusion technology platform. Fusion positions Nasdaq's North American and European markets to manage, operate and deploy a common platform that can be used across our nine Nasdaq derivative markets, while enabling our markets for cloud deployment.

Competitive Strengths

We are a global, client-focused technology company with expertise in markets and financial technology. We deploy robust technology capabilities and have developed innovative solutions to further address client needs across the financial ecosystem. Our business segments complement each other and we believe that our strong competitive position in large, high-growth markets positions us for sustained growth.

Our Value Proposition

We operate leading platforms that can improve the liquidity, transparency, and integrity of the global financial ecosystem, allowing us to:

- Develop efficient and reliable technologies to facilitate and protect the financial system across asset classes;
- Empower our clients to effectively navigate the capital markets, achieve their sustainability goals, and maintain corporate governance excellence; and
- Provide data, tools and insights that drive sound decision making while complying with evolving regulatory requirements.

Technological Strength

The strength and resiliency of our technology, enhanced by our Financial Technology segment, in meeting the advancing demands of our global customer base is vital to the continued success of our business and distinguishes us from our competitors.

We strive to be a trusted partner to a diverse range of clients that participate across the global financial ecosystem, including:

- *Banks and Financial Institutions:* Providing banks and financial institutions with safety and integrity through a suite of trade surveillance, cloud-native fraud and anti-money laundering solutions and robust regulatory reporting software.
- *Market Infrastructure Operators:* Assisting market infrastructure operators in increasing efficiency, meeting customer needs, and growing revenue across the trade lifecycle.
- *Brokers and Traders:* Helping brokers and traders to confidently plan, optimize, manage risk and execute their business vision.
- *Market Participants:* Providing market participants with access to liquidity and enabling them to efficiently consume, monitor, analyze, and capitalize on real-time market changes.
- *Listed Companies:* Enabling companies to access capital markets effectively, manage stakeholders and leverage technology to operate and govern effectively.
- *Investors and Asset Managers:* Offering products and services to assist investors and asset managers in optimizing their portfolios and offerings.

Competition

Capital Access Platforms

Our Data business includes proprietary data products. Proprietary data products are made up exclusively of data derived from each exchange's systems. Competition in the data business is influenced by rapidly changing technology and the creation of new product and service offerings.

Our proprietary data products face competition globally from alternative exchanges and trading venues that offer similar products. Our data business competes with other exchanges and third-party vendors to provide information to market participants.

Our Listing Services business in both the U.S. and Europe provides a means of facilitating capital formation through public capital markets. There are competing ways of raising capital, and we seek to demonstrate the benefits of listing shares on our exchange. Our primary competitor for larger company stock share listings in the U.S. is NYSE. The Nasdaq Stock Market competes with local and international markets located outside the U.S. for listings of equity securities of both U.S. and non-U.S. companies that choose to list (or dual-list) outside of their home country. For example, The Nasdaq Stock Market competes for listings with exchanges in Europe and Asia. Additionally, we face competition from private equity firms that may elect to keep their portfolio companies as private companies.

The Listings Services business in Europe is characterized by a large number of exchanges competing for new or secondary listings. Each country has one or more national exchanges, which are often the first choice of companies in each respective country. For those considering an alternative, competing European exchanges that frequently attract many listings from outside their respective home countries include LSE, Euronext N.V. and Deutsche Börse AG. In addition to the larger exchanges, companies seeking capital or liquidity from public capital markets are able to raise capital without a regulated market listing and can consider trading their shares on smaller markets and quoting facilities.

Our Index business offers Nasdaq-branded indices and financial products and faces competition from providers of various competing financial indices. For example, there are a number of indices that aim to track the technology sector and thereby compete with the Nasdaq-100 Index and the Nasdaq Composite Index. We face competition from investment banks, dedicated index providers, markets and other product developers, including S&P Dow Jones Indices, MSCI and FTSE Russell.

Workflow & Insights includes our analytics and corporate solutions businesses. Our analytics business faces competition from a broad array of data and analytics suppliers, both established firms and small start-ups.

Our corporate solutions business faces competition that can be varied and fragmented. Other exchange operators are partnering with firms that have capabilities in this area and seeking to acquire relevant assets in order to provide investor relations services to customers alongside listing services. Our Sustainability Solutions, including Nasdaq Metrio and sustainability consulting services, are positioned in evolving markets with competitors offering multiple point solutions providing software, data or consulting services. Our Governance Solutions products compete against a wide range of companies that vary by customer segment and geography.

Financial Technology

For our Financial Crime Management Technology and trade and market surveillance businesses, competitors include core banking solution providers ranging from small to large, independent solution providers, FinTech start-ups and in-house custom builds. We compete against enterprise solution providers and point solutions for clients with larger AUM. Competitors also include companies that serve multiple industries in addition to financial services with generalized solutions, such as business intelligence tools, data integrators, investigation platforms and software covering the broader compliance lifecycle. Recently, there has been an increase of FinTech start-ups shifting into the surveillance, fraud detection and AML space offering highly-specialized solutions for advanced data analytics, AI and machine learning technology. The Financial Crime Management Technology and surveillance offerings compete on a number of factors, including but not limited to, increased workflow efficiency, quality of the data, quality of alerts and pricing.

Our Financial Crime Management Technology and surveillance offerings must demonstrate the ability to decrease false-positives and provide in-depth views into potential abuses and risks that stem from those cases. These offerings help firms reduce both the reputational and regulatory risk as well as the complexity in efforts to keep markets and financial institutions safe.

Competitors to our AxiomSL solutions, which includes financial, statistical and prudential reporting as well as shareholder disclosures, trade reporting and ESG reporting, include large independent solution providers, in-house solutions at financial institutions as well as some smaller independent point solution providers. As regulatory reporting becomes more granular and time sensitive, the ability of our platform to operate with speed at scale, and with consistency across functional business domains continues to set AxiomSL apart.

Competitors to our Calypso product, which includes solutions for cross-asset, front-to-back trading, treasury, risk and collateral management, include enterprise solution providers as well as local and regional providers focusing on smaller clients. Competition among larger clients, such as global banks, typically includes internally developed solutions. Other competitors include point solution companies, such as pricing library providers, and post-trade service providers.

Our market technology business faces competition from exchanges and exchange-related businesses that internally develop their technology. This model has gradually changed as many operators have recognized the cost-savings made possible by buying technology from third parties. As a result, two types of competitors have emerged in our market technology business: exchange operators and technology providers unaffiliated with exchanges. These organizations make available a range of off-the-shelf technology, including trading, clearing, settlement, depository and information dissemination, and offer customization and operation expertise. Market conditions in market technology are evolving rapidly, which makes continuous investment and innovation a necessity. Our partnership with AWS enables us to compete with other companies that are developing cloud-based exchanges and market technology offerings.

Our trade management services business competes with other exchange operators, extranet providers, and data center providers.

Market Services

We face intense competition in North America and Europe. We seek to provide market participants with greater functionality, trading system stability and performance, high levels of customer service, and efficient pricing. In both North America and Europe, our competitors include other exchange operators, operators of non-exchange trading systems and banks and brokerages that operate their own internal trading pools and platforms.

In the U.S., our options markets compete with exchanges operated by Cboe Global Markets, Inc., or Cboe, Miami International Holdings, Inc., or MIAX, Intercontinental Exchange, Inc., or ICE, Members Exchange and BOX Options Market. In the U.S., our cash equities markets compete with exchanges operated by Cboe, ICE, MIAX, The Investors Exchange, Members Exchange and Long Term Stock Exchange. We also face competition from ATSs, known as "dark pools," and other less-heavily regulated broker-owned trade facilitation systems, as well as from other types of OTC trading. In Canada, our cash equities exchange competes principally with exchanges such as the Toronto Stock Exchange, or TSX.

Our U.S. Tape plans earn revenue from consolidated data products which are distributed by SEC-mandated consolidators (one for Nasdaq-listed stocks and another for NYSE and other-listed stocks) that share the revenue among the exchanges that contribute data. The consolidated data business is under competitive pressure from other securities exchanges that trade Nasdaq-listed securities. In addition, The Nasdaq Stock Market similarly competes for the tape fees from the sale of information on securities listed on other markets.

In Europe, our cash equities markets compete with exchanges such as Euronext N.V., Deutsche Börse AG, London Stock Exchange Group plc, or LSE, and many Multilateral Trading Facilities, or MTFs, such as Cboe, Turquoise and Aquis. Our competitors in the trading and clearing of options and futures on European equities include Eurex, Cboe, ICE Futures Europe and London Clearing House, or LCH. In addition, in equities markets in Europe, we face competition from other broker-owned systems, dark pools, Systematic Internalizers, or SIs, and other types of OTC trading. Competition among exchanges for trading European equity derivatives tends to occur where there is competition in the trading of the underlying equities. In addition to exchange-based competition, we face competition from OTC derivative markets.

The implementation of MiFID II and MiFIR has resulted in further competitive pressure on our European trading business. SIs are attracting a significant share of electronically matched volume and compete aggressively for the trading of equity securities listed on our Nordic exchanges. Different bilateral trading systems pursuing block business also remain active in Europe.

Our European fixed income and commodities products and services are subject to competitive pressure from European exchanges and clearinghouses.

INTELLECTUAL PROPERTY

We believe that our intellectual property assets are important for maintaining the competitive differentiation of our products, systems, software and services, enhancing our ability to access technology of third parties and maximizing our return on research and development investments.

To support our business objectives and benefit from our investments in research and development, we actively create and maintain a wide array of intellectual property assets, including patents and patent applications related to our innovations, products and services; trademarks related to our brands, products and services; copyrights in software and creative content; trade secrets; and through other intellectual property rights, licenses of various kinds and contractual provisions. We enter into confidentiality and invention assignment agreements with our employees and contractors, and utilize non-disclosure agreements with third parties with whom we conduct business in order to secure and protect our proprietary rights and to limit access to, and disclosure of, our proprietary information.

We own, or have licensed, rights to trade names, trademarks, domain names and service marks that we use in conjunction with our operations and services. We have registered many of our most important trademarks in the U.S. and in foreign countries. For example, our primary "Nasdaq" mark is a registered trademark that we actively seek to protect in the U.S. and in over 50 other countries worldwide.

Over time, we have accumulated a robust portfolio of issued patents in the U.S. and in many other jurisdictions across the world. We currently hold rights to patents relating to certain aspects of our products, systems, software and services, but we primarily rely on the innovative skills, technical competence and marketing abilities of our personnel. No single patent is in itself core to the operations of Nasdaq or any of its principal business areas.

CORPORATE VENTURE PROGRAM

We operate a corporate venture program to make minority investments primarily in emerging growth FinTech companies that are strategically relevant to, and aligned with, Nasdaq. Investments are made through the venture program to further our research and development efforts and accelerate the path to commercial viability. We expect that capital invested will continue to be modest and will not have a material impact on our consolidated financial statements, existing capital return or deployment priorities. Since its inception in 2017, our venture program has grown in size and has invested in companies covering various sectors, including data, analytics and workflow technologies, blockchain and digital assets, market infrastructure, anti-financial crime, new marketplaces and enabling technologies. As of December 31, 2024, our investments, which primarily include equity and convertible debt investments, were valued at $218 million.

ENVIRONMENTAL, SOCIAL AND GOVERNANCE MATTERS

Nasdaq is committed to our long-term governance and sustainability strategy, advocacy and oversight. We continue to engage with internal and external stakeholders at all levels regarding sustainability matters. During 2024, we continued our corporate, community and commercial ESG efforts, including furthering our commitment to climate change awareness, reducing our environmental impact, building a workplace culture of inclusivity and evolving our portfolio of sustainability-related solutions and services.

The Nominating & ESG Committee has formal responsibility and oversight for corporate ESG policies and programs and receives regular reports on key ESG matters and initiatives. Our Corporate ESG Steering Committee serves as the central coordinating body for our ESG strategy; it is co-chaired by executive leaders and comprised of a cross-functional group of Nasdaq senior executives.

We continued to be committed to our decarbonization and climate strategy. We have taken steps to achieve carbon neutrality across all our business operations for the seventh consecutive year after we retire our remaining carbon offsets for 2024 by the third quarter of 2025. We are working towards our short- and long-term net-zero science-based targets, which were validated and approved by the Science Based Targets initiative in 2022. In 2024, we were named to the Dow Jones Best-in-Class World Index for the first time, the Dow Jones Best-in-Class North America Index for the ninth consecutive year and Just Capital's Just100 list of America's most just companies for the second consecutive year. In addition, Nasdaq maintained industry leading scores from ESG rating agencies, including a rating of "AA," from MSCI placing Nasdaq in MSCI's "Leaders" category.

Our environmental footprint is relatively small due to the nature of our business operations. We remain committed to reducing our environmental impact, focusing on several key areas, including our energy use, the management of our workspaces and how we conduct business travel, and engagement with our value chain. We seek to reduce our atmospheric carbon emissions and we manage our water use and the waste associated with our business operations.

We help companies of all maturity levels through our robust combination of technology, tools, data, insights and capital market solutions.

Our sustainability-focused solutions are centered around three strategic pillars to meet our audience's needs in a rapidly evolving market:

- *Regulatory-focused Workflows:* A powerful, built-for-purpose sustainability data management platform with user-friendly workflows for the most impactful regulation and climate strategy needs.
- *AI-powered Insights:* Proprietary insights powered by trusted data sources and generative AI to provide our users with a better lens to make faster sustainability decisions.
- *In-house Expertise:* In-house sustainability expertise combined with technology to provide full-service support to organizations navigating global compliance requirements, while also monitoring the capital markets.

During 2024, we also maintained, and continued to expand, our portfolio of sustainability services and solutions for our clients and stakeholders.

In 2024, we requested our existing leading suppliers by spend to attest to our Supplier Code of Ethics. The Supplier Code of Ethics, which is available on our website, encourages our suppliers and vendors to adopt sustainability and environmental practices in line with our published Environmental Practices Statement. Additionally, our new suppliers are required to attest to the Supplier Code of Ethics in connection with the commencement of their engagement.

REGULATION

We are subject to extensive regulation in the U.S., Canada and Europe.

U.S. Regulation

U.S. federal securities laws establish a system of cooperative regulation of securities markets, market participants and listed companies. SROs conduct the day-to-day administration and regulation of the nation's securities markets under the close supervision of, and subject to extensive regulation, oversight and enforcement by, the SEC. SROs, such as national securities exchanges, are registered with the SEC.

This regulatory framework applies to our U.S. business in the following ways:

National Securities Exchanges. SROs in the securities industry are an essential component of the regulatory scheme of the Exchange Act responsible for providing fair and orderly markets and protecting investors. The Exchange Act and the rules thereunder, as well as each SRO's own rules, impose many regulatory and operational responsibilities on SROs, including the day-to-day responsibilities for market and broker-dealer oversight. Moreover, an SRO is responsible for enforcing compliance by its members, and persons associated with its members, with the provisions of the Exchange Act, the rules and regulations thereunder, and the rules of the SRO, including rules and regulations governing the business conduct of its members.

Nasdaq currently operates three cash equity, six options markets and one corporate bond market in the U.S. We operate The Nasdaq Stock Market, The Nasdaq Options Market and the Corporate Bond Market pursuant to The Nasdaq Stock Market's SRO license; Nasdaq BX and Nasdaq BX Options pursuant to Nasdaq BX's SRO license; Nasdaq PSX and Nasdaq PHLX pursuant to Nasdaq PHLX's SRO license; and Nasdaq ISE, Nasdaq GEMX and Nasdaq MRX, each of which operates an options market under its own SRO license. As SROs, each entity has separate rules pertaining to its broker-dealer members and listed companies, as applicable. Broker-dealers that choose to become members of our exchanges are subject to the rules of those exchanges.

All of our U.S. national securities exchanges are subject to SEC oversight, as prescribed by the Exchange Act, including periodic and special examinations by the SEC. Our exchanges also are potentially subject to regulatory or legal action by the SEC at any time in connection with alleged regulatory violations. We have been subject to a number of routine reviews and inspections by the SEC or external auditors in the ordinary course, and we have been and may in the future be subject to SEC enforcement proceedings. To the extent such actions or reviews and inspections result in regulatory or other changes, we may be required to modify the manner in which we conduct our business, which may adversely affect our business, operating results and financial condition.

Section 19 of the Exchange Act provides that our exchanges must submit to the SEC proposed changes to any of the SROs' rules, practices and procedures, including revisions to provisions of our certificate of incorporation and by-laws that constitute SRO rules. The SEC will typically publish such proposed changes for public comment, after which the SEC may approve or disapprove the proposal, as it deems appropriate. SEC approval requires a finding by the SEC that the proposal is consistent with the requirements of the Exchange Act and the rules and regulations thereunder. Pursuant to the requirements of the Exchange Act, our exchanges must file with and seek approval from the SEC for, among other things, all proposals to change their pricing structure.

Nasdaq conducts real-time market monitoring, certain equity surveillance not involving cross-market activity, most options surveillance, rulemaking, enforcement and membership functions through our Nasdaq Regulation department. We review suspicious trading behavior discovered by our regulatory staff, and depending on the nature of the activity, may refer the activity to FINRA for further investigation. Pursuant to regulatory services agreements between FINRA and our SROs, FINRA provides certain regulatory services to our markets, including some regulation of trading activity and surveillance and investigative functions. Our SROs retain ultimate regulatory responsibility for all regulatory activities performed under regulatory agreements by FINRA, and for fulfilling all regulatory obligations for which FINRA does not have responsibility under the regulatory services agreements.

In addition to its other SRO responsibilities, The Nasdaq Stock Market, as a listing market, also is responsible for overseeing each listed company's compliance with The Nasdaq Stock Market's financial and corporate governance standards. Our listing qualifications department evaluates applications submitted by issuers seeking to list their securities on The Nasdaq Stock Market to determine whether the quantitative and qualitative listing standards have been satisfied. Once securities are listed, the listing qualifications department monitors each issuer's on-going compliance with The Nasdaq Stock Market's continued listing standards.

Broker-dealer regulation. Nasdaq's broker-dealer subsidiaries are subject to regulation by the SEC, the SROs and various state securities regulators. Nasdaq operates three broker-dealers: Nasdaq Execution Services, LLC, NFSTX, LLC, and Nasdaq Capital Markets Advisory LLC. Each broker-dealer is registered with the SEC, a member of FINRA and registered in the U.S. states and territories required by the operation of its business. In addition, we own a minority interest in NPM.

Nasdaq Execution Services operates as our routing broker for sending orders from Nasdaq's U.S. cash equity and options exchanges to other venues for execution. NFSTX is a registered ATS and acts as an intermediary to facilitate secondary transactions in certain funds (both registered or not registered under the Investment Company Act of 1940), business development companies, certain closed-end funds and private real estate investment funds. Nasdaq Capital Markets Advisory acts as a third-party advisor to privately-held or publicly-traded companies during IPOs and various other offerings.

The SEC, FINRA and SROs adopt, and require strict compliance with, rules and regulations applicable to broker-dealers. The SEC, SROs and state securities commissions may conduct administrative proceedings which can result in censures, fines, the issuance of cease-and-desist orders or the suspension or expulsion of a broker-dealer, its officers or employees. The SEC and state regulators may also institute proceedings against broker-dealers seeking an injunction or other sanction. All broker-dealers have an SRO that is assigned by the SEC as the broker-dealer's Designated Examining Authority. The Designated Examining Authority is responsible for examining a broker-dealer for compliance with the SEC's financial responsibility rules. FINRA is the current Designated Examining Authority for each of our broker-dealer subsidiaries.

Our registered broker-dealers are subject to regulatory requirements intended to ensure their general financial soundness and liquidity, which require that they comply with certain minimum capital requirements. As of December 31, 2024, each of our broker-dealers were in compliance with applicable capital requirements.

Regulatory contractual relationships with FINRA. Our SROs have signed a series of regulatory service agreements covering the services FINRA provides to the respective SROs. Under these agreements, FINRA personnel act as our agents in performing the regulatory functions outlined above, and FINRA bills us a fee for these services. These agreements ensure that the markets for which we are responsible are properly regulated. In conjunction with these agreements, we also perform certain of these functions ourselves. In addition, our SROs retain ultimate regulatory responsibility for all regulatory activities performed under these agreements by FINRA.

Exchange Act Rule 17d-2 permits SROs to enter into agreements, commonly called Rule 17d-2 agreements, approved by the SEC with respect to enforcement of common rules relating to common members. Our SROs have entered into several such agreements under which FINRA assumes regulatory responsibility for various rules or areas covered by agreements.

Regulation NMS and Options Intermarket Linkage Plan. We are subject to Regulation NMS for our cash equity markets, and our options markets have joined the Options Intermarket Linkage Plan. These are designed to facilitate the routing of orders among exchanges to create a national market system as mandated by the Exchange Act. One of the principal purposes of a national market system is to ensure that brokers may execute investors' orders at the best market price. Both Regulation NMS and the Options Intermarket Linkage Plan require that exchanges avoid trade-throughs, locking or crossing of markets and provide market participants with electronic access to the best prices among the markets for the applicable cash equity or options order.

In addition, Regulation NMS requires that every national securities exchange on which an NMS stock is traded and every national securities association act jointly pursuant to one or more national market system plans to disseminate consolidated information, including a national best bid and national best offer, on quotations for transactions in NMS stocks, and that such plan or plans provide for the dissemination of all consolidated information for an individual NMS stock through a single plan processor.

The UTP Plan was filed with and approved by the SEC as a national market system plan in accordance with the Exchange Act and Regulation NMS to provide for the collection, consolidation and dissemination of such information for Nasdaq-listed securities. The Nasdaq Stock Market serves as the processor for the UTP Plan pursuant to a contract for a two-year term through October 2025. The Nasdaq Stock Market also serves as the administrator for the UTP Plan. To fulfill its obligations as the processor, The Nasdaq Stock Market has designed, implemented, maintained, and operated a data processing and communications system, hardware, software and communications infrastructure to provide processing for the UTP Plan. As the administrator, The Nasdaq Stock Market manages the distribution of market data, the collection of the resulting market data revenue, and the dissemination of that revenue to plan members in accordance with the terms of the UTP Plan and of Regulation NMS.

Regulation SCI. Regulation SCI is a set of rules designed to strengthen the technology infrastructure of the U.S. securities markets. Regulation SCI applies to national securities exchanges, operators of certain ATSs, market data information providers and clearing agencies, subjecting these entities to extensive compliance obligations, with the goals of reducing the occurrence of technical issues that disrupt the securities markets and improving recovery time when disruptions occur. We implemented an inter-disciplinary program to ensure compliance with Regulation SCI. We have also created Regulation SCI policies and procedures, updated internal policies and procedures, and developed an information technology governance program to ensure compliance.

Regulation of Registered Investment Advisor Subsidiary. Our subsidiary Nasdaq Dorsey Wright, or NDW, is an investment advisor registered with the SEC under the Investment Advisors Act of 1940. In this capacity, NDW is subject to oversight and inspections by the SEC. Among other things, registered investment advisors like NDW must comply with certain disclosure obligations, advertising and fee restrictions and requirements relating to client suitability and custody of funds and securities. Registered investment advisors are also subject to anti-fraud provisions under both federal and state law.

CFTC Regulation. The Dodd-Frank Wall Street Reform and Consumer Protection Act resulted in increased CFTC regulation of our use of certain regulated derivatives products, as well as the operations of some of our subsidiaries outside the U.S. and their customers.

Canadian Regulation

Regulation of Nasdaq Canada is performed by the Canadian Securities Administrators, an umbrella organization of Canada's provincial and territorial securities regulators. As a recognized exchange in Ontario, Nasdaq Canada must comply with the terms and conditions of its exchange recognition order. While exempt from exchange recognition in each jurisdiction in Canada other than Ontario where Nasdaq Canada carries on business, Nasdaq must also comply with the terms and conditions of an exemption order granted by the other jurisdictions in order to maintain its exemptive status. Oversight of the exchange is performed by Nasdaq Canada's lead regulator, the Ontario Securities Commission.

Nasdaq Canada is subject to several national marketplace related instruments which set out requirements for marketplace operations, trading rules and managing electronic trading risk. Exchange terms and conditions include but are not limited to, requirements for governance, regulation, rules and rulemaking, fair access, conflict management and financial viability.

European Regulation

Regulation of our markets in the European Union and the European Economic Area focuses on matters relating to financial services, listing and trading of securities, clearing and settlement of securities and commodities, as well as issues related to market abuse.

We are subject to MiFID II and MiFIR, the European Union's Market Abuse Regulation, which primarily affects our European trading businesses. Many of the provisions of MiFID II and MiFIR are implemented through technical standards drafted by the European Securities and Markets Authority and approved by the European Commission. In addition, in 2016, the European Union adopted legislation on governance and control of the production and use of benchmark indices. The Benchmark Regulation became effective in the European Union beginning in 2018, and Nasdaq must comply beginning January 1, 2026 in relation to benchmarks provided by non-European Nasdaq entities as well as European Nasdaq entities. As the regulatory environment continues to evolve and related opportunities arise, we intend to continue developing our products and services to ensure that the exchanges and clearinghouse that comprise Nasdaq Nordic and Nasdaq Baltic maintain favorable liquidity and offer fair and efficient trading.

In addition, proposed rules under MiFID II and MiFIR rules include provisions potentially impacting various parts of Nasdaq's exchanges and data business, including a proposal to establish a European consolidated tape of pre- and/or post-trade data.

The entities that operate trading venues in the Nordic and Baltic countries are each subject to local regulations. As a result, we have a strong local presence in each jurisdiction in which we operate regulated businesses. The regulated entities have decision-making power and can adopt policies and procedures and retain resources to manage all operations subject to their license. In Sweden, general supervision of the Nasdaq Stockholm exchange is carried out by the SFSA, while Nasdaq Clearing's role as CCP in the clearing of derivatives is supervised by the SFSA and overseen by the Swedish central bank (Riksbanken). Additionally, as a function of the Swedish two-tier supervisory model, certain surveillance of the exchange market is carried out by the

Nasdaq Stockholm exchange, through its surveillance function.

Nasdaq Stockholm's exchange activities are regulated primarily by the SSMA, which implements MiFID II into Swedish law and which sets up basic requirements for the board of directors of the exchange and the exchange's share capital, and which also outlines the conditions on which exchange licenses are issued. The SSMA also provides that any changes to the exchange's articles of association following initial registration must be approved by the SFSA. Nasdaq Clearing holds the license as a CCP under EMIR.

The SSMA requires exchanges to conduct their activities in an honest, fair and professional manner, and in such a way as to maintain public confidence in the securities markets. When operating a regulated market, an exchange must apply the principles of free access (i.e., that each person which meets the requirements established by law and by the exchange may participate in trading), neutrality (i.e., that the exchange's rules for the regulated market are applied in a consistent manner to all those who participate in trading) and transparency (i.e., that the participants must be given prompt, simultaneous and correct information concerning trading and that the general public must be given the opportunity to access this information). Additionally, the exchange operator must identify and manage the risks that may arise in its operations, use secure technical systems and identify and handle the conflicts of interest that may arise between the exchange or its owners' interests and the interest in safeguarding effective risk management and secure technical systems. Similar requirements are set up by EMIR in relation to clearing operations.

The SSMA also contains the framework for both the SFSA's supervisory work in relation to exchanges and clearinghouses and the surveillance to be carried out by the exchanges themselves. The latter includes the requirement that an exchange should have "an independent surveillance function with sufficient resources and powers to meet the exchange's obligations." That requires the exchange to, among other things, supervise trading and price information, compliance with laws, regulations and good market practice, participant compliance with trading participation rules, financial instrument compliance with relevant listing rules and the extent to which issuers meet their obligation to submit regular financial information to relevant authorities.

Due to the underlying EU regulation, the regulatory requirements in the other Nordic and Baltic countries in which a Nasdaq entity has a trading venue are similar to the requirements in Sweden described above. The supervisory authorities in Sweden, Iceland, Denmark, Finland and Norway all cooperate to safeguard effective and comprehensive supervision of the exchanges comprising Nasdaq Nordic and the systems operated by it, and to ensure a common supervisory approach.

Nasdaq owns a central securities depository known as Nasdaq CSD SE (Societas Europaea), that provides notary, settlement, central maintenance and other services in the Baltic countries and in Iceland. Nasdaq CSD SE is licensed under the European Central Securities Depositories Regulation and is supervised by the respective regulatory institutions.

We operate a licensed exchange, Nasdaq Oslo ASA, in Norway that trades and lists commodity derivatives. Although Norway is not a member of the EU, as a result of the European Economic Area, or EEA, agreement (entered into between the EU and European Free Trade Association) the regulatory environment is broadly similar to what applies in EU member states. Since Norway has adopted legislation mirroring the provisions of MiFID II and MIFIR, the regulatory environment in Norway is similar to Sweden. The Financial Supervisory Authority of Norway supervises the Norwegian exchange on an autonomous basis and the Norwegian exchange also has a separate market surveillance function overseen by the Financial Supervisory Authority.

Confidence in capital markets is paramount for trading to function properly. Nasdaq Nordic carries out market surveillance through an independent unit that is separate from the business operations. The surveillance work is conceptually organized into two functions: one for the review and admission of listing applications and surveillance activities related to issuers (issuer surveillance) and one for surveillance of trading (trading surveillance). The real-time trading surveillance for the Finnish, Icelandic, Danish and Swedish markets has been centralized in Stockholm. In addition, there are designated personnel who carry out surveillance activities at Nasdaq Oslo and the three Baltic exchanges. In Finland, Sweden and Estonia, decisions to list new companies on the main market are made by listing committees that have external members in addition to members from each respective exchange and in the other countries the decision is made either by the respective president of the exchange or by the executive board.

If there is suspicion that a listed company or member has acted in breach of exchange regulations, the matter is handled by the respective surveillance department. Serious breaches are considered by the respective disciplinary committee in Denmark, Finland, Iceland, Sweden and Norway. Suspected insider trading is reported to the appropriate authorities in the respective country.

In the United Kingdom, The Nasdaq Stock Market, Nasdaq Oslo ASA, Nasdaq Stockholm AB, Nasdaq Copenhagen A/S, and Nasdaq Helsinki Ltd are each subject to regulation by the Financial Conduct Authority as "Recognised Overseas Investment Exchanges." Nasdaq Clearing is registered as a recognized third country CCP with the Bank of England under the temporary recognition regime. The registration became effective on December 31, 2020 and lasts until December 31, 2026 (which may be extended further), during which time Nasdaq Clearing may continue to act as a CCP vis-a-vis UK members. Nasdaq Clearing has submitted its application for permanent recognition and is awaiting further information as to the process and timeline from the Bank of England.

HUMAN CAPITAL MANAGEMENT

Nasdaq has continued to strengthen our commitment to, and investment in, attracting, retaining, developing and motivating our employees during 2024.

We also continued our efforts to create an inclusive work environment of equal opportunity, where employees feel respected and valued for their contributions, and where Nasdaq and its employees have opportunities to make positive contributions to our local communities.

Additional information regarding our human capital management matters can be found in our annual Sustainability Report, which will be available on our website later in 2025. Our Sustainability Report and other information on our website are not incorporated by reference into this Annual Report on Form 10-K.

As of December 31, 2024, Nasdaq had 9,162 full and part-time employees, including employees of non-wholly owned consolidated subsidiaries.

Flexible and Hybrid Workplace

Following the COVID pandemic, we re-shaped our expectations of the work environment. Most of our employees balance their time between several days in the office and several days working from home, contributing to a positive work-life balance. In addition to vacation time, we provide every employee six paid "flex" days per year, to be used as extra vacation days for mental health, family time, or any other purpose. We have found this flexibility has contributed both to our high engagement scores among current employees, as well as a positive element in attracting new talent to join Nasdaq.

Talent Management and Development

We continued to increase our efforts in attracting and retaining our employees. Nasdaq seeks to hire world-class and innovative talent across the globe.

In 2024, our internal employee engagement score, based on our biannual employee engagement surveys, which most recently had a 94% participation rate, reached its record high rating of 80% favorable, with 14% neutral, placing us in the top 10% of tech companies, according to our survey provider. Our workforce voluntary attrition rate during 2024 was approximately 6.7%, which was nearly one percentage point lower than 2023.

During 2024, we continued a series called the Manager Forum, facilitated by our CEO and other senior and mid-career leaders, to engage managers in sustained leadership development, alongside our existing formal leadership development curriculum.

Our AI-driven career development platform, the Career Hub, matches employees, based on their career aspirations, to internal training, potential mentors, short-term projects and full-time internal roles. This helped us again increase our career satisfaction scores in our biannual employee engagement survey and supported employee retention.

We have invested in professional development for our employees, including offering access to professional development programs; providing tuition assistance to employees enrolled in degree-granting academic programs; holding internal career fairs and career development programs; connecting employees to our formal mentoring programs and providing one-on-one professional coaching opportunities. Our 2024 AI training initiative saw 98% of the firm participating in at least one program to bolster their AI knowledge and skills.

To reward our employees at various stages of their tenure with Nasdaq, we continued our anniversary recognition program that includes Nasdaq-branded merchandise, and, for major milestones, recognition on our Nasdaq Tower in Times Square. Additionally, our peer-to-peer employee recognition program rewards employees and highlights recognized employees on our internal social media channels, further amplifying the recognition. In 2024, more than 18,600 peer-to-peer recognition awards were issued by employees to other employees across the organization.

A Culture of Inclusion

At Nasdaq, three pillars guide our inclusion efforts: *Workforce, Workplace and Marketplace*.

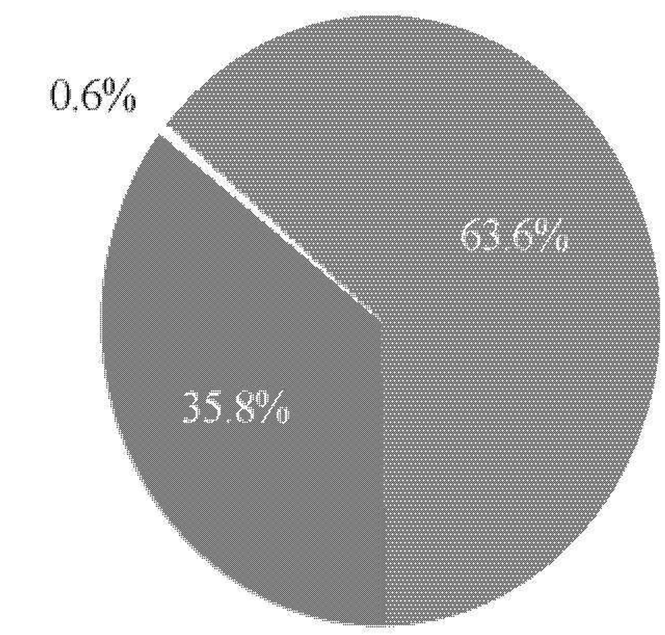
- *Workforce* seeks to ensure that our employee population is representative of the communities in which we operate.
- *Workplace* seeks to create a positive, equitable workplace experience for all employees of Nasdaq.
- *Marketplace* aims to positively influence our peers in the capital market ecosystem and invest in the local communities where we operate.

Workplace Demographics

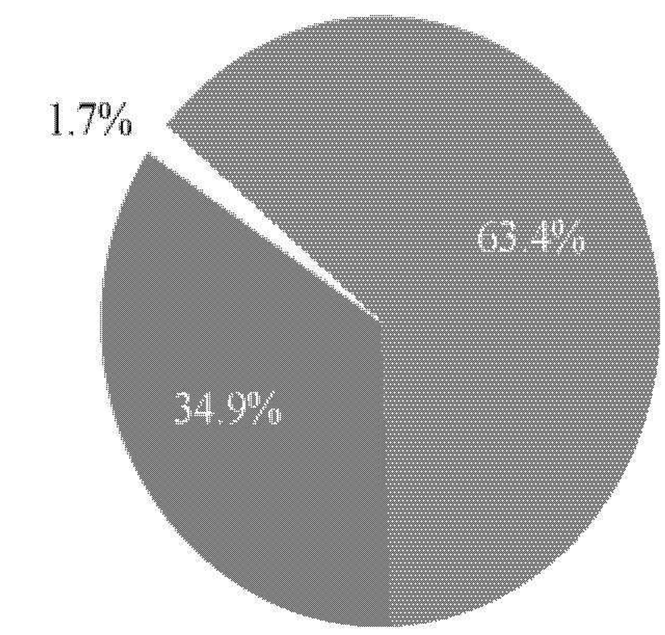
Our global female employee base in 2024 was approximately 36%. Our minority representation in the U.S., which includes Asian, Black/African American, Hispanic/Latino, Multiracial, Native American, Native Hawaiian, and Pacific Islander employees, was 33% in 2024.

Gender and Ethnicity Data as of December 31, 2024 and 2023 are presented below:

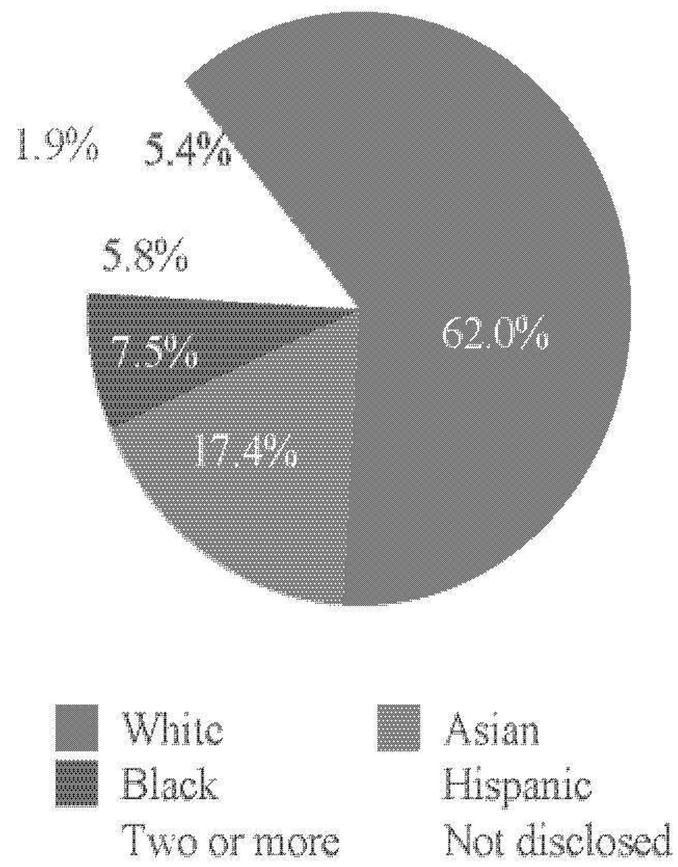
Gender as of December 31, 2024



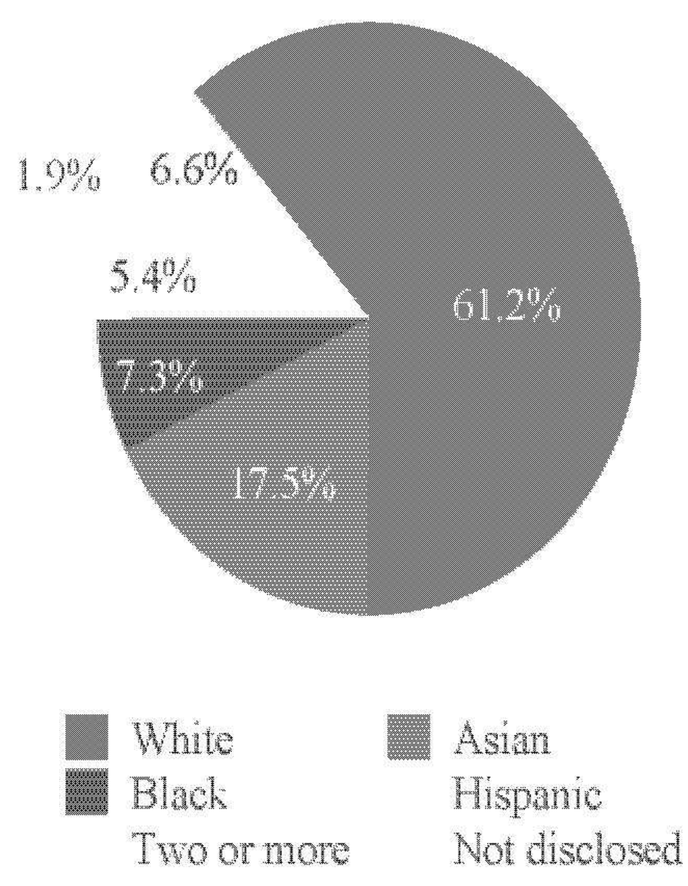
Gender as of December 31, 2023



Race and Ethnicity (U.S. only) as of December 31, 2024*



Race and Ethnicity (U.S. only) as of December 31, 2023*



* In the charts above, the "not disclosed" percentage includes employees that have chosen not to disclose and race and ethnicities that are less than 0.3% of our total employee headcount.

Compensation and Benefits

Our Total Rewards program is designed to attract, retain, and empower employees to successfully execute our growth strategy and our mission to better serve our clients. Our comprehensive Total Rewards program reflects our commitment to protecting our employees' health, well-being and financial security.

Our pay-for-performance compensation programs includes market-competitive base salaries, annual bonuses or sales commissions, and equity grants. The majority of our employees are granted annual, long-term equity awards, enabling them to be owners of the company, committed to our long-term success and aligning their interests with the short-term and long-term interests of our shareholders.

Beyond compensation, we offer a suite of programs, benefits, perquisites, and resources. Our core benefits include health (medical, dental, and vision) and risk insurances (life and disability), retirement plans, and an employee stock purchase plan. We also offer robust paid time-off benefits which include vacation, incidental sick days and parental leave. In addition, all Nasdaq employees, regardless of their location in any of our global offices, are offered paid time off for key life events such as bereavement leave and volunteer days. Our North American employees continue to have access to our flexible time off policy. These programs, coupled with our hybrid work schedules, are designed to meet the various needs of our workforce.

In 2024, we continued to build awareness of our wellness programs and increase support to our employees through on-site and virtual events such as Wellness Week and World Mental Health Day. Wellness Week included six virtual webinars for U.S. employees to learn about the scope of wellness benefits offered. World Mental Health Day was a month-long campaign where managers and employees could participate in webinars to learn about mental health in the workplace. The benefits team also started "well-being moments," which are monthly reminders shared in employee newsletters and town hall meetings to improve the physical, mental and financial health of our employees in their personal and professional life.

Community Involvement

Nasdaq's "Purpose" initiative comprises our philanthropic, community outreach, entrepreneurial support and employee volunteerism programs, all designed to leverage our unique place at the center of capital creation, markets, and technology and drive stronger economies, more equitable opportunities and contribute to a more sustainable world.

Through our Nasdaq GoodWorks Corporate Responsibility Program, we have committed to supporting the communities in which we live and work by providing eligible full and part-time employees with two paid days off per year to volunteer. We also match charitable donations of all Nasdaq employees and contractors up to $1,000, or more in certain circumstances, per calendar year. In 2024, Nasdaq employees raised over $550,000, including donations and matches, supporting more than 800 charities worldwide.

During 2024, Nasdaq held its fourth annual Purpose Week, a week dedicated to celebrating and advancing economic progress for all. Throughout Purpose Week, we hosted employees from around the world for panels and workshops highlighting our continued purpose of advancing economic progress for all. Employees participated in a variety of activities, including packing Thanksgiving food kits, preparing financial literacy guidebooks and building solar lights for communities affected by natural disasters

Additionally, Nasdaq also hosted its second annual Purpose Forum in 2024, focusing on the theme "A Better Tomorrow: Built for Purpose." The Purpose Forum convened thought leaders, change-makers, and innovators to discuss creating positive impact through embracing and adopting purpose-driven strategy, culture, and brand.

The Nasdaq Foundation works with organizations that promote and support under-resourced communities by reimagining investor engagement and equipping communities with the financial knowledge needed to share in the wealth that markets create. During 2024, the Nasdaq Foundation provided grants to 23 organizations that share that mission. These grants were awarded to, among others: The Legal Aid Society, which provides through its Community Development Project legal trainings and technical assistance to small businesses in New York City; Future Founders, which empowers entrepreneurs ages 18-30 to launch and grow their own businesses; and World Services for the Blind, in collaboration with Penny Forward, which will create the first investing courses specifically designed for people who are blind or have low vision.

NASDAQ WEBSITE AND AVAILABILITY OF SEC FILINGS

We file periodic reports, proxy statements and other information with the SEC. The SEC maintains a website that contains reports, proxy and information statements, and other information regarding issuers that file electronically with the SEC. The address of that site is www.sec.gov.

Our website is ir.nasdaq.com. Information on our website is not a part of this Form 10-K. We make available free of charge on our website, or provide a link to our SEC filings, including our Forms 10-K, Forms 10-Q and Forms 8-K and any amendments to these documents, that are filed or furnished pursuant to Section 13(a) or 15(d) of the Exchange Act as soon as reasonably practicable after we electronically file such material with, or furnish it to, the SEC. To access these filings, go to our website and click on "Financials" then click on "SEC Filings."

Item 1A. Risk Factors

The risks and uncertainties described below 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. If any of the following risks actually occur, our business, financial condition, or operating results could be adversely affected.

RISKS RELATED TO OUR BUSINESS AND INDUSTRY

Economic conditions and market factors, which are beyond our control, may adversely affect our business and financial condition.

Our business performance is impacted by a number of factors, including general economic conditions, current or expected inflation, interest rate fluctuations, market volatility, changes in investment patterns and priorities, regulatory shifts, pandemics and other factors that are generally beyond our control. To the extent that global or national economic conditions weaken and result in slower growth or recessions, our business may be negatively impacted. Adverse market conditions could reduce customer demand for our services and the ability of our customers, lenders and other counterparties to meet their obligations to us. Poor economic conditions may result in a reduction in the demand for our products and services, including data, indices and corporate solutions, or could result in a decline in the number of IPOs, reduced trading volumes or values and deterioration of the economic welfare of our listed companies, which could cause an increase in delistings. The demand for our Regulatory Technology, Capital Markets Technology and Financial Crime Management Technology offerings are primarily influenced by regulatory changes and the financial strength and growth plans of our clients at any given time, and such demand may be adversely affected by economic, political and geopolitical market conditions.

Trading volumes and values are driven primarily by general market conditions and declines in trading volumes or values may affect our market share and impact our pricing. In addition, our Market Services businesses receive revenues from a relatively small number of customers concentrated in the financial industry, so any event that impacts one or more customers or the financial industry in general could impact our revenues.

The number of listings on our markets is primarily influenced by factors such as investor demand, the global economy, available sources of financing, and tax and regulatory policies. Adverse conditions may jeopardize the ability of our listed companies to comply with the continued listing requirements of our exchanges, or reduce the number of issuers launching IPOs, including SPACs, and direct listings. While the number of IPOs on our exchanges increased in 2024 as compared to 2023, there is no assurance that demand for IPOs will continue at the same or higher rate.

Our Capital Access Platforms segment may be significantly affected by global economic conditions. Professional subscriptions to our data products are at risk if staff reductions occur in financial services companies or if our customers consolidate, which could result in significant reductions in our professional user revenue or expose us to increased risks relating to dependence on a smaller number of customers. In addition, adverse market conditions may cause reductions in the number of non-professional investors with investments in the market and in ETP AUM tracking Nasdaq indices as well as trading in futures linked to Nasdaq indices.

There may be less demand for our analytics, corporate solutions, market technology and risk and regulatory products and services if global economic conditions weaken. Our customers historically reduce purchases of new services and technology when growth rates decline, thereby diminishing our opportunities to sell new products and services or upgrade existing products and services.

Additionally, during a global economic downturn, or periods of economic, political or regulatory uncertainty, our sales cycle may become longer or more unpredictable due to customer budget constraints or unplanned administrative delays to approve purchases.

A reduction in trading volumes or values, market share of trading, the number of our listed companies, or demand for our products and services due to economic conditions or other market factors could adversely affect our business, financial condition and operating results.

The industries we operate in are highly competitive.

We face significant competition in our Capital Access Platforms, Financial Technology and Market Services segments from other market participants. We face intense competition from other exchanges and markets for market share of trading activity and listings. This competition includes both product and price competition.

The liberalization and globalization of world markets has resulted in greater mobility of capital, greater international participation in local markets and more competition. As a result, both in the U.S. and in other countries, the competition among exchanges and other execution venues has become more intense. Marketplaces in both U.S. and Europe have also merged to achieve greater economies of scale and scope.

Regulatory changes also have facilitated the entry of new participants in the European Union that compete with our European markets. The regulatory environment, both in the U.S. and in Europe, is structured to maintain this environment of intense competition. In addition, a high proportion of business in the securities markets is becoming concentrated in a smaller number of institutions and our revenue may therefore become concentrated in a smaller number of customers.

We also compete globally with other regulated exchanges and markets, ATSs, MTFs and other traditional and non-traditional execution venues. Some of these competitors also are our customers. Competitors may develop market trading platforms that are more competitive than ours. Competitors may leverage data more effectively or enter into strategic partnerships, mergers or acquisitions that could make their trading, listings, clearing, data or technology businesses more competitive than ours.

We face intense price competition in all areas of our business. In particular, the trading industry is characterized by price competition. We have in the past lowered prices, and in the U.S., increased rebates for trade executions to attempt to gain or maintain market share. These strategies have not always been successful and have at times hurt operating performance. Additionally, we have also been, and may once again be, required to adjust pricing to respond to actions by competitors and new entrants, or due to new SEC regulations, which could adversely impact operating results. We also compete with respect to the pricing of data products and with respect to products for pre-trade book data and for post-trade last sale data.

If we are unable to compete successfully in the industries in which we do business, our business, financial condition and operating results will be adversely affected.

System limitations or failures could harm our business.

Our businesses depend on the integrity and performance of the technology, computer and communications systems supporting them. If new systems fail to operate as intended or our existing systems cannot expand to cope with increased demand or otherwise fail to perform, we could experience unanticipated disruptions in service, slower response times and delays in the introduction of new products and services. We could experience a systems failure due to human error by our employees, contractors or vendors, electrical or telecommunications failures or disruptions, hardware or software failures or defects, cyberattacks, sabotage or similar unexpected events. These consequences could result in service outages, lower trading volumes or values, financial losses, decreased customer satisfaction, litigation and regulatory sanctions. Our markets and the markets that rely on our technology have experienced system failures and delays in the past and we could experience future system failures and delays.

Although we currently maintain and expect to maintain multiple computer facilities, and leverage third party cloud providers, that are designed to provide redundancy and back-up to reduce the risk of system disruptions and have facilities in place that are expected to maintain service during a system disruption, such systems and facilities may prove inadequate. If trading volumes increase unexpectedly or other unanticipated events occur, we may need to expand and upgrade our technology, transaction processing systems and network infrastructure. We do not know whether we will be able to accurately project the rate, timing or cost of any volume increases, or expand and upgrade our systems and infrastructure to accommodate any increases in a timely manner.

While we have programs in place to identify and minimize our exposure to vulnerabilities and work in collaboration with the technology industry to share corrective measures with our business partners, we cannot guarantee that such events will not occur in the future. Any system issue that causes an interruption in services, decreases the responsiveness of our services or otherwise affects our services could impair our reputation, damage our brand name and negatively impact our business, financial condition and operating results.

We must continue to introduce new products, initiatives and enhancements to maintain our competitive position.

We intend to launch new products and initiatives and continue to explore and pursue opportunities to strengthen our business and grow our company. We may spend substantial time and money developing new products, initiatives and enhancements to existing products. If these products and initiatives are not successful or their launches are delayed, we may not be able to offset their costs, which could have an adverse effect on our business, financial condition and operating results.

In our technology operations, we have invested substantial amounts in the development of system platforms, the rollout of our platforms and the adoption of new technologies, including cloud-based infrastructure and AI for certain of our offerings. Although investments are carefully planned, there can be no assurance that the demand for such platforms or technologies will justify the related investments. If we fail to generate adequate revenue from planned system platforms or the adoption of new technologies, or if we fail to do so within the envisioned timeframe, it could have an adverse effect on our results of operations and financial condition. In addition, clients may delay purchases in anticipation of new products or enhancements. We may allocate significant amounts of cash and other resources to product technologies or business models for which market demand is lower than anticipated. In addition, the introduction of new products by competitors, the emergence of new industry standards or the development of entirely new technologies to replace existing product offerings could render our existing or future products obsolete.

A decline in trading and clearing volumes or values or market share will decrease our trading and clearing revenues.

Trading and clearing volumes and values are directly affected by economic, political and market conditions, broad trends in business and finance, unforeseen market closures or other disruptions in trading, the level and volatility of interest rates, inflation, changes in price levels of securities and the overall level of investor confidence. Over the past several years, trading and clearing volumes and values across our markets have fluctuated significantly depending on market conditions and other factors beyond our control. Because a significant

percentage of our revenues is tied directly to the volume or value of securities traded and cleared on our markets, it is likely that a general decline in trading and clearing volumes or values would lower revenues and may adversely affect our operating results if we are unable to offset falling volumes or values through pricing changes. Declines in trading and clearing volumes or values may also impact our market share or pricing structures and adversely affect our business and financial condition.

If our total market share in securities decreases relative to our competitors, our venues may be viewed as less attractive sources of liquidity. If our exchanges are perceived to be less liquid, then our business, financial condition and operating results could be adversely affected.

Since some of our exchanges offer clearing services in addition to trading services, a decline in market share of trading could lead to a decline in clearing and depository revenues. Declines in market share also could result in issuers viewing the value of a listing on our exchanges as less attractive, thereby adversely affecting our listing business. Finally, declines in market share of Nasdaq-listed securities, or recently adopted SEC rules and regulations, could lower The Nasdaq Stock Market's share of tape pool revenues under the consolidated data plans, thereby reducing the revenues of our U.S. Tape plans business.

Our role in the global marketplace positions us at greater risk for a cyberattack.

Our systems and operations are vulnerable to damage, misappropriation or disruption from security breaches. Some of these threats include attacks from foreign governments, hacktivists, insiders and criminal organizations. Foreign governments may seek to obtain a foothold in U.S. critical infrastructure, hacktivists may seek to deploy denial of service attacks to bring attention to their cause, insiders may pose a risk of human error or malicious activity and criminal organizations may seek to profit by gaining control of company systems or accounts or from stolen data via ransomware or other means, such as social engineering, including deepfake scams, compromised business email or other methods. Our hybrid work model and our global footprint elevate cybersecurity and operational risks, particularly in geographies with adversary nation-states and/or unreliable law enforcement. Given our position in the global securities industry, we may be more likely than other companies to be a direct target, or an indirect casualty, of such events.

While we continue to employ and invest resources to monitor our systems and protect our infrastructure, these measures may prove insufficient due to the continuously evolving nature of threat activity. Any system issue, whether as a result of an intentional breach, collateral damage from a cybersecurity incident involving our supply chain vendors, a negligent or malicious act by an insider, or the use of AI by bad actors, including the use of such tools to engage in social engineering or similar activities, or due to a cybersecurity breach of a customer that results in a loss of our data or compromises our systems or those of our other customers utilizing the same products, could damage our reputation and result in: a loss of customers; disrupted customer relationships; the loss of our intellectual property or sensitive data; lower trading volumes or values, significant liabilities, litigation or regulatory fines; or otherwise have a negative impact on our business, our products and services, financial condition and operating results. There can be no assurance we will be able to identify and mitigate every incident involving cybersecurity attacks, breaches or incidents. A system breach may go undetected for an extended period of time.

Expanded cybersecurity regulations, and increased cybersecurity infrastructure and compliance costs, may adversely impact our results of operations.

As cybersecurity threats continue to increase in frequency and sophistication, and as the domestic and international regulatory and compliance structure related to information, cybersecurity, data privacy, resiliency and data usage becomes increasingly complex and exacting, we may be required to devote significant additional resources to strengthen our cybersecurity capabilities, and to identify and remediate any security vulnerabilities. Compliance with laws and regulations concerning cybersecurity, data privacy, resiliency and data usage could result in significant expense, and any failure to comply could result in proceedings against us by regulatory authorities or other third parties. Costs for bolstering cybersecurity capabilities, and increased cybersecurity and data privacy compliance costs, could adversely impact our business, financial condition and operating results. Additionally, our clients increasingly demand rigorous contractual, certification and audit provisions regarding cybersecurity, data protection and data usage, which may also increase our overall compliance burden and costs in meeting such obligations.

The success of our business depends on our ability to keep up with rapid technological and other competitive changes affecting our industry. Specifically, we must complete development of, successfully implement and maintain platforms that have the functionality, performance, capacity, reliability and speed required by our business and our regulators, as well as by our customers.

The markets in which we compete are characterized by rapidly changing technology, evolving industry and regulatory standards, frequent enhancements to existing products and services, the adoption of new services and products and changing customer demands. We are reliant on our customers that purchase our on-premises solutions to maintain a certain level of network infrastructure for our products to operate and to allow for our support of those products, and to secure our software and other proprietary materials stored in such systems, and there is no assurance that a customer will implement such measures. We may not be able to keep up with rapid technological and other competitive changes affecting our industry. For example, we must continue to enhance our platforms and, where relevant,

our customers', to remain competitive as well as to address our regulatory responsibilities, and our business will be negatively affected if our platforms or the technology solutions we sell to our customers fail to function as expected. If we are unable to develop our platforms to include other products and markets, or if our platforms do not have the required functionality, performance, capacity, reliability and speed required by our business and our regulators, as well as by our customers, we may not be able to compete successfully. Further, our failure to anticipate or respond adequately to changes in technology and customer preferences or any significant delays in product development efforts, could have a material adverse effect on our business, financial condition and operating results.

Our AI initiatives under development and the use of AI in certain of our existing products may be unsuccessful and may give rise to various risks, which could adversely affect our business, reputation, or operating results.

We have made, and are continuing to make, significant investments in AI including generative AI, to, among other things, develop new products or features for our existing products, including our anti-financial crime, equity trading, investor relations, sustainability and investment analytics solutions, and to enhance and refine our internal business operations. As AI is a new and evolving technology in the early stages of commercial use, there are significant risks involved in the development and deployment of AI, and there can be no assurance that the use of AI will enhance our products or services or augment our business or operating results. Market acceptance of AI technologies is uncertain, and we may be unsuccessful in our product development efforts. Moreover, our AI-related product initiatives and offerings, or use in our internal business operations, may give rise to risks related to harmful content, accuracy, bias, discrimination, intellectual property infringement, the ability to obtain intellectual property protection, misappropriation or leakage of intellectual property, defamation, data privacy, and cybersecurity, among others. In addition, these risks include the possibility of the introduction of new or enhanced laws or regulations or novel enforcement of existing laws to uses of AI, for which compliance may be costly and burdensome or involve changes to our business practices or products, litigation or other legal liability, or additional oversight, audits or enforcement under existing laws or regulations. The use of AI may also give rise to ethical concerns or negative public perceptions, which may cause brand or reputational harm. Additionally, our competitors may be developing their own AI products and technologies, which may be superior in features or functionality, or cost, to our offerings. Any of these factors could adversely affect our business, reputation, or operating results.

Failure to attract and retain key personnel may adversely affect our ability to conduct our business.

Our future success depends, in large part, upon our ability to attract and retain highly qualified and skilled professional personnel that can learn and embrace new technologies. In the current tight labor market, we have intensified our efforts to recruit and retain talent. Competition for key personnel in the various localities and business segments in which we operate is intense. We have, and may continue to, experience higher compensation costs to retain personnel, and hire new talent, that may not be offset by improved productivity, higher revenues or increased sales. Our ability to attract and retain key personnel, in particular senior officers or technology personnel, including from companies that we acquire, will be dependent on a number of factors, including prevailing market conditions, office/remote working arrangements and compensation and benefit packages offered by companies competing for the same talent. There is no guarantee that we will have the continued service of key employees who we rely upon to execute our business strategy and identify and pursue strategic opportunities and initiatives. Our ability to execute our business strategy could be impaired if we are unable to replace such persons without incurring significant costs or in a timely manner or at all.

Our clearinghouse operations expose us to risks, including credit or liquidity risks that may include defaults by clearing members, or insufficiencies in margins or default funds.

We are subject to risks relating to our operation of a clearinghouse, including counterparty and liquidity risks, risk of defaults by clearing members and risks associated with adequacy of the customer margin and of default funds. Our clearinghouse operations expose us to counterparties with differing risk profiles. We may be adversely impacted by the financial distress or failure of a clearing member, which may cause us negative financial impact, reputational harm or regulatory consequences, including litigation or regulatory enforcement actions.

We are exposed to credit risk from third parties, including customers, counterparties and clearing agents.

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 clear a range of equity-related and fixed-income-related derivative products, commodities and resale and repurchase agreements. We assume the counterparty risk for all transactions that are cleared through Nasdaq Clearing on our markets and guarantee that our cleared contracts will be honored. We enforce minimum financial and operational criteria for membership eligibility, require members and investors to provide collateral, and maintain established risk policies and procedures to ensure that the counterparty risks are properly monitored and proactively managed; however, none of these measures provides absolute assurance against

experiencing financial losses from defaults by our counterparties on their obligations. No guarantee can be given that the collateral provided will at all times be sufficient. Although we maintain clearing capital resources to serve as an additional layer of protection to help ensure that we are able to meet our obligations, these resources also may not be sufficient.

We also have credit risk related to transaction and subscription-based revenues that are billed to customers on a monthly or quarterly basis, in arrears.

Credit losses such as those described above could adversely affect our consolidated financial position and results of operations.

Technology issues relating to our role as exclusive processor for Nasdaq-listed stocks could affect our business.

Nasdaq, as technology provider to the UTP Operating Committee, has implemented measures to enhance the resiliency of the existing processor system. Nasdaq transferred the processor technology platform to our INET platform and this migration further enhanced the resiliency of the processor systems. However, if future outages occur or the processor systems fail to function properly while we are operating the systems, it could have an adverse effect on our business, reputation and financial condition.

Stagnation or decline in the listings market could have an adverse effect on our revenues.

The market for listings is dependent on the prosperity of companies and the availability of risk capital. A stagnation or decline in the number of new listings, or an increase in the number of delistings, on The Nasdaq Stock Market and the Nasdaq Nordic and Nasdaq Baltic exchanges could cause a decrease in revenues for future years. A prolonged decrease in the number of listings, failure of existing SPACs to successfully complete transactions with target companies and dissolve or an increase in the number of delistings, could negatively impact the growth of our revenues. Our corporate solutions business is also impacted by declines in the listings market or increases in acquisitions, privatizations or bankruptcies as there may be fewer publicly-traded customers that need our products.

RISKS RELATED TO TRANSACTIONAL ACTIVITIES AND STRATEGIC RELATIONSHIPS

We may not be able to successfully integrate acquired businesses, which may result in an inability to realize the anticipated benefits of our acquisitions.

We must rationalize, coordinate and integrate the operations of our acquired businesses, including the acquisition of Adenza, which was completed in November 2023. This process involves complex technological, operational and personnel-related challenges, which are time-consuming and expensive and may disrupt our business. The difficulties, costs and delays that could be encountered may include:

- difficulties, costs or complications in combining the companies' operations, including technology platforms, security measures and infrastructure or regulatory or legal non-compliance that may need greater remediation than anticipated, which could lead to us not achieving the synergies or efficiencies we anticipate or customers not renewing their contracts with us as we migrate platforms;
- incompatibility of systems and operating methods;
- reliance on, or provision of, transition services;
- inability to use capital assets efficiently to develop the business of the combined company and achieve revenue growth, including cross-sell activity;
- difficulties of complying with government-imposed regulations in the U.S. and abroad, which may be conflicting;
- resolving possible inconsistencies in standards, controls, procedures and policies, business cultures and compensation structures;
- the diversion of management's attention from ongoing business concerns and other strategic opportunities;
- difficulties in operating businesses we have not operated before;
- difficulties of integrating multiple acquired businesses simultaneously;
- the retention of key employees and management;
- the implementation of disclosure controls, internal controls and financial reporting systems at non-U.S. subsidiaries to enable us to comply with U.S. GAAP and U.S. securities laws and regulations, including the Sarbanes-Oxley Act of 2002, required as a result of our status as a reporting company under the Exchange Act;
- the coordination of geographically separate organizations;
- the coordination and consolidation of ongoing and future research and development efforts;
- possible tax costs or inefficiencies associated with integrating the operations of a combined company;
- the retention of strategic partners and attracting new strategic partners; and
- negative impacts on employee morale and performance as a result of job changes and reassignments.

Foreign acquisitions, or acquisitions involving companies with numerous foreign subsidiaries, involve risks in addition to those mentioned above, including those related to integration of operations across different cultures and languages, our ability to enforce contracts in various jurisdictions, currency risks and the particular economic, political and regulatory risks associated with specific countries. We may not be able to address these risks successfully, or at all, without incurring significant costs, delays or other operating problems that could disrupt our business and have a material adverse effect on our financial condition.

For these reasons, we may not achieve the anticipated financial and strategic benefits from our acquisitions and strategic initiatives. Any actual efficiencies and synergies may be lower than we expect and may take a longer time to achieve than we anticipate, and we may fail to realize the anticipated benefits of acquisitions.

We rely on third parties to perform certain functions, and our business could be adversely affected if these third parties fail to perform as expected or experience service interruptions affecting our operations.

We rely on third parties for regulatory, data center, cloud computing, data storage and processing, connectivity, data content, clearing, maintaining markets and exchange liquidity and other services. Interruptions or delays in services from our third-party providers could impair our services or their delivery and harm our business. To the extent that any of our vendors or other third-party service providers experience difficulties or a significant disruption, breach or outage, materially changes their business relationship with us or fails or delays for any reason to perform their obligations, including due to geopolitical instability, our business or our reputation may be materially adversely affected.

Our access to cloud service provider infrastructure could be limited by a number of events, including technical or infrastructure failures, natural disasters or cybersecurity attacks. As we continue to grow our SaaS businesses, our dependency on the continuing operation and availability of these cloud service providers increases. If our cloud services from third party providers are unavailable to us for any reason, or there are cloud service disruptions or a delay or inability to access our exchanges, platforms or certain of our cloud products or features, such unavailability or delays may adversely affect our clients, which could significantly impact our reputation, operations, business, and financial results.

AWS operates a platform that we use to provide exchange and other services to our clients, and therefore we are vulnerable to service outages on the AWS platform that affect Nasdaq workloads running or stored in the AWS environment. If AWS does not deliver our system requirements on time, fails to provide maintenance and support to our specifications or a migration experiences integration challenges, the successful migration of our exchanges to the AWS cloud platform may be significantly delayed, which may adversely affect our reputation and financial results.

We also rely on members of our trading community to maintain markets and add liquidity. To the extent that any of our largest members experience difficulties, materially change their business relationship with us or are unable for any reason to perform market making activities, our business or our reputation may be materially adversely affected.

We may be required to recognize impairments of our goodwill, intangible assets or other long-lived assets in the future.

Our business acquisitions typically result in the recording of goodwill and intangible assets, and the recorded values of those assets may become impaired in the future. As of December 31, 2024, goodwill totaled $14.0 billion and intangible assets, net of accumulated amortization, totaled $6.9 billion. The determination of the value of such goodwill and intangible assets requires management to make estimates and assumptions that affect our consolidated financial statements.

We assess goodwill and intangible assets, as well as other long-lived assets, including equity method investments, equity securities, and property and equipment, for potential impairment on an annual basis or more frequently if indicators of impairment arise. We estimate the fair value of such assets by assessing many factors, including historical performance and projected cash flows. Considerable management judgment is necessary to project future cash flows and evaluate the impact of expected operating and macroeconomic changes on these cash flows. The estimates and assumptions we use are consistent with our internal planning process. However, there are inherent uncertainties in these estimates.

There were no impairment charges recorded relating to goodwill and indefinite-lived intangible assets and there were no material impairment charges recorded relating to other long-lived assets in 2024, 2023 and 2022.

We may experience future events that may result in asset impairments. Future disruptions to our business, prolonged economic weakness, due to pandemics or otherwise, or significant declines in operating results at any of our reporting units or businesses, may result in impairment charges to goodwill, intangible assets or other long-lived assets. A significant impairment charge in the future could have a material adverse effect on our operating results.

Acquisitions, divestments, investments, joint ventures and other transactional activities may require significant resources and/or result in significant unanticipated losses, costs or liabilities.

Over the past several years, acquisitions, such as Adenza, have been, or are expected to be, significant factors in our growth. We have divested businesses and may continue to divest additional businesses or assets in the future. Although we cannot predict our transactional activities, we believe that additional acquisitions, divestments, investments, joint ventures and other transactional activities will be important to our strategy. Such transactions may be material in size and scope. Other potential purchasers of assets in our industry may have greater financial resources than we have. Therefore, we cannot be sure that we will be able to complete future transactions on terms favorable to us.

We also invest in early-stage companies through our Nasdaq Ventures program and hold minority interests in other entities. Given the size of these investments, we do not have operational control of these entities and may have limited visibility into risk management practices. Thus, we may be subject to additional capital requirements in certain circumstances and financial and reputational risks if there are operational failures.

We may finance future transactions by issuing additional equity and/or debt. The issuance of additional equity in connection with any such transaction could be substantially dilutive to existing shareholders. In addition, the announcement or implementation of future transactions by us or others could have a material effect on the price of our common stock. The issuance of additional debt could increase our leverage substantially. Additional debt may reduce our liquidity, curtail our access to financing markets, impact our standing with credit rating agencies and increase the cash flow required for debt service. Any incremental debt incurred to finance a transaction could also place significant constraints on the operation of our business.

Furthermore, any future transactions could entail a number of additional risks, including:

- the inability to maintain key pre-transaction business relationships;
- increased operating costs;
- the inability to meet our target for return on invested capital;
- increased debt obligations, which may adversely affect our targeted debt ratios;
- changes in our credit rating and financing costs;
- risks to the continued achievement of our strategic direction;
- risks associated with divesting employees, customers or vendors when divesting businesses or assets;
- declines in the value of investments;
- exposure to unanticipated liabilities, including after a transaction is completed;
- incurred but unreported claims for an acquired company; and
- difficulties in realizing projected efficiencies and synergies.

RISKS RELATED TO LIQUIDITY AND CAPITAL RESOURCES

A downgrade of our credit rating could increase the cost of our funding from the capital markets.

Our debt is currently rated investment grade by two of the major rating agencies. These rating agencies regularly evaluate us, and their ratings of our long-term debt and commercial paper are based on a number of factors, including our financial strength and corporate development activity, as well as factors not entirely within our control, including conditions affecting our industry generally. There can be no assurance that we will maintain our current ratings. Our failure to maintain such ratings could reduce or eliminate our ability to issue commercial paper and adversely affect the cost and other terms upon which we are able to obtain funding and increase our cost of capital. A reduction in credit ratings would also result in increases in the cost of our commercial paper and other outstanding debt as the interest rate on the outstanding amounts under our credit facilities and our senior notes fluctuates based on our credit ratings.

Our leverage limits our financial flexibility, increases our exposure to weakening economic conditions and may adversely affect our ability to obtain additional financing.

Our indebtedness as of December 31, 2024 was $9.5 billion. We may borrow additional amounts by utilizing available liquidity under our existing credit facilities, issuing additional debt securities or issuing short-term, unsecured commercial paper notes through our commercial paper program.

Our leverage and reliance on the capital markets could:

- reduce funds available to us for operations and general corporate purposes or for capital expenditures as a result of the dedication of a substantial portion of our consolidated cash flow from operations to the payment of principal and interest on our indebtedness;
- increase our exposure to a continued downturn in general economic conditions;
- place us at a competitive disadvantage compared with our competitors with less debt;
- affect our ability to obtain additional financing in the future for refinancing indebtedness, acquisitions, working capital, capital expenditures or other purposes; and
- increase our cost of debt and reduce or eliminate our ability to issue commercial paper.

In addition, we must comply with the covenants in our credit facilities. Among other things, these covenants restrict our ability to effect certain fundamental transactions, dispose of certain assets, incur additional indebtedness and grant liens on assets. Failure to meet any of the covenant terms of our credit facilities could result in an event of default. If an event of default or cross-default occurs, and we are unable to receive a waiver of default, our lenders may increase our borrowing costs, restrict our ability to obtain additional borrowings and accelerate repayment of all amounts outstanding.

We will need to invest in our operations to maintain and grow our business and to integrate acquisitions, and we may need additional funds, which may not be readily available.

We depend on the availability of adequate capital to maintain and develop our business. Although we believe that we can meet our current capital requirements from internally generated funds, cash on hand and borrowings under our revolving credit facility and commercial paper program, if the capital and credit markets experience volatility, access to capital or credit may not be available on terms acceptable to us or at all. Rising interest rates could adversely affect our ability to pursue new financing opportunities, and it may be more expensive for us to issue new debt securities. Limited access to capital or credit in the future could have an impact on our ability to refinance debt, maintain our credit rating, meet our regulatory capital requirements, engage in strategic initiatives, make acquisitions or strategic investments in other companies, pay dividends, repurchase our stock or react to changing economic and business conditions. If we are unable to fund our capital or credit requirements, it could have an adverse effect on our business, financial condition and operating results.

In addition to our debt obligations, we will need to continue to invest in our operations for the foreseeable future to integrate acquired businesses and to fund new initiatives. If we do not achieve the expected operating results, we will need to reallocate our cash resources. This may include borrowing additional funds to service debt payments, which may impair our ability to make investments in our business or to integrate acquired businesses.

If we need to raise funds through incurring additional debt, we may become subject to covenants more restrictive than those contained in our credit facilities, the indentures governing our notes and our other debt instruments. Furthermore, if adverse economic conditions occur, we could experience decreased revenues from our operations which could affect our ability to satisfy financial and other restrictive covenants to which we are subject under our existing indebtedness.

RISKS RELATED TO LEGAL AND REGULATORY MATTERS

We operate several of our businesses in highly regulated industries and may be subject to censures, fines and enforcement proceedings if we fail to comply with regulatory obligations that can be ambiguous and can change unexpectedly.

We operate several of our businesses in highly regulated industries and are subject to extensive regulation in the U.S., Europe and Canada. The securities trading industry is subject to significant regulatory oversight and could be subject to increased governmental and public scrutiny in the future that can change in response to global conditions and events, or due to changes in trading patterns, such as due to the recent volatility involving the trading of certain stocks.

Our ability to comply with complex and changing regulation is largely dependent on our establishment and maintenance of compliance, audit and reporting systems that can quickly adapt and respond, as well as our ability to attract and retain qualified compliance and other risk management personnel. There is no assurance that our policies and procedures will always be effective or that we will always be successful in monitoring or evaluating the risks to which we are or may be exposed.

Our regulated markets are subject to audits, investigations, administrative proceedings and enforcement actions relating to compliance with applicable rules and regulations. Regulators have broad powers to impose fines, penalties or censure, issue cease-and-desist orders, prohibit operations, revoke licenses or registrations and impose other sanctions on our exchanges, broker-dealers, central securities depositories, clearinghouse and markets for violations of applicable requirements.

In the future, we could be subject to regulatory investigations or enforcement proceedings that could result in substantial sanctions, including revocation of our operating licenses. Any such investigations or proceedings, whether successful or unsuccessful, could result in substantial costs, the diversion of resources, including management time, and potential harm to our reputation, which could have a material adverse effect on our business, results of operations or financial condition. In addition, our exchanges could be required to modify or restructure their regulatory functions in response to any changes in the regulatory environment, or they may be required to rely on third parties to perform regulatory and oversight functions, each of which may require us to incur substantial expenses and may harm our reputation if our regulatory services are deemed inadequate.

The regulatory framework under which we operate and new regulatory requirements or new interpretations of existing regulatory requirements could require substantial time and resources for compliance, which could make it difficult and costly for us to operate our business.

Under current U.S. federal securities laws, changes in the rules and operations of our securities markets, including our pricing structure, must be reviewed and in many cases explicitly approved by the SEC. The SEC may approve, disapprove, or recommend changes to proposals that we submit. In addition, the SEC may delay either the approval process or the initiation of the public comment process. Favorable SEC rulings and interpretations can be challenged in and reversed by federal courts of appeals, reducing or eliminating the value of such prior interpretations. Any delay in approving changes, or the altering of any proposed change, could have an adverse effect on our business, financial condition and operating results.

We must compete not only with non-exchanges, such as ATSs that are not subject to the same SEC approval requirements and processes, but also with other exchanges that may have lower regulation and surveillance costs than us. There is a risk that trading will shift to exchanges or non-exchanges that charge lower fees because, among other reasons, they spend significantly less on regulation.

In 2016, the SEC approved a plan for Nasdaq and other exchanges to establish a CAT to improve regulators' ability to monitor trading activity. Implementation of a CAT has resulted in significant additional expenditures, including to implement the costly and complex new technology. In September 2023, the SEC approved a "Funding Model" for the CAT that allocated one-third of CAT expenses to the SROs, including Nasdaq, and two-thirds of CAT expenses to the industry. This SEC approval order has been appealed to the 11th Circuit U.S. Court of Appeals, and the appeal remains pending. This allocation of expenses could be resolved unfavorably to the SEC and to the SROs, resulting in a delay in recovering expenses or the inability to recover those expenses. The SROs have yet to seek reimbursement for a portion of their expenses related to delivery of certain technology. If the SEC determines that we failed to timely or properly deliver the technology, we may forfeit recovery of an undetermined portion of those expenses. As of December 31, 2024, we have an outstanding net receivable of $135 million in connection with our portion of expenses related to the CAT implementation.

In addition, our registered broker-dealer subsidiaries are subject to regulation by the SEC, FINRA and other SROs. These subsidiaries are subject to regulatory requirements intended to ensure their general financial soundness and liquidity, which require that they comply with certain minimum capital requirements. The SEC and FINRA impose rules that require notification when a broker-dealer's net capital falls below certain predefined criteria, dictate the ratio of debt to equity in the regulatory capital composition of a broker-dealer and constrain the ability of a broker-dealer to expand its business under certain circumstances. Additionally, the SEC's Uniform Net Capital Rule and FINRA rules impose certain requirements that may have the effect of prohibiting a broker-dealer from distributing or withdrawing capital and requiring prior notice to the SEC and FINRA for certain withdrawals of capital. Any failure to comply with these broker-dealer regulations could have a material adverse effect on the operation of our business, financial condition and operating results.

Our non-U.S. business is subject to regulatory oversight in all the countries in which we operate regulated businesses, such as exchanges, clearinghouses or central securities depositories. In these countries, we have received authorization from the relevant authorities to conduct our regulated business activities. The authorities may issue regulatory fines or may ultimately revoke our authorizations if we do not suitably carry out our regulated business activities. The authorities are also entitled to request that we adopt measures in order to ensure that we continue to fulfill the authorities' requirements. We are also subject to current and forthcoming regulations applicable to the financial services sector generally including, but not limited to, the Digital Operational Resilience Act, or DORA, which became effective in January 2025. Such regulations may impact our operational, contracting and compliance costs by requiring the implementation of new risk management procedures, requirements for procuring information and communication technology services, and ongoing processes to monitor compliance; failure to maintain compliance may cause us to be subject to regulatory actions and fines. Additionally, we are subject to the obligations under the Benchmark Regulation ((EU) 2016/1011), compliance with which could be costly or cause a change in our business practices.

Certain of our customers operate in a highly regulated industry. Regulatory authorities could impose regulatory changes that could impact the ability of our customers to use our exchanges. The loss of a significant number of customers or a reduction in trading activity on any of our exchanges as a result of such changes could have a material adverse effect on our business, financial condition and operating results. In addition, regulatory changes could impact the ability of current or prospective customers to procure commercial services from us, increase our cost of delivery or performance due to regulatory-driven changes to services or related business processes and lengthen sales cycles as customers are required to conduct additional diligence and contracting processes prior to procuring our services.

Regulatory changes and changes in market structure and proprietary data could have a material adverse effect on our business.

Regulatory changes adopted by the SEC or other regulators of our markets, and regulatory changes that our markets may adopt in fulfillment of their regulatory obligations, could materially affect our business operations. In recent years, there has been increased regulatory and governmental focus on issues affecting the securities markets, including market

structure, technological oversight and fees for proprietary market data, connectivity and transactions. The SEC, FINRA and the national securities exchanges have introduced several initiatives to ensure the oversight, integrity and resilience of markets.

With respect to our regulated businesses, our business model can be severely impacted by policy decisions. In September 2024, the SEC adopted a rule that would significantly reduce the fees that exchanges are permitted to charge for access to liquidity quoted on the exchange, with a resulting reduction in the ability of exchanges to pay rebates to attract liquidity. Nasdaq has petitioned the U.S. Court of Appeals for the District of Columbia Circuit to vacate the proposed rule. While we will adjust our business model in accordance with the new rule if it is not vacated, the implementation of the rule may adversely impact our business and revenue.

In Canada, all new marketplace fees and changes to existing fees, including trading and market data fees, must be filed with and approved by the Ontario Securities Commission. The Canadian Securities Administrators adopted a Data Fees Methodology that restricts the total amount of fees that can be charged for professional uses by all marketplaces to a reference benchmark. Currently, all marketplaces are subject to annual reviews of their market data fees tying market data revenues to pre- and post-trade market share metrics. Permitted fee ranges are based on an interim domestic benchmark that is subject to change to an international benchmark, which could lower the permitted fees charged by marketplaces, which could adversely impact our revenues.

Our European exchanges currently offer market data products to customers on a non-discriminatory and reasonable commercial basis. The MiFID II/MiFIR rules entail that the price for regulated market data such as pre- and post-trade data shall be based on cost plus a reasonable margin. However, these terms are not clearly defined. There is a risk that a different interpretation of these terms may influence the fees for European market data products adversely. In addition, any future actions by European Union institutions could affect our ability to offer market data products in the same manner as today, thereby causing an adverse effect on our market data revenues.

We are subject to litigation risks, risks from compliance obligations and associated enforcement risks, and other liabilities.

Many aspects of our business potentially involve substantial liability risks. Although under current law we are immune from private suits arising from conduct within our regulatory authority and from acts and forbearances incident to the exercise of our regulatory authority, this immunity only covers certain of our activities in the U.S., and we could be exposed to liability under national and local laws, court decisions and rules and regulations promulgated by regulatory agencies.

We face risks related to compliance with economic sanctions (including those administered by the U.S. Office of Foreign Assets Control), export controls, corruption (including the U.S. Foreign Corrupt Practices Act) and money laundering. While we maintain compliance programs to prevent and detect potential violations, such programs cannot completely eliminate the risk of non-compliance. Since our Financial Crime Management Technology and surveillance solutions are important offerings, a significant compliance event involving one of these areas could more negatively impact our business than a comparable business without this service offering.

Liability could also result from disputes over the terms of a trade, claims that a system failure or delay cost a customer money, claims we entered into an unauthorized transaction or claims that we provided materially false or misleading statements in connection with a securities transaction. Although we carry insurance that may limit our risk of damages in some cases, we still may incur significant legal expenses and may sustain uncovered losses or losses in excess of available insurance that would affect our business, financial condition and results of operations.

We have self-regulatory obligations and also operate for-profit businesses, and these two roles may create conflicts of interest.

We have obligations to regulate and monitor activities on our markets and ensure compliance with applicable law and the rules of our markets by market participants and listed companies. In the U.S., some have expressed concern about potential conflicts of interest of "for-profit" markets performing the regulatory functions of an SRO. We perform regulatory functions and bear regulatory responsibility related to our listed companies and our markets. Any failure by us to diligently and fairly regulate our markets or to otherwise fulfill our regulatory obligations could significantly harm our reputation, prompt SEC scrutiny and adversely affect our business and reputation.

Our Nordic and Baltic exchanges monitor trading and compliance with listing standards in accordance with the European Union's Market Abuse Regulation and other applicable laws. As previously disclosed, the SFSA initiated a review of the Nasdaq Stockholm exchange regarding the obligation of Nasdaq Stockholm to report suspected market abuse, which resulted in Nasdaq Stockholm paying an administrative fine to the SFSA of 100 million SEK, or $9 million, during 2024. Any failure to diligently and fairly regulate the Nordic and Baltic exchanges could significantly harm our reputation, prompt scrutiny from regulators and adversely affect our business and reputation.

Laws and regulations regarding security and safeguarding of our systems and services, protection of sensitive customer data and the handling of personal data and information may affect our services or result in increased costs, legal claims or fines against us.

Our business operates certain systems that may be considered "critical infrastructure" under certain regulations and licenses or sells certain systems or services to customers that are used by customers in their role as providers of critical infrastructure or to fulfill certain core business requirements or process certain sensitive data. New cybersecurity, privacy, data sovereignty, and resiliency regulations may impact the requirements and cost of delivery for impacted systems and services and, in the event of an incident, increase the cost and complexity of our response and the potential financial and reputation impact from fines or private litigation. These regulations may also impact customer decision making and conditions on contracting for our services.

Our businesses and internal operations rely on the processing of data in many jurisdictions and the movement of data, including personal data, across national borders. Legal and contractual requirements relating to the processing, including, but not limited to, collection, storage, handling, use, disclosure, transfer and security, and brokering, of personal data continue to evolve and regulatory scrutiny and customer requirements in this area are increasing around the world. Significant uncertainty exists as privacy and data protection laws may be interpreted and applied differently across jurisdictions and may create inconsistent or conflicting requirements with privacy and other laws to which we are subject.

Laws and regulations such as the European Union and United Kingdom General Data Protection Regulation, the California Privacy Rights Act and other comparable laws and regulations adopted globally and within the United States and Canada can apply to our processing of their residents' personal data by Nasdaq legal entities regardless of the location of such entities; such laws may also require our customers located in such jurisdictions to contractually obligate our compliance.

In addition to directly applying to some of our business activities, these laws and industry-specific regulations, such as the Health Insurance Portability and Accountability Act and the Gramm-Leach-Bliley Act, impact many of our customers, which may affect their decisions to purchase our services. As a supplier to such customers, regulators may engage in direct enforcement actions or seek to impose liability on us if we do not comply with applicable regulations. Our efforts to comply with privacy and data protection laws may entail substantial expenses, may divert resources from other initiatives and projects, and could impact the services that we offer. The enactment of more restrictive laws, rules or regulations, future enforcement actions or investigations, or the creation of new rights to pursue damages could impact us through increased costs or restrictions on our business, and noncompliance could result in regulatory penalties and significant legal liability.

Changes in tax laws, regulations or policies could have a material adverse effect on our financial results.

Changes in tax laws, regulations, trade policies or other policies, including with respect to renewable energy tax credits, could result in us having to pay higher taxes or operating expenses, which may reduce our net income, or could adversely affect our ability to continue our capital allocation program, purchase additional energy tax credits or effect strategic transactions in a tax-favorable manner. In addition, such changes, including federal or state financial transaction taxes, may increase the cost of our offerings or services, which may cause our clients to reduce their use of our services. Any changes to laws, regulations, policies or other legal restrictions regarding the employment, staffing, supervision or business activities of international or non-U.S. citizen employees of U.S. companies may adversely affect our results of operations.

Some of our subsidiaries are subject to tax in the jurisdictions in which they are organized or operate, and in computing our tax obligation in these jurisdictions, we take various tax positions. We cannot ensure that upon review of these positions, the applicable authorities will agree with our positions. A successful challenge by a tax authority could result in additional taxes imposed on our clients or our subsidiaries.

RISKS RELATED TO INTELLECTUAL PROPERTY AND BRAND REPUTATION

Damage to our reputation or brand name could have a material adverse effect on our businesses.

One of our competitive strengths is our strong reputation and brand name. Various issues may give rise to reputational risk, including issues relating to:

- our ability to maintain the security of our data and systems;
- the quality and reliability of our technology platforms and systems;
- the ability to fulfill our regulatory obligations;
- the ability to execute our business plan, key initiatives or new business ventures and the ability to keep up with changing customer demand;
- the representation of our business in the media;
- the accuracy of our financial statements, other financial and statistical information or sustainability-related disclosures;
- the accuracy of our financial guidance or other information provided to our investors;
- the quality of our corporate governance structure;
- the quality of our products the reliability of our solutions and the accuracy of our information and data offerings;

- the quality of our disclosure controls or internal controls over financial reporting, including any failures in supervision;
- extreme price volatility on our markets;
- any negative publicity surrounding our listed companies or our listing rules;
- any negative publicity surrounding the use of our products and/or services by our customers, including in connection with emerging asset classes such as crypto assets; and
- any misconduct, fraudulent activity or theft by our employees or other persons formerly or currently associated with us.

Negative publicity or misrepresentations by third parties, particularly on social media, may adversely impact our credibility as a leader in the global capital markets and as a source for data and analytics. This may have an adverse effect on our brands, business and operating results. Damage to our reputation could cause some issuers not to list their securities on our exchanges or switch to a different exchange. Reputational damage may also reduce trading volumes or values on our exchanges or cause us to lose customers. This may have a material adverse effect on our business, financial condition and operating results.

Failure to meet customer expectations or deadlines for the implementation of our products could result in negative publicity, losses and reduced sales, each of which may harm our reputation, business and results of operations.

We generally mutually agree with our customers on the duration, budget and costs associated with the implementation of certain of our products, particularly our market technology large-scale market infrastructure projects. Various factors may cause implementations to be delayed, inefficient or otherwise unsuccessful, including due to unforeseen project complexities, our deployment of insufficient resources or other external factors. The effects of a failure to meet an implementation schedule could include monetary credits for current or future service engagements, a reduction in fees for the project, or the expenditure of additional expenses to mitigate such delays. In addition, time-consuming implementations may also increase the personnel we must allocate to such customer, thereby increasing our costs and diverting attention from other projects. Unsuccessful, lengthy, or costly customer implementation projects could result in claims from customers, decreased customer satisfaction, harm to our reputation, and opportunities for competitors to displace us, each of which could have an adverse effect on our reputation, business and results of operations.

Our reputation or business could be negatively impacted by sustainability matters and our reporting of such matters.

We communicate certain sustainability-related initiatives, goals, and/or commitments regarding environmental matters, social matters, vendors and suppliers and other matters in our annual Sustainability Report, Task Force on Climate-related Financial Disclosures Report, on our website, in our filings with the SEC and elsewhere. These goals or commitments, such as our commitment to achieve net-zero for Scope 3 greenhouse gas emissions by 2050, could be difficult to achieve and costly to implement. Our initiatives could fail to achieve, or be perceived to fail to achieve, these goals or commitments. In addition, we could be criticized for the timing, scope or nature of these initiatives, goals, or commitments, or for any revisions to them. We could be subject to litigation or regulatory enforcement actions regarding the accuracy, adequacy, or completeness of our sustainability-related disclosures. Our actual or perceived failure to achieve, or stakeholder dissatisfaction of, our sustainability-related goals or commitments could negatively impact our reputation or otherwise materially harm our business.

Failure to protect our intellectual property rights, or allegations that we have infringed on the intellectual property rights of others, could harm our brand-building efforts and ability to compete effectively.

To protect our intellectual property rights, we rely on a combination of trademark laws, copyright laws, patent laws, trade secret protection, confidentiality agreements and other contractual arrangements with our affiliates, clients, strategic partners, employees and others. However, the efforts we have taken to protect our intellectual property and proprietary rights might not be sufficient, or effective, at stopping unauthorized use of those rights. We may be unable to detect the unauthorized use of, or take appropriate steps to enforce, our intellectual property rights.

We have registered, or applied to register, our trademarks in the United States and in over 50 foreign jurisdictions and have pending U.S. and foreign applications for other trademarks. We also maintain copyright protection for software products and pursue patent protection for inventions developed by us. We hold a number of patents, patent applications and licenses in the United States and other foreign jurisdictions. However, effective trademark, copyright, patent and trade secret protection might not be available or cost-effective in every country in which we offer our services and products. Moreover, changes in patent law, regulation or practices at the U.S. Patent and Trademark Office and/or analogous offices in other jurisdictions, such as changes in the law regarding patentable subject matter, could also impact our ability to obtain patent protection for our innovations. The scope of protection under our patents may not be sufficient in some cases, or existing patents may be deemed invalid or unenforceable. Failure to protect our intellectual property adequately could harm our brand and affect our ability to compete effectively. Further, defending our intellectual property rights could result in the expenditure of significant financial and managerial resources.

Third parties may assert intellectual property rights claims against us, which may be costly to defend, could require the payment of damages and could limit our ability to use certain technologies, trademarks or other intellectual property. Any intellectual property claims, with or without merit, could be expensive to litigate or settle and could divert management resources and attention. Successful challenges against us could require us to modify or discontinue our use of technology or business processes where such use is found to infringe or violate the rights of others, or require us to purchase licenses from third parties, any of which could adversely affect our business, financial condition and operating results.

GENERAL RISK FACTORS

We are a holding company that depends on cash flow from our subsidiaries to meet our obligations, and any restrictions on our subsidiaries' ability to pay dividends or make other payments to us may have a material adverse effect on our results of operations and financial condition.

As a holding company, we require dividends and other payments from our subsidiaries to meet cash requirements. Minimum capital requirements mandated by regulatory authorities having jurisdiction over some of our regulated subsidiaries indirectly restrict the amount of dividends that can be paid upstream.

If our subsidiaries are unable to pay dividends and make other payments to us when needed, or if regulators or counterparties require us to increase capital deployed in certain of our regulated subsidiaries, we may be unable to satisfy our obligations, which would have a material adverse effect on our business, financial condition and operating results.

We may experience fluctuations in our operating results, which may adversely affect the market price of our common stock.

Our industry is risky and unpredictable and is directly affected by many national and international factors beyond our control, including:

- economic, political and geopolitical market conditions;
- natural disasters, terrorism, pandemics, war or other catastrophes;
- broad trends in finance and technology;
- changes in price levels and volatility in the stock markets;
- the level and volatility of interest rates;
- volatility in commodity markets, including the energy markets;
- inflation;
- disruptions or delays in our supply chains;
- changes in government monetary or tax policy;
- the imposition of governmental economic sanctions or tariffs, on countries in which we do business or where we plan to expand our business or sell our products and services; and
- the perceived attractiveness of the U.S. or European capital markets.

Any one of these factors could have a material adverse effect on our business, financial condition and operating results by causing a substantial decline in the financial services markets and reducing trading volumes or values.

Additionally, since borrowings under our credit facilities bear interest at variable rates and commercial paper is issued at prevailing interest rates, any increase in interest rates on debt that we have not fixed using interest rate hedges will increase our interest expense, reduce our cash flow or increase the cost of future borrowings or refinancings. Other than variable rate debt, we believe our business has relatively large fixed costs and low variable costs, which magnifies the impact of revenue fluctuations on our operating results. As a result, a decline in our revenue may lead to a relatively larger impact on operating results. A substantial portion of our operating expenses is related to personnel costs, regulation and corporate overhead, none of which can be adjusted quickly and some of which cannot be adjusted at all. Our operating expense levels are based on our expectations for future revenue. If actual revenue is below management's expectations, or if our expenses increase before revenues do, both revenues less transaction-based expenses and operating results would be materially and adversely affected. Because of these factors, it is possible that our operating results or other operating metrics may fail to meet the expectations of stock market analysts and investors. If this happens, the market price of our common stock may be adversely affected.

Our operational processes are subject to the risk of error, which may result in financial loss or reputational damage.

We have instituted extensive controls to reduce the risk of error inherent in our operations; however, such risk cannot completely be eliminated. Our businesses are highly dependent on our ability to process and report, on a daily basis, a large number of transactions across numerous and diverse markets. Some of our operations require complex processes, and the introduction of new products or services or changes in processes or reporting due to regulatory requirements may result in an increased risk of errors for a period after implementation. Additionally, the likelihood of such errors or vulnerabilities is heightened as we acquire new products from third parties, whether as a result of acquisitions or otherwise.

Data, other content or information that we distribute may contain errors or be delayed, causing reputational harm. Use of our products and services as part of the investment process creates the risk that clients, or the parties whose assets are managed by our clients, may pursue claims against us in the event of such delay or error, and significant litigation against us might unduly burden management, personnel, financial and other resources.

In addition, the sophisticated software we sell to our customers may contain undetected errors or vulnerabilities, some of which may be discovered only after delivery, or could fail to perform its intended purpose. Because our clients depend on our solutions for critical business functions, any service interruptions, failures or other issues may result in lost or delayed market acceptance and lost sales, or negative customer experiences that could damage our reputation, resulting in the loss of customers, loss of revenues and liability for damages, which may adversely affect our business, operating results and financial condition.

Climate change may have a long-term adverse impact on our business, while simultaneously, we face reputational, regulatory and financial risks related to our ability to respond to diverse stakeholder expectations and requirements on climate change and other sustainability-related topics.

While we seek to mitigate our business risks associated with climate change by establishing robust environmental and sustainability programs, there are inherent climate related risks wherever our business is conducted. Climate related events, including extreme weather events and their impact on the critical infrastructure in the U.S. and elsewhere, have the potential to disrupt our business or the business of our clients and/or suppliers. For example, changes in weather where we operate may increase the costs of powering and cooling our data centers or the facilities that we use to operate our exchanges and clearinghouses, develop our products or provide cloud-based services; cause increased volatility in commodity markets in which Nasdaq Clearing operates as a clearinghouse, which may result in Nasdaq Clearing holding insufficient collateral for such volatility; lead to an increase in costs of raw materials, which may adversely affect certain of our listed companies operating in certain sectors and create adverse market conditions, including trading volatility beyond historical levels, any of which could adversely affect our business, reputation, financial condition and operating results. Access to clean water and reliable energy in the communities where we conduct our business, whether for our offices, data centers, vendors, clients or other stakeholders, is a priority.

Additionally, there is an increased focus from our regulators, investors, clients, employees, and other stakeholders concerning corporate citizenship, greenhouse gas emissions reduction and sustainability matters, including proposed or adopted laws, regulations or policies on sustainability-related topics that diverge from, or potentially conflict with, laws in other jurisdictions in which we operate. Changing legal requirements, policies and stakeholder expectations have resulted in, and are likely to continue to result in, increased general and administrative expenses and management time and attention to comply with, or meet, those regulations and expectations.

Our businesses operate in various international markets, which are subject to political, economic and social uncertainties.

Our businesses operate in various international markets, including but not limited to Northern Europe, the Baltics, the Middle East, Latin America, Africa and Asia, and our non-U.S. operations are subject to the risk inherent in the international environment. Political, economic or social events or developments in one or more of our non-U.S. locations or in the U.S. arising from such international developments, such as limitations imposed on securing new listings on our exchanges or restrictions on entering into transactions with new or existing customers, could adversely affect our sales, operations and financial results. Some locations, such as Lithuania, India, the Philippines and in other emerging markets, have economies that may be subject to greater political, economic and social uncertainties than countries with more developed institutional structures, which may increase our operational risk.

Unforeseen or catastrophic events could interrupt our critical business functions. In addition, our U.S. and European businesses are heavily concentrated in particular areas and may be adversely affected by events in those areas.

We may incur losses as a result of unforeseen or catastrophic events, such as terrorist attacks, natural disasters, pandemics, extreme weather, fire, power loss, telecommunications failures, human error, theft, sabotage and vandalism. Given our position in the global capital markets and our brand, we may be more likely than other companies to be a target for malicious disruption activities or physical attacks on our senior leadership team and/or our office locations.

In addition, our U.S. and European business operations are heavily concentrated in the east coast of the U.S., and Stockholm, Sweden, respectively. Any event that impacts either of those geographic areas could potentially affect our ability to operate our businesses.

We have disaster recovery and business continuity plans and capabilities for critical systems and business functions to mitigate the risk of an interruption. However, any interruption in our critical business functions or systems could negatively impact our financial condition and operating results. Additionally, some colocation customers may lack adequate disaster recovery solutions to avoid loss of trade flow from a sustained interruption of our critical systems.

Because we have operations in numerous countries, we are exposed to currency risk.

We have operations in the U.S., the Nordic and Baltic countries, Canada, the United Kingdom, Australia and many other foreign countries. We therefore have significant exposure to exchange rate movements between the Euro, Swedish Krona, the Canadian dollar and other foreign currencies against the U.S. dollar. Significant inflation or disproportionate changes in foreign exchange rates with respect to one or more of these currencies could occur as a result of general economic conditions, acts of war or terrorism, changes in governmental monetary, trade or tax policy, changes in local interest rates or other factors. These exchange rate differences will affect the translation of our non-U.S. results of operations, interest expense and financial condition into U.S. dollars as part of the preparation of our consolidated financial statements.

If our risk management methods are not effective, our business, reputation and financial results may be adversely affected.

We utilize widely-accepted methods to identify, assess, monitor and manage our risks, including oversight of risk management by Nasdaq's Global Risk Management Committee, which comprises senior executives and has the responsibility for regularly reviewing risks and referring significant risks to the board of directors or specific board committees. Local risk management committees in our international offices provide local risk oversight and escalation to local boards, as appropriate. Certain risk management methods require subjective evaluation of dynamic information regarding markets, customers or other matters. That variable information may not in all cases be accurate, complete, up-to-date or properly evaluated. If we do not successfully identify, assess, monitor or manage the risks to which we are exposed, our business, reputation, financial condition and operating results could be materially adversely affected.

Decisions to declare future dividends on our common stock will be at the discretion of our board of directors and there can be no guarantee that we will pay future dividends to our stockholders.

Our board of directors regularly declares quarterly cash dividend payments on our outstanding common stock. Future declarations of dividends and the establishment of future record and payment dates are subject to approval by Nasdaq's board of directors. The board's determination to declare dividends will depend upon our profitability and financial condition, contractual restrictions, restrictions imposed by applicable law and other factors that the board deems relevant. Based on an evaluation of these factors, the board may determine not to declare future dividends at all or to declare future dividends at a reduced amount.

Provisions of our certificate of incorporation, by-laws, exchange rules (including provisions included to address SEC concerns) and governing law restrict the ownership and voting of our common stock. In addition, such provisions could delay or prevent a change in control of us and entrench current management.

Our organizational documents place restrictions on the voting rights of certain stockholders. The holders of our common stock are entitled to one vote per share on all matters to be voted upon by the stockholders except that no person may exercise voting rights in respect of any shares in excess of 5% of the then outstanding shares of our common stock. Any change to the 5% voting limitation would require SEC approval.

In response to the SEC's concern about a concentration of our ownership, the rules of some of our exchange subsidiaries include a prohibition on any member or any person associated with a member of the exchange from beneficially owning more than 20% of our outstanding voting interests. SEC consent would be required before any investor could obtain more than a 20% voting interest in us. The rules of some of our exchange subsidiaries also require the SEC's approval of any business ventures with exchange members, subject to exceptions.

Our organizational documents contain provisions that may be deemed to have an anti-takeover effect and may delay, deter or prevent a change of control of us, such as a tender offer or takeover proposal that might result in a premium over the market price for our common stock. Additionally, certain of these provisions make it more difficult to bring about a change in the composition of our board of directors, which could result in entrenchment of current management.

Our certificate of incorporation and by-laws:

- do not permit stockholders to act by written consent;
- require certain advance notice for director nominations and actions to be taken at annual meetings; and
- authorize the issuance of undesignated preferred stock, or "blank check" preferred stock, which could be issued by our board of directors without stockholder approval.

Section 203 of the Delaware General Corporation Law imposes restrictions on mergers and other business combinations between us and any holder of 15% or more (or, in some cases, a holder who previously held 15% or more) of our common stock. In general, Delaware law prohibits a publicly held corporation from engaging in a "business combination" with an "interested stockholder" for three years after the stockholder becomes an interested stockholder, unless the corporation's board of directors and stockholders approve the business combination in a prescribed manner.

Finally, many of the European countries where we operate regulated entities require prior governmental approval before an investor acquires 10% or greater of our common stock.

Item 1B. Unresolved Staff Comments

None.

Item 1C. Cybersecurity

Risk Management and Strategy

Nasdaq's brand and role as a critical infrastructure provider for global financial markets, and operator of The Nasdaq Stock Market, make us an attractive target for cybersecurity risks, including from international political opponents, hacktivists and ransomware or other financially motivated criminals targeting the financial sector. Our cybersecurity risks include financial and reputational damage, along with collateral damage from loss of customer confidence in our exchange, products or offerings, as applicable, potential regulatory enforcement actions or litigation, either from governmental authorities, shareholders, or other litigants, or the failure to comply with contractual breach notifications. To date, no risks from cybersecurity threats, including as a result of any previous cybersecurity incidents, have materially affected or are reasonably likely to materially affect our business, our business strategy, our results of operations or financial condition. For further information, see "Our role in the global marketplace positions us at greater risk for a cyberattack" and "Expanded cybersecurity regulations, and increased cybersecurity infrastructure and compliance costs, may adversely impact our results of operations" in "Item 1A, Risk Factors" of this Annual Report on Form 10-K.

Our risk management and mitigation approach includes the adoption of NIST CSF and NIST 800-53 security control frameworks and adaptive ongoing threat analysis. In addition, our Information Security, or InfoSec, team reviews and conducts a risk assessment of any novel technologies Nasdaq plans to implement. Our policies and our baseline security controls incorporate robust security infrastructure with multi-layered defense systems. We have 17 System and Organization Controls Type 2, or SOC 2, certifications with respect to our information security and infrastructure. Our adaptive analysis monitors the threat landscape relevant to Nasdaq, our vendors and financial industry peers, and threats arising from geopolitical events. As the external threat landscape evolves, our information security controls are regularly evaluated, updated and enhanced to help protect against emerging risks. Additionally, we conduct extensive cybersecurity assessments of our acquired entities, both prior to acquisition and following completion of the transaction, to understand potential threats and mitigate any potential security gaps, as well as to ensure compliance with our security infrastructure and access management practices and policies.

We periodically engage external advisors to perform an independent assessment of the maturity of Nasdaq's information security programs, and compare our programs to our financial and technology industry peers. Nasdaq's InfoSec program has demonstrated increasing levels of maturity year-over-year for every InfoSec department. Recommendations to further enhance our procedures and maturity ratings from these assessments are then presented to the Audit & Risk Committee.

On a periodic basis, our management team and the Board of Directors conduct tabletop exercises and simulations in cybersecurity matters with assistance from internal and outside experts. These exercises are intended to strengthen resilience and readiness with scenarios, including cybersecurity matters.

We use certain cloud-based third-party vendors for the core trading systems of certain of our exchanges and certain of our governance products and solutions. Prior to engaging such vendors, we analyze each provider's SOC2 certifications, perform due diligence testing for information security and interoperability with our systems, and annually review the SOC2 certifications. Our security assurance and threat assessment team, within our Information Security organization, collaborates with our external threat intelligence providers to proactively review Nasdaq, and our vendors with respect to emerging threats and associated risks.

For our third-party service providers, our risk assessment process evaluates the probability and potential impact of incidents related to operational errors, technology disruptions, information security breaches, workforce issues, internal and external fraud, financial actions, and legal and regulatory matters. This assessment process is part of our Supplier Risk Management program, which establishes processes for identifying, assessing, and periodically reviewing our exposure to risk through third party vendors.

Governance

Cybersecurity is an integral part of risk management at Nasdaq. The Board of Directors appreciates the rapidly evolving nature of threats presented by cybersecurity incidents and is committed to the prevention, timely detection, and mitigation of the effect any such incidents may have on us. We use a cross-departmental approach to assess and manage cybersecurity risk, with our Information Security; Legal, Risk and Regulatory; and Internal Audit functions presenting on key topics to the Audit & Risk Committee, which provides oversight of our cybersecurity risk. Additionally, members from these organizations, along with Finance and Accounting, comprise a rapid response team that would mobilize in the event of a significant cybersecurity incident and would analyze and evaluate the incident while also advising the executive management team. Our Global Risk Management Committee, which includes our Chair and CEO and other senior executives, assists the Board of Directors in its cybersecurity risk oversight role.

Our Audit & Risk Committee receives quarterly or, if needed, more frequent reports on cybersecurity and information security matters from our Chief Information Security Officer, or CISO, and his team. The CISO has more than 25 years of experience in information technology and information security, particularly in the financial services industry, and our InfoSec organization has seasoned

members with expertise in application security; governance and compliance; program and vulnerability management; security engineering; security operations security assurance; and threat intelligence and security architecture.

This regular reporting to the Audit & Risk Committee also includes a cybersecurity dashboard that contains information on cybersecurity governance processes, and from time to time, also includes the status of projects to strengthen internal cybersecurity, ongoing prevention and mitigation efforts, security features of the products and services we provide our customers, or the results of security events during the period. The Audit & Risk Committee also reviews and discusses recent cyber incidents affecting the industry and the emerging threat landscape.

Cybersecurity is a shared responsibility, and our goal is for all employees to be vigilant in helping to protect our organization and themselves, at all times. We routinely perform simulations and tabletop exercises, and incorporate external resources and advisors as needed, to help strengthen our cybersecurity protection and information security procedures and safeguards. All employees are required to complete annual cybersecurity awareness training and have access to continuous cybersecurity educational opportunities throughout the year. Nasdaq also maintains a cybersecurity and information security risk insurance policy, and our Nasdaq Information Security Management System conforms to ISO 27001 requirements and is ISO 27001 certified.

On an annual basis, the Information Security team reviews and updates its governance documents, including the Information Security Charter, the Information Security Policy, and the Information Security Program Plan, and then presents the revised documents to the Audit & Risk Committee for review and/or approval. Additionally, the Information Security team maintains a formal cybersecurity strategic three-year plan, which outlines the strategic vision and associated goals for the cybersecurity of our global operations. The plan is regularly updated with new initiatives that align with technology innovations and changes in the threat landscape, and is reviewed and approved by the CISO and the Audit & Risk Committee. Throughout the three-year plan term, the CISO regularly provides management with progress reports.

Item 2. Properties

We conduct our business operations in leased facilities. We do not own any real property. Our U.S. headquarters are located in New York, New York, and our European headquarters are located in Stockholm, Sweden. We also lease space in multiple locations around the world, which are used for research and development, sales and support, and administrative activities, as well as for data centers and disaster preparedness facilities.

Generally, our properties are not allocated for use by a particular business segment. Instead, most of our properties are used by two or more segments. We regularly monitor the facilities we occupy to ensure that they suit our needs in a hybrid work environment. We believe the facilities that we occupy are adequate for the purposes for which they are currently used and are well-maintained. See Note 16, "Leases," to the consolidated financial statements for further discussion.

Item 3. Legal Proceedings

See "Legal and Regulatory Matters" of Note 18, "Commitments, Contingencies and Guarantees," to the consolidated financial statements for a description of our legal proceedings, if any.

Item 4. Mine Safety Disclosures

Not applicable.

PART II

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

Market Information

Our common stock is listed on The Nasdaq Stock Market under the ticker symbol "NDAQ." As of February 12, 2025, we had approximately 193 holders of record of our common stock.

Issuer Purchases of Equity Securities

Share Repurchase Program

See "Share Repurchase Program," of Note 12, "Nasdaq Stockholders' Equity," to the 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 December 31, 2024:

Period	Total Number of Shares Purchased	Average Price Paid Per Share	Total Number of Shares Purchased as Part of Publicly Announced Plans or Programs	Maximum Dollar Value of Shares that May Yet Be Purchased Under the Plans or Programs (in millions)
October 2024				
Share repurchase program	—	$ —	—	$ 1,745
Employee transactions	4,444	$ 73.00	N/A	N/A
November 2024				
Share repurchase program	—	$ —	—	$ 1,745
Employee transactions	10,561	$ 74.32	N/A	N/A
December 2024				
Share repurchase program	—	$ —	—	$ 1,745
Employee transactions	44,463	$ 79.38	N/A	N/A
Total Quarter Ended December 31, 2024				
Share repurchase program	—	$ —	—	$ 1,745
Employee transactions	59,468	$ 78.00	N/A	N/A

In the preceding table:

- N/A - Not applicable.
- See "Share Repurchase Program," of Note 12, "Nasdaq Stockholders' Equity," to the 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.

PERFORMANCE GRAPH

The following performance graph and related information shall not be deemed "filed" for purposes of Section 18 of the Exchange Act or incorporated by reference into any of our other filings under the Securities Act or the Exchange Act, except as shall be expressly set forth by specific reference in such filing.

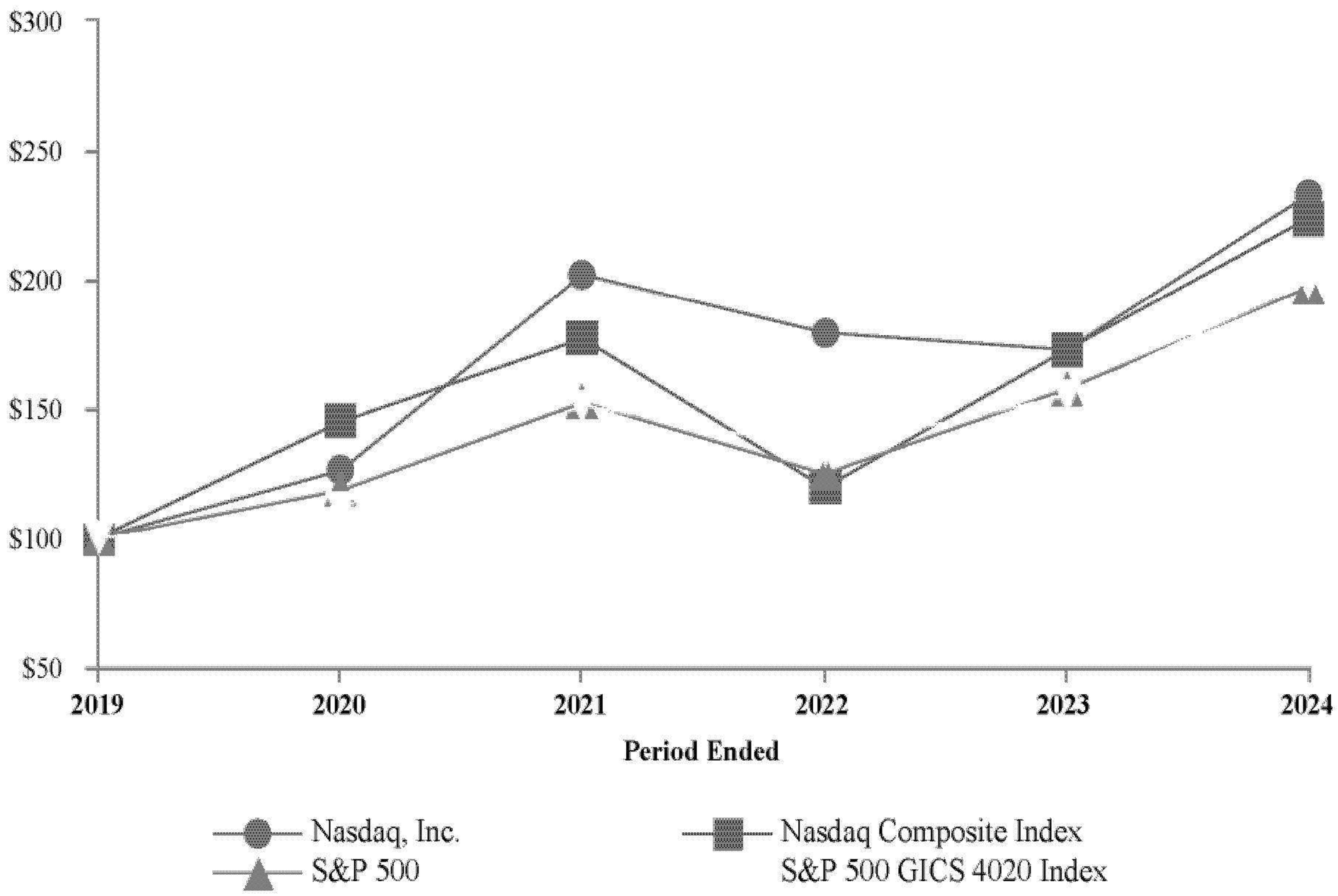
The following graph compares the total return of our common stock to the Nasdaq Composite Index, the S&P 500 and S&P 500 GICS 4020 Index, our peer group, for the past five years.

	Year Ended December 31,					
	2019	2020	2021	2022	2023	2024
Nasdaq, Inc.	$ 100	$ 126	$ 202	$ 179	$ 173	$ 233
Nasdaq Composite Index	100	145	177	119	173	224
S&P 500	100	118	152	125	158	197
S&P 500 GICS 4020 Index	100	111	151	134	155	199

The figures represented below assume an initial investment of $100 in the common stock or index at the closing price on December 31, 2019 and the reinvestment of all dividends.

COMPARISON OF 5 YEAR CUMULATIVE TOTAL RETURN

Among Nasdaq, Inc., the Nasdaq Composite Index, the S&P 500 and S&P 500 GICS 4020 Index



Item 6. [Reserved]

Item 7. 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 refers to the year over year comparison for the fiscal years ended December 31, 2024 and 2023 and should be read in conjunction with our consolidated financial statements and related notes included in this Form 10-K, as well as the discussion under "Part I, Item 1A. Risk Factors." For further discussion of our growth strategy, products and services, and competitive strengths, see "Part I, Item 1. Business." For a similar discussion comparing the fiscal years ended December 31, 2023 and 2022, refer to "Part II, Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations" of our Annual Report on Form 10-K for the fiscal year ended December 31, 2023, which was previously filed with the SEC on February 21, 2024.

The period over period percentages below are calculated based on exact dollars, and therefore may not recalculate exactly using rounded numbers as presented in millions in the tables below.

EXECUTIVE OVERVIEW

Nasdaq is a global technology company serving corporate clients, investment managers, banks, brokers, and exchange operators as they navigate and interact with the global capital markets and the broader financial system. We aspire to deliver world-leading platforms that improve the liquidity, transparency, and integrity of the global economy. Our diverse offering of data, analytics, software, exchange capabilities, and client-centric services enables clients to optimize and execute their business vision with confidence.

We manage, operate and provide our products and services in three business segments: Capital Access Platforms, Financial Technology and Market Services.

2024 Highlights

- Throughout 2024, Nasdaq substantially completed the integration of AxiomSL and Calypso.
- In 2024, our Financial Technology segment delivered more than 10% ARR growth, reflecting an increase in new clients, cross-sells and upsells.
- Nasdaq extended listing leadership in 2024 with its sixth consecutive year as the top U.S. exchange by number of IPOs and proceeds raised.
- In 2024, Nasdaq achieved an 82% win rate among Nasdaq-eligible IPOs in the U.S., representing 180 deals and $23 billion in total proceeds raised.
- In 2024, our Index business had $80 billion of net inflows, including $28 billion in the fourth quarter, and reported its fifth consecutive record quarter in ETP AUM, reaching $647 billion as of December 31, 2024. In addition, the Index business launched a record 116 new products with its clients.
- In 2024, our Market Services segment achieved record net revenue. The Closing Cross set full year records in both share volume and notional value traded.

Macroeconomic environment

Our business performance can be positively or negatively impacted by a number of factors, including general economic conditions, current or expected inflation, interest rate fluctuations, market volatility, changes in investment patterns and priorities, regulatory changes, pandemics and other factors that are generally beyond our control. For example, higher overall U.S. trading volumes in 2024 as compared to 2023 has led to an increase in our U.S. Equity Derivative Trading and U.S. Cash Equity Trading revenues. Market factors also contributed to higher valuations in Nasdaq Indices. In our corporate solutions business, we managed through market challenges, as corporate buying cycles remained elongated throughout the year. To the extent that global or national economic conditions weaken and result in slower growth or recessions, our business may be negatively impacted. See "Part I, Item 1A. Risk Factors" for further discussion.

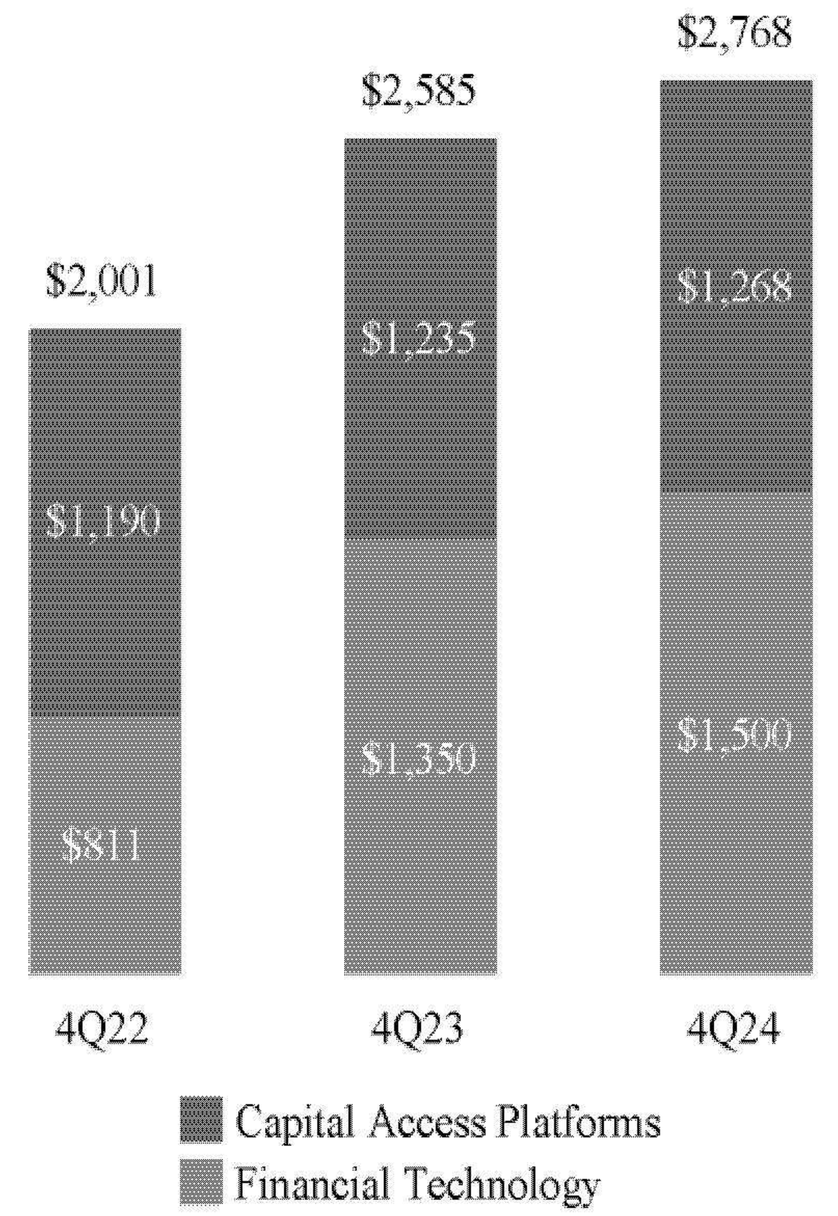
Nasdaq's Operating Results

The following table summarizes our financial performance for the year ended December 31, 2024 compared to the same period in 2023 and for the year ended December 31, 2023 compared to the same period in 2022. The comparability of our results of operations between reported periods is impacted by the acquisition of Adenza in November 2023. See Note 4, "Acquisition," to the consolidated financial statements for further discussion. For a detailed discussion of our results of operations, see "Segment Operating Results" below.

	Year Ended December 31,			Percentage Change	
	2024	2023	2022	2024 vs. 2023	2023 vs. 2022
	(in millions, except per share amounts)				
Revenues less transaction-based expenses	$ 4,649	$ 3,895	$ 3,582	19.4 %	8.8 %
Operating expenses	2,851	2,317	2,018	23.0 %	14.9 %
Operating income	$ 1,798	$ 1,578	$ 1,564	13.9 %	0.8 %
Net income attributable to Nasdaq	$ 1,117	$ 1,059	$ 1,125	5.5 %	(5.9)%
Diluted earnings per share	$ 1.93	$ 2.08	$ 2.26	(7.4)%	(7.8)%
Cash dividends declared per common share	$ 0.94	$ 0.86	$ 0.78	9.3 %	10.3 %

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 7A. Quantitative and Qualitative Disclosures About Market Risk."

The following chart summarizes our ARR (in millions):

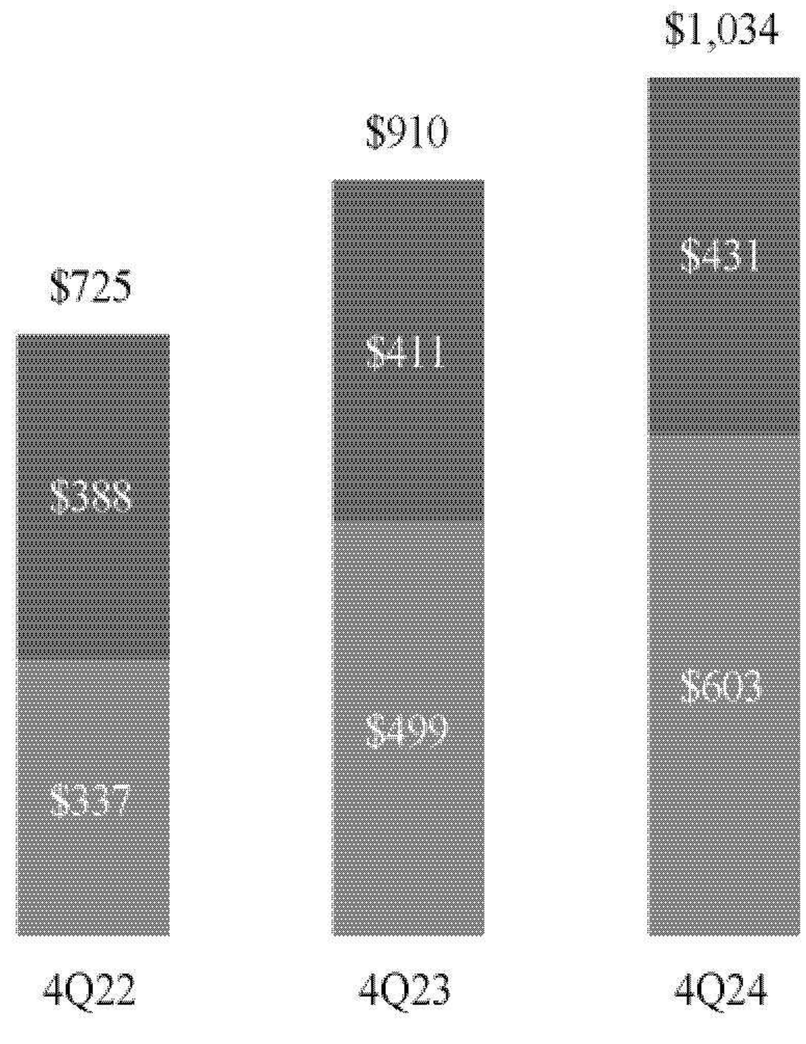


ARR for a given period is the current annualized value derived from subscription contracts with a defined contract value. This excludes contracts that are not recurring, are one-time in nature, or where the contract value fluctuates based on defined metrics. ARR is currently one of our key performance 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. For AxiomSL and Calypso recurring revenue contracts, the amount included in ARR is consistent with the amount that we invoice the customer during the current period. Additionally, for AxiomSL and Calypso recurring revenue contracts that include annual values that increase over time, we include in ARR only the annualized value of components of the contract that are considered active as of the date of the ARR calculation. We do not include the future committed increases in the contract value as of the date of the ARR calculation. 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:

- Capital Access Platforms
  - Proprietary market data subscriptions and annual listing fees within our Data & Listing Services business
  - Index data subscriptions and guaranteed minimum on futures contracts within our Index business
  - Subscription contracts under our Workflow & Insights business
- Financial Technology
  - Financial Crime Management Technology SaaS subscription contracts excluding one-time service requests
  - Regulatory Technology SaaS subscription and support contracts excluding one-time service requests
  - Capital Markets Technology SaaS subscription and support contracts excluding one-time service requests

The following chart summarizes our quarterly annualized SaaS revenues for Solutions, which comprises our Capital Access Platforms and Financial Technology segments, for December 31, 2024, 2023 and 2022 (in millions):

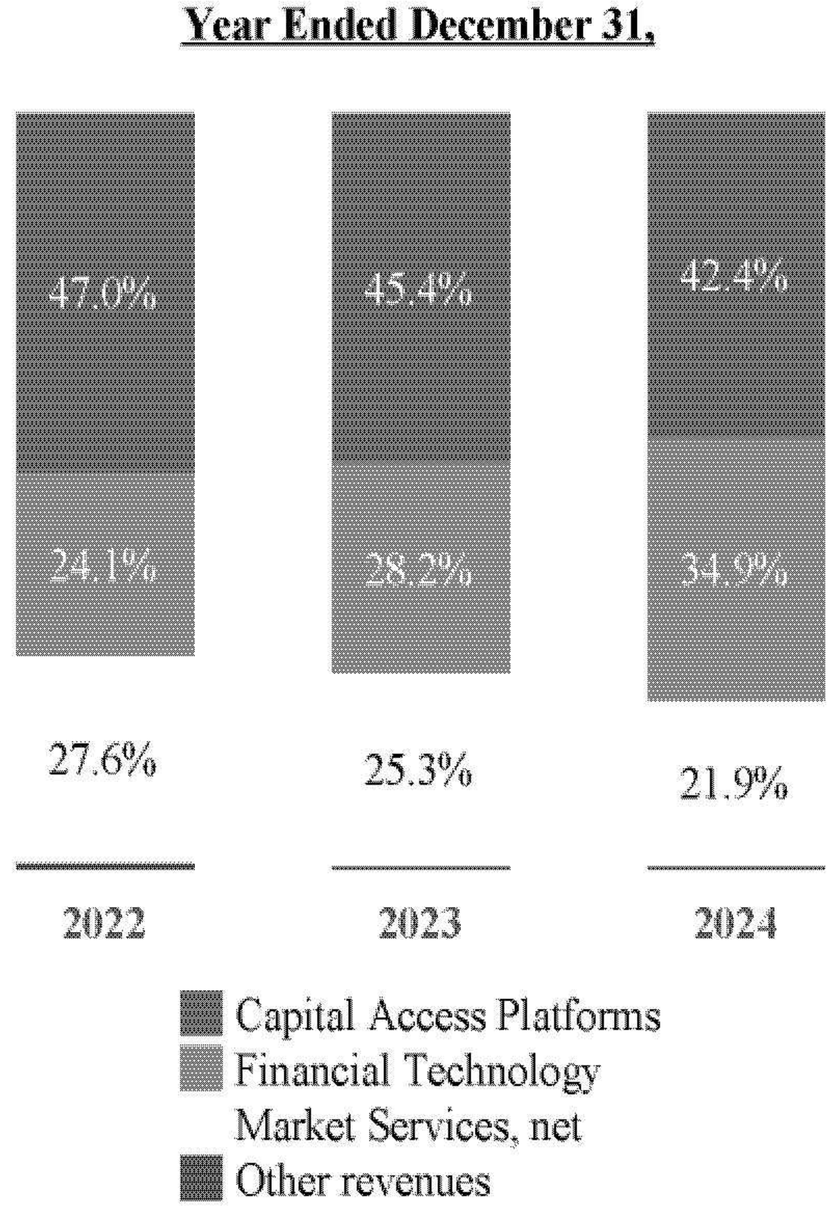


SEGMENT OPERATING RESULTS

The following table presents our revenues by segment:

	Year Ended December 31,			Percentage Change	
	2024	2023	2022	2024 vs. 2023	2023 vs. 2022
	(in millions)				
Capital Access Platforms	$ 1,972	$ 1,770	$ 1,682	11.4 %	5.2 %
Financial Technology	1,621	1,099	864	47.5 %	27.1 %
Market Services	3,771	3,156	3,632	20.9 %	(13.4)%
Other revenues	36	39	48	(8.6)%	(16.9)%
Total revenues	$ 7,400	$ 6,064	$ 6,226	22.0 %	(2.6)%
Transaction rebates	(2,026)	(1,838)	(2,092)	10.2 %	(12.1)%
Brokerage, clearance and exchange fees	(725)	(331)	(552)	119.1 %	(40.1)%
Total revenues less transaction-based expenses	$ 4,649	$ 3,895	$ 3,582	19.4 %	8.8 %

The following chart presents our Capital Access Platforms, Financial Technology and Market Services segments as a percentage of our total revenues, less transaction-based expenses.



Capital Access Platforms

The following tables present revenues and ARR from our Capital Access Platforms segment:

	Year Ended December 31,			Percentage Change	
	2024	2023	2022	2024 vs. 2023	2023 vs. 2022
		(in millions)			
Data & Listing Services	$ 754	$ 749	$ 727	0.7 %	3.0 %
Index	706	528	486	33.7 %	8.6 %
Workflow & Insights	512	493	469	3.8 %	5.2 %
Total Capital Access Platforms	$1,972	$1,770	$ 1,682	11.4 %	5.2 %

	As of December 31,		
	2024	2023	2022
ARR (in millions)	$ 1,268	$ 1,235	$ 1,190

Data & Listing Services Revenues

The following tables present key drivers from our Data & Listing Services business:

	Year Ended December 31,		
	2024	2023	2022
IPOs			
The Nasdaq Stock Market	180	130	161
Exchanges that comprise Nasdaq Nordic and Nasdaq Baltic	14	7	38
Total new listings			
The Nasdaq Stock Market	463	330	366
Exchanges that comprise Nasdaq Nordic and Nasdaq Baltic	31	23	63

	As of December 31,		
	2024	2023	2022
Number of listed companies			
The Nasdaq Stock Market	4,075	4,044	4,230
Exchanges that comprise Nasdaq Nordic and Nasdaq Baltic	1,174	1,218	1,251
ARR (in millions)	691	682	664

In the table above:

- For the years ended December 31, 2024, 2023 and 2022, IPOs included 50, 27 and 74 SPACs, respectively. The number of total listed companies on The Nasdaq Stock Market for the years ended December 31, 2024, 2023 and 2022 included 768, 600 and 528 ETPs, respectively.
- IPOs, new listings (which includes IPOs) and total listed companies for exchanges that comprise Nasdaq Nordic and Nasdaq Baltic represent companies listed on the Nasdaq Nordic and Nasdaq Baltic exchanges and companies listed on the alternative markets of Nasdaq First North.

Data & Listing Services revenues increased in 2024 compared with the same period in 2023 as higher data usage, price increases on regulated data, higher initial listing fees and new data sales were partially offset by lower annual fees due to the impact of 2023 delistings and downgrades and lower amortization of prior period initial listing fees.

Index Revenues

The following table presents key drivers from our Index business:

	As of or Year Ended December 31,		
	2024	2023	2022
Number of licensed ETPs	401	364	348
TTM change in period end ETP AUM tracking Nasdaq indices (in billions)			
Beginning balance	$ 473	$ 315	$ 424
Net appreciation (depreciation)	110	128	(142)
Net impact of ETP sponsor switches	(16)	(1)	(1)
Net inflows	80	31	34
Ending balance	$ 647	$ 473	$ 315
Annual average ETP AUM tracking Nasdaq indices (in billions)	$ 558	$ 396	$ 351
ARR (in millions)	$ 76	$ 72	$ 68

In the table above, TTM represents trailing twelve months. The number of listed ETPs as of December 31, 2023 and 2022 has been updated to reflect a revised methodology whereby an ETP listed on multiple exchanges is counted as one product, rather than formerly being counted per exchange. This change has no impact on reported AUM.

Index revenues increased in 2024 compared with the same period in 2023 primarily due to higher AUM in exchange traded products linked to Nasdaq indices and growth in trading volume on futures contracts linked to the Nasdaq-100 Index. The increase in 2024 also includes a $16 million one-time item related to a legal settlement to recoup revenue.

Workflow & Insights Revenues

The following table presents key drivers from our Workflow & Insights business:

	As of or Year Ended December 31		
	2024	2023	2022
	(in millions)		
ARR	$ 501	$ 481	$ 458
Quarterly annualized SaaS revenues	431	411	388

Workflow & Insights revenues increased in 2024 compared with the same period in 2023 primarily due to an increase in analytics revenue, particularly our Data Link and eVestment product offerings.

Financial Technology

The following table presents revenues from our Financial Technology segment:

	Year Ended December 31,			Percentage Change	
	2024	2023	2022	2024 vs. 2023	2023 vs. 2022
	(in millions)				
Financial Crime Management Technology	$ 273	$ 223	$ 176	22.2 %	26.5 %
Regulatory Technology	352	212	130	66.3 %	63.5 %
Capital Markets Technology	996	664	558	50.0 %	18.9 %
Total Financial Technology	$1,621	$1,099	$ 864	47.5 %	27.1 %

Financial Crime Management Technology Revenues

The following table presents key drivers for our Financial Crime Management Technology business:

	As of or Year Ended December 31		
	2024	2023	2022
	(in millions)		
ARR and Quarterly annualized SaaS revenues	$ 278	$ 226	$ 182

Financial Crime Management Technology revenues increased in 2024 compared with the same period in 2023 primarily due to revenue recognition from the full year impact of contracts signed in 2023, including higher value contracts, new sales and price increases to existing clients and new customer acquisitions, particularly small and medium-sized businesses.

Regulatory Technology Revenues

The following table presents key drivers for our Regulatory Technology business:

	As of or Year Ended December 31		
	2024	2023	2022
	(in millions)		
ARR	$ 354	$ 325	$ 130
Quarterly annualized SaaS revenues	191	165	116

Regulatory Technology revenues increased in 2024 compared with the same period in 2023 primarily due to the inclusion of revenues from AxiomSL associated with our acquisition of Adenza and higher surveillance revenues, partially offset by a one-time revenue reduction recognized in the third quarter of 2024 related to a purchase accounting adjustment. See Note 3, "Revenue from Contracts with Customers," to the consolidated financial statements for discussion on the measurement period adjustment.

Capital Markets Technology Revenues

The following table presents key drivers for our Capital Markets Technology business:

	As of or Year Ended December 31		
	2024	2023	2022
	(in millions)		
ARR	$ 868	$ 799	$ 499
Quarterly annualized SaaS revenues	134	108	39

Capital Markets Technology revenues increased in 2024 compared with the same period in 2023. The increase was primarily due to the inclusion of revenues from Calypso associated with our acquisition of Adenza. The increase was also driven by higher trade management services revenues mainly driven by demand for additional colocation and connectivity services following our recent data center expansion and higher market technology license and support revenues, partially offset by lower market technology professional services revenue due to a large project delivery in the comparable period in 2023.

Market Services

The following table presents revenues from our Market Services segment:

	Year Ended December 31,			Percentage Change	
	2024	2023	2022	2024 vs. 2023	2023 vs. 2022
	(in millions)				
Market Services	$3,771	$3,156	$3,632	20.9 %	(13.4)%
Transaction-based expenses:					
Transaction rebates	(2,026)	(1,838)	(2,092)	10.2 %	(12.1)%
Brokerage, clearance and exchange fees	(725)	(331)	(552)	119.1 %	(40.1)%
Total Market Services, net	$1,020	$ 987	$ 988	3.4 %	(0.1)%

The following table presents net revenues by product from our Market Services segment:

	Year Ended December 31,			Percentage Change	
	2024	2023	2022	2024 vs. 2023	2023 vs. 2022
	(in millions)				
U.S. Equity Derivative Trading	$ 395	$ 374	$ 371	5.7 %	0.7 %
Cash Equity Trading	430	397	397	8.3 %	— %
U.S. Tape plans	125	141	149	(11.5)%	(5.4)%
Other	70	75	71	(6.2)%	4.6 %
Total Market Services, net	$1,020	$ 987	$ 988	3.4 %	(0.1)%

In the preceding table, Other includes Nordic fixed income trading & clearing, Nordic derivatives and Canadian cash equities trading.

U.S. Equity Derivative Trading

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

	Year Ended December 31,			Percentage Change	
	2024	2023	2022	2024 vs. 2023	2023 vs. 2022
	(in millions)				
U.S. Equity Derivative Trading Revenues	$1,428	$1,257	$1,252	13.6 %	0.4 %
Section 31 fees	87	55	89	56.9 %	(37.9)%
Transaction-based expenses:					
Transaction rebates	(1,030)	(879)	(878)	17.1 %	0.2 %
Section 31 fees	(87)	(55)	(89)	56.9 %	(37.9)%
Brokerage and clearance fees	(3)	(4)	(3)	(16.5)%	13.9 %
U.S. Equity Derivative Trading Revenues, net	$ 395	$ 374	$ 371	5.7 %	0.7 %

Section 31 fees are recorded as U.S. equity derivative and cash equity trading revenues with a corresponding amount recorded in transaction-based expenses. 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. Section 31 fees increased in 2024 compared with the same period in 2023 primarily due to higher average SEC fee rates as a result of an increase in the SEC fee rate in May 2024. Since the amount recorded in revenues is equal to the amount recorded as Section 31 fees, there is no impact on our net revenues.

	Year Ended December 31,		
	2024	2023	2022
U.S. equity options			
Total industry average daily volume (in millions)	44.4	40.4	38.2
Nasdaq PHLX matched market share	10.0%	11.3%	11.6%
The Nasdaq Options Market matched market share	5.5%	6.1%	8.0%
Nasdaq BX Options matched market share	2.1%	3.3%	2.8%
Nasdaq ISE Options matched market share	6.9%	5.9%	5.7%
Nasdaq GEMX Options matched market share	2.6%	2.4%	2.3%
Nasdaq MRX Options matched market share	2.7%	2.0%	1.6%
Total matched market share executed on Nasdaq's exchanges	29.8%	31.0%	32.0%

U.S. equity derivative trading revenues and U.S. equity derivative trading revenues, net increased in 2024 compared with the same period in 2023 primarily due to higher industry trading volumes, partially offset by lower overall matched market share executed on Nasdaq's exchanges. U.S. equity derivative trading revenues also increased in 2024 compared with the same period in 2023 due to higher gross capture.

Transaction rebates, in which we credit a portion of the execution charge to the market participant, increased in 2024 compared with the same period in 2023 primarily due to higher rebate capture rate and industry trading volumes, partially offset by lower overall U.S. matched market share executed on Nasdaq's exchanges.

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:

	Year Ended December 31,			Percentage Change	
	2024	2023	2022	2024 vs. 2023	2023 vs. 2022
		(in millions)			
Cash Equity Trading Revenues	$ 1,428	$ 1,355	$ 1,605	5.4 %	(15.6)%
Section 31 fees	611	253	436	141.7%	(42.0)%
Transaction-based expenses:					
Transaction rebates	(974)	(939)	(1,184)	3.8%	(20.8)%
Section 31 fees	(611)	(253)	(436)	141.7%	(41.9)%
Brokerage and clearance fees	(24)	(19)	(24)	29.5%	(22.3)%
Cash equity trading revenues, net	$ 430	$ 397	$ 397	8.3 %	— %

See the discussion in "U.S. Equity Derivative Trading" for an explanation of Section 31 fees for 2024 as compared with the same period in 2023.

	Year Ended December 31,		
	2024	2023	2022
Total U.S.-listed securities			
Total industry average daily share volume (in billions)	12.2	11.0	11.9
Matched share volume (in billions)	479.4	455.6	522.8
The Nasdaq Stock Market matched market share	15.1%	15.8%	16.2%
Nasdaq BX matched market share	0.3%	0.4%	0.5%
Nasdaq PSX matched market share	0.2%	0.3%	0.8%
Total matched market share executed on Nasdaq's exchanges	15.6%	16.5%	17.5%
Market share reported to the FINRA/Nasdaq Trade Reporting Facility	44.3%	36.7%	35.2%
Total market share	59.9%	53.2%	52.7%
Nasdaq Nordic and Nasdaq Baltic securities			
Average daily number of equity trades executed on Nasdaq's exchanges	651,455	666,411	908,813
Total average daily value of shares traded (in billions)	$ 4.5	$ 4.5	$ 5.4
Total market share executed on Nasdaq's exchanges	71.9%	71.0%	71.5%

Cash equity trading revenues and cash equity trading revenues, net increased in 2024 compared with the same period in 2023 primarily due to higher U.S. industry trading volumes, partially offset by lower overall U.S. matched market share executed on Nasdaq's exchanges.

Transaction rebates increased in 2024 compared with the same period in 2023 primarily due to higher U.S. industry volumes, partially offset by lower overall U.S. matched market share executed on Nasdaq's exchanges. 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.

U.S. Tape Plans

The following table presents revenues from our U.S. Tape plans business:

	Year Ended December 31,			Percentage Change	
	2024	2023	2022	2024 vs. 2023	2023 vs. 2022
		(in millions)			
U.S. Tape plans	$ 125	$ 141	$ 149	(11.5)%	(5.4)%

U.S. Tape plans revenues decreased in 2024 compared with the same period in 2023 primarily due to lower industry-wide usage volume and the impact of one-time industry-wide adjustments.

Other

Other includes Nordic fixed income trading and clearing, Nordic derivatives and Canadian cash equities trading. The following tables present revenues and a key driver from our Other business:

	Year Ended December 31,			Percentage Change	
	2024	2023	2022	2024 vs. 2023	2023 vs. 2022
		(in millions)			
Other	$ 70	$ 75	$ 71	(6.2)%	4.6 %

In the preceding table, Other includes Canadian cash equity transaction rebates of $22 million, $20 million and $30 million for the years ended December 31, 2024, 2023 and 2022, respectively.

Other revenues decreased in 2024 compared with the same period in 2023 primarily due to a decrease in Nordic derivatives revenues due to a non-recurring payment received in 2023, partially offset by an increase in Nordic fixed income trading and clearing.

Other Revenues

For the years ended December 31, 2024, 2023 and 2022, Other revenues include revenues related to our Nordic power trading and clearing business, following our announcement in June 2023 that we entered into an agreement to sell this business, which was subsequently terminated in June 2024. In January 2025, we entered into a new agreement to transfer existing open positions in our Nordic power derivatives trading and clearing business to a European exchange. The completion of this transaction is subject to customary regulatory approvals. Revenues from this business will continue to be reflected in Other revenues. Prior to June 2023, these revenues were included in our Market Services and Capital Access Platforms segments. For the years ended December 31, 2023 and 2022, Other revenues also include revenues related to a transitional services agreement associated with a divested business. For the year ended December 31, 2022, Other revenues also include revenues related to our Nordic broker services business for which we completed the wind-down in June 2022. Prior to June 2022, these revenues were included in our Market Services and Capital Access Platforms segments.

EXPENSES

Operating Expenses

The following table presents our operating expenses:

	Year Ended December 31,			Percentage Change	
	2024	2023	2022	2024 vs. 2023	2023 vs. 2022
		(in millions)			
Compensation and benefits	$ 1,324	$ 1,082	$ 1,003	22.4%	7.9%
Professional and contract services	152	128	140	18.4%	(8.6)%
Technology and communication infrastructure	281	233	207	20.9%	12.7%
Occupancy	112	129	104	(12.9)%	23.7%
General, administrative and other	109	113	125	(3.6)%	(9.8)%
Marketing and advertising	54	47	51	16.4%	(8.8)%
Depreciation and amortization	613	323	258	89.3%	25.5%
Regulatory	55	34	33	60.8%	4.4%
Merger and strategic initiatives	35	148	82	(76.5)%	79.7%
Restructuring charges	116	80	15	44.3%	454.5%
Total operating expenses	$ 2,851	$ 2,317	$ 2,018	23.0%	14.9%

The increase in compensation and benefits expense in 2024 compared with the same period in 2023 was primarily driven by the inclusion of a full year of compensation costs related to Adenza employees as compared to two months in 2023, a pre-tax charge of $23 million resulting from the finalization of the termination of our pension plan and higher incentive compensation.

Headcount, including employees of non-wholly owned consolidated subsidiaries, increased to 9,162 employees as of December 31, 2024 from 8,525 employees as of December 31, 2023, primarily due to an increase in our Financial Technology segment as we support revenue growth and innovation.

Professional and contract services expense increased in 2024 compared with the same period in 2023 primarily due to an increase in expenses related to the inclusion of Adenza.

Technology and communication infrastructure expense increased in 2024 compared with the same period in 2023 primarily due to an increase in expenses related to the inclusion of Adenza and an increase in investment in technology expense related to our cloud initiatives and software licensing.

Occupancy expense decreased in 2024 compared with the same period in 2023 primarily due to $18 million in impairment charges and exit related costs recorded in 2023 following the abandonment of leased office space, partially offset by an increase in costs related to the inclusion of Adenza office space.

General, administrative and other expense decreased in 2024 compared with the same period in 2023 primarily due to a one-time accrual in 2023 related to a legal matter, partially offset by the inclusion of Adenza expense for a full year in 2024 and insurance recoveries related to legal matters recorded in 2023.

Marketing and advertising expense increased in 2024 compared with the same period in 2023 primarily due to higher client incentive spending resulting from higher IPO activity.

Depreciation and amortization expense increased in 2024 compared with the same period in 2023 primarily due to an increase in amortization related to the intangible assets acquired as part of the Adenza acquisition.

Regulatory expense increased in 2024 compared with the same period in 2023 primarily due to the settlement of a previously disclosed SFSA inquiry.

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 vary based on the size and frequency of the activities described above. For the years ended December 31, 2024 and 2023, these costs primarily relate to the Adenza acquisition. For the year ended December 31, 2024, these costs were partially offset by the recognition of a termination fee received by Nasdaq in 2024 related to the termination of the proposed divestiture of our Nordic power trading and clearing business.

Restructuring charges increased in 2024 compared with the same period in 2023 as a result of charges from our Adenza restructuring program, which we implemented to optimize our efficiencies as a combined organization, and our divisional alignment program, which was completed in September 2024.

We further expanded our Adenza restructuring program in the fourth quarter of 2024 to accelerate our momentum. In connection with this program, we expect to incur approximately $140 million in pre-tax charges. Actions taken as part of this program are expected to be completed by the end of 2025, while certain costs may be recognized in the first half of 2026. We expect to achieve benefits primarily in the form of expense synergies with annual cost savings of $140 million by the end of 2025, inclusive of the $80 million of net expense synergies related to the AxiomSL and Calypso acquisition.

The divisional alignment program concluded on September 30, 2024, incurring total pre-tax charges of $139 million over a two-year period, within the projected range of $115 million to $145 million. In addition to significantly boosting the scalability of our platforms, and thus revenue opportunities, we expect to achieve benefits from the 2022 divisional alignment program through combined annual run-rate operational efficiencies of approximately $30 million annually by 2025.

For further discussion related to both programs described above, see Note 20, "Restructuring Charges," to the consolidated financial statements.

Non-Operating Income and Expenses

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

	Year Ended December 31,			Percentage Change	
	2024	2023	2022	2024 vs. 2023	2023 vs. 2022
	(in millions)				
Interest income	$ 28	$ 115	$ 7	(75.5)%	1,538.3 %
Interest expense	(414)	(284)	(129)	45.6 %	120.2 %
Net interest expense	(386)	(169)	(122)	128.3 %	38.4 %
Other income (loss)	21	(1)	2	(5,232.5)%	(121.9)%
Net income (loss) from unconsolidated investees	16	(7)	31	(328.7)%	(122.9)%
Total non-operating expense	$ (349)	$(177)	$(89)	97.4 %	96.7 %

The following table presents our interest expense:

	Year Ended December 31,			Percentage Change	
	2024	2023	2022	2024 vs. 2023	2023 vs. 2022
	(in millions)				
Interest expense on debt	$ 398	$ 272	$ 120	46.3 %	126.8 %
Accretion of debt issuance costs and debt discount	13	9	7	33.9 %	37.0 %
Other fees	3	3	2	18.7 %	21.2 %
Interest expense	$ 414	$ 284	$ 129	45.6 %	120.2 %

Interest income decreased in 2024 compared with the same period in 2023 primarily due to a higher cash balance in 2023 during the period between the issuance of the senior unsecured notes in June 2023 and the close of the Adenza acquisition in November 2023.

Interest expense increased in 2024 compared with the same period in 2023 primarily due to debt issued in June 2023 to finance the Adenza acquisition. See "Financing of the Adenza Acquisition," of Note 9, "Debt Obligations," to the consolidated financial statements for further discussion.

Other income (loss) primarily represents realized and unrealized gains and losses from strategic investments related to our corporate venture program.

Net income (loss) from unconsolidated investees increased in 2024 compared with the same period in 2023 primarily due to higher income recognized from our equity method investment in OCC and lower losses from our equity method investment in NPM. See "Equity Method Investments," of Note 6, "Investments," to the consolidated financial statements for further discussion.

Tax Matters

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

	Year Ended December 31,			Percentage Change	
	2024	2023	2022	2024 vs. 2023	2023 vs. 2022
	(in millions)				
Income tax provision	$ 334	$ 344	$ 352	(2.8)%	(2.1)%
Effective tax rate	23.1 %	24.6 %	23.9 %		

For further discussion of our tax matters, see Note 17, "Income Taxes," to the 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 in this Annual Report on Form 10-K. 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 Annual Report on Form 10-K, including our 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.

The following table presents 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:

	Year Ended December 31,		
	2024	2023	2022
	(in millions, except per share amounts)		
U.S. GAAP net income attributable to Nasdaq	$ 1,117	$ 1,059	$ 1,125
Non-GAAP adjustments:			
Adenza purchase accounting adjustment	34	—	—
Amortization expense of acquired intangible assets	488	206	153
Merger and strategic initiatives expense	35	148	82
Restructuring charges	116	80	15
Lease asset impairments	—	25	—
Extinguishment of debt	4	—	16
Net (income) loss from unconsolidated investees	(16)	7	(29)
Legal and regulatory matters	20	12	26
Pension settlement charge	23	9	—
Other (income) loss	(15)	21	2
Total non-GAAP adjustments	$ 689	$ 508	$ 265
Total non-GAAP tax adjustments	(208)	(134)	(66)
Tax on intra-group transfer of IP assets	33	—	—
Total non-GAAP adjustments, net of tax	$ 514	$ 374	$ 199
Non-GAAP net income attributable to Nasdaq	$ 1,631	$ 1,433	$ 1,324
U.S. GAAP effective tax rate	23.1 %	24.6 %	23.9 %
Total adjustments from non-GAAP tax rate	0.7 %	0.4 %	0.1 %
Non-GAAP effective tax rate	23.8 %	25.0 %	24.0 %
Weighted-average common shares outstanding for diluted earnings per share	579.2	508.4	497.9
U.S. GAAP diluted earnings per share	$ 1.93	$ 2.08	$ 2.26
Total adjustments from non-GAAP net income	0.89	0.74	0.40
Non-GAAP diluted earnings per share	$ 2.82	$ 2.82	$ 2.66

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:

- *Adenza purchase accounting adjustment:* As discussed in Note 3, "Revenue from Contracts with Customers," to the consolidated financial statements, during the third quarter of 2024, as part of finalizing the purchase accounting of the Adenza acquisition, a one-time revenue reduction of $32 million was recorded, reflecting the net impact of the accounting change on AxiomSL subscription revenue from the date of the Adenza acquisition. We have excluded the reduction of $34 million as this relates to the prior year impact of this change from our non-GAAP results. We have not excluded the $2 million offsetting impact of this change as it is related to current year results.
- *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 and the relative operating performance of the businesses between periods.
- *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. For the years ended December 31, 2024 and 2023, these costs primarily relate to the Adenza acquisition. For the year ended December 31, 2024, these costs were partially offset by the recognition of a termination fee received by Nasdaq in 2024, related to the termination of the proposed divestiture of our Nordic power trading and clearing business.
- *Restructuring charges:* In the fourth quarter of 2023, following the closing of the Adenza acquisition, our management approved, committed to and initiated a restructuring program, to optimize our efficiencies as a combined organization. We further expanded this restructuring program in the fourth quarter of 2024 to accelerate our momentum. In October 2022, following our September 2022 announcement to realign our segments and leadership, we initiated a divisional alignment program with a focus on realizing the full potential of this structure. We completed this program in September 2024. See Note 20, "Restructuring Charges," to the consolidated financial statements for further discussion of these programs.

- *Net (income) loss from unconsolidated investees*: We exclude our share of the earnings and losses of our equity method investments. This provides a more meaningful analysis of Nasdaq's ongoing operating performance or comparisons in Nasdaq's performance between periods. See "Equity Method Investments," of Note 6, "Investments," to the consolidated financial statements for further discussion.

- *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. We believe the exclusion of such amounts allows management and investors to better understand the ongoing financial results of Nasdaq. Other significant items include:

  - *Lease asset impairments:* For the year ended December 31, 2023, other items include impairment charges related to our operating lease assets and leasehold improvements associated with vacating certain leased office space, which are recorded in occupancy and depreciation and amortization expense in the Consolidated Statements of Income. See Note 16, "Leases," to the consolidated financial statements for further discussion.

  - *Extinguishment of debt:* For the years ended December 31, 2024 and 2022 this includes a loss on extinguishment of debt, which is recorded under general, administrative and other expense in the Consolidated Statements of Income. See Note 9, "Debt Obligations," to the consolidated financial statements for further discussion.

  - *Legal and regulatory matters:* For the year ended December 31, 2024, other items primarily include the settlement of a previously disclosed SFSA inquiry, and accruals related to certain legal matters. For 2023 and 2022, other items also includes accruals related to certain legal matters. For 2023, these charges were partially offset by insurance recoveries related to certain legal matters. The charges and related insurance recoveries are recorded in professional and contract services and general, administrative and other expense in the Consolidated Statements of Income. For 2022, this also includes a charge related to an administrative fine imposed by the SFSA related to the clearing default that occurred in 2018. This charge was included in regulatory expense in the Consolidated Statements of Income.

  - *Pension settlement charge:* For the years ended December 31, 2024 and 2023, we recorded a pre-tax charge as a result of settling our U.S. pension plan. The plan was terminated and partially settled in 2023, with final settlement occurring during the first quarter of 2024. The pre-tax charge is recorded in compensation and benefits expense in the Consolidated Statements of Income. See Note 10, "Retirement Plans," to the consolidated financial statements for further discussion.

  - *Other (income) loss*: For the years ended December 31, 2024 and 2022, other items include net gains from strategic investments entered into through our corporate venture program, which are included in other income (loss) in the Consolidated Statements of Income. For 2023, other items included certain financing costs related to the Adenza acquisition and a net loss from a strategic investments entered into through our corporate venture program.

- *Significant tax items:* The non-GAAP adjustment to the income tax provision for all periods primarily includes the tax impact of each non-GAAP adjustment. In addition, for the year ended December 31, 2024, tax items also include a one-time net tax expense of $33 million related to the completion of an intra-group transfer of certain intellectual property, or IP, assets to our U.S. headquarters as well as a tax benefit related to return to provision adjustments and release of tax reserves due to lapse in statute of limitations.

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 debt. Currently, our cost and availability of funding remain healthy. We continue to prudently assess our capital deployment strategy through balancing internal investments, debt repayments, and shareholder return activity, including dividends and share repurchases, and potential acquisitions.

We expect that our current cash and cash equivalents combined with cash flows provided by operating activities, supplemented with our borrowing capacity and access to additional financing, including our revolving credit facility and our commercial paper program, provides us additional flexibility to meet our ongoing obligations and the capital deployment strategic actions described above, while allowing us to invest in activities and product development that support the long-term growth of our operations.

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; and
- volatility or disruption in the public debt and equity markets.

The following table summarizes selected measures of our liquidity and capital resources:

	December 31, 2024	December 31, 2023
	(in millions)	
Cash and cash equivalents	$ 592	$ 453
Financial investments	184	188
Working capital	(116)	71

The decrease in working capital is primarily driven by the reclassification of the 2025 Notes to short-term debt in 2024 and an increase in current deferred revenue, partially offset by a decrease in commercial paper, net, as further described below under "*Debt Obligations.*"

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 December 31, 2024, our cash and cash equivalents of $592 million were primarily invested in money market funds, commercial paper and bank deposits.

Repatriation of Cash

Our cash and cash equivalents held outside of the U.S. in various foreign subsidiaries totaled $181 million as of December 31, 2024 and $236 million as of December 31, 2023. The remaining balance held in the U.S. totaled $411 million as of December 31, 2024 and $217 million as of December 31, 2023.

Cash Flow Analysis

The following table summarizes the changes in cash flows:

	Year Ended December 31,		
	2024	2023	2022
	(in millions)		
Net cash provided by (used in):			
Operating activities	$ 1,939	$ 1,696	$ 1,706
Investing activities	(953)	(5,994)	49
Financing activities	(2,561)	4,220	1,036

Net Cash Provided by Operating Activities

Net cash provided by operating activities primarily consists of net income adjusted for certain non-cash items, including, but not limited to, depreciation and amortization expense, expense associated with share-based compensation, deferred income taxes and the effects of changes in working capital. Changes in working capital include changes in 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 changes in SEC fee rates and the timing of collections from customers and payments to the SEC.

Net cash provided by operating activities increased $243 million for the year ended December 31, 2024 compared with the same period in 2023. The increase was primarily driven by an increase in net income and the impact of certain non-cash items on net income, primarily an increase in amortization expense due to acquired intangibles related to the Adenza acquisitions offset by a decrease in deferred income tax liabilities.

The changes in our operating assets and liabilities primarily included higher Section 31 fees payable to the SEC due to changes in Section 31 fee rate between periods, partially offset by higher cash outflows from accounts payable and accrued expenses, primarily due to interest paid relating to the senior unsecured notes and the settlement of a legal matter, and higher cash outflows from higher receivables, net, primarily due to higher Market Services receivables driven by higher Section 31 fee rate as well as higher billings.

Net Cash Used in Investing Activities

Net cash used in investing activities for the year ended December 31, 2024 related to net purchases of investments related to default funds and margin deposits of $707 million, purchases of property and equipment of $207 million, other investing activities primarily related to our corporate venture program of $32 million and net purchases of trading securities, net, of $7 million.

Net cash used in investing activities for the year ended December 31, 2023 related to $5,766 million paid for the acquisition of Adenza, net of cash and cash equivalents acquired, purchases of property and equipment of $158 million, net purchases of investments related to default funds and margin deposits of $74 million and $3 million from other investing activities, partially offset by proceeds from the sale and redemption of trading securities, net of $7 million.

Net Cash Provided by (Used in) Financing Activities

Net cash used in financing activities for the year ended December 31, 2024 primarily related to a decrease in default funds and margin deposits of $1,030 million, dividend payments to our shareholders of $541 million, 2023 Term Loan repayment of $340 million, net repayments of our commercial paper of $291 million, repayments of debt and credit commitments of $181 million and repurchases of common stock of $145 million.

Net cash provided by financing activities for the year ended December 31, 2023 primarily related to $5,608 million in proceeds from issuances of senior unsecured notes and the 2023 Term Loan, in connection with the Adenza acquisition, net of debt issuance costs partially offset by dividend payments to our shareholders of $441 million, repayments of our commercial paper, net of $371 million, repurchases of common stock of $269 million and partial repayment of the 2023 Term Loan of $260 million.

See Note 9, "Debt Obligations," to the consolidated financial statements for further discussion of our debt obligations.

See "Share Repurchase Program," and "Cash Dividends on Common Stock," of Note 12, "Nasdaq Stockholders' Equity," to the consolidated financial statements for further discussion of our share repurchase program and cash dividends declared and paid on our common stock.

Financial Investments

Our financial investments totaled $184 million as of December 31, 2024 and $188 million as of December 31, 2023. Of these securities, $171 million as of December 31, 2024 and $168 million as of December 31, 2023 are assets primarily utilized to meet regulatory capital requirements, mainly for our clearing operations at Nasdaq Clearing. See Note 6, "Investments," to the 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 December 31, 2024, our required regulatory capital of $129 million was primarily comprised of highly rated European government debt securities that are included in financial investments in the 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 December 31, 2024, the combined required minimum net capital totaled $1 million and the combined excess capital totaled $24 million, substantially all of which is held in cash and cash equivalents in the Consolidated Balance Sheets. The required minimum net capital is included in restricted cash and cash equivalents in the 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 December 31, 2024, our required regulatory capital of $35 million was primarily invested in European government bills and mortgage bonds that are included in financial investments in the Consolidated Balance Sheets and cash, which is included in restricted cash and cash equivalents in the 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 December 31, 2024, other required regulatory capital of $12 million, primarily related to Nasdaq Central Securities Depository, was primarily invested in European government debt securities that are included in financial investments in the Consolidated Balance Sheets.

Equity and dividends

Share Repurchase Program

See "Share Repurchase Program," of Note 12, "Nasdaq Stockholders' Equity," to the consolidated financial statements for further discussion of our share repurchase program.

Cash Dividends on Common Stock

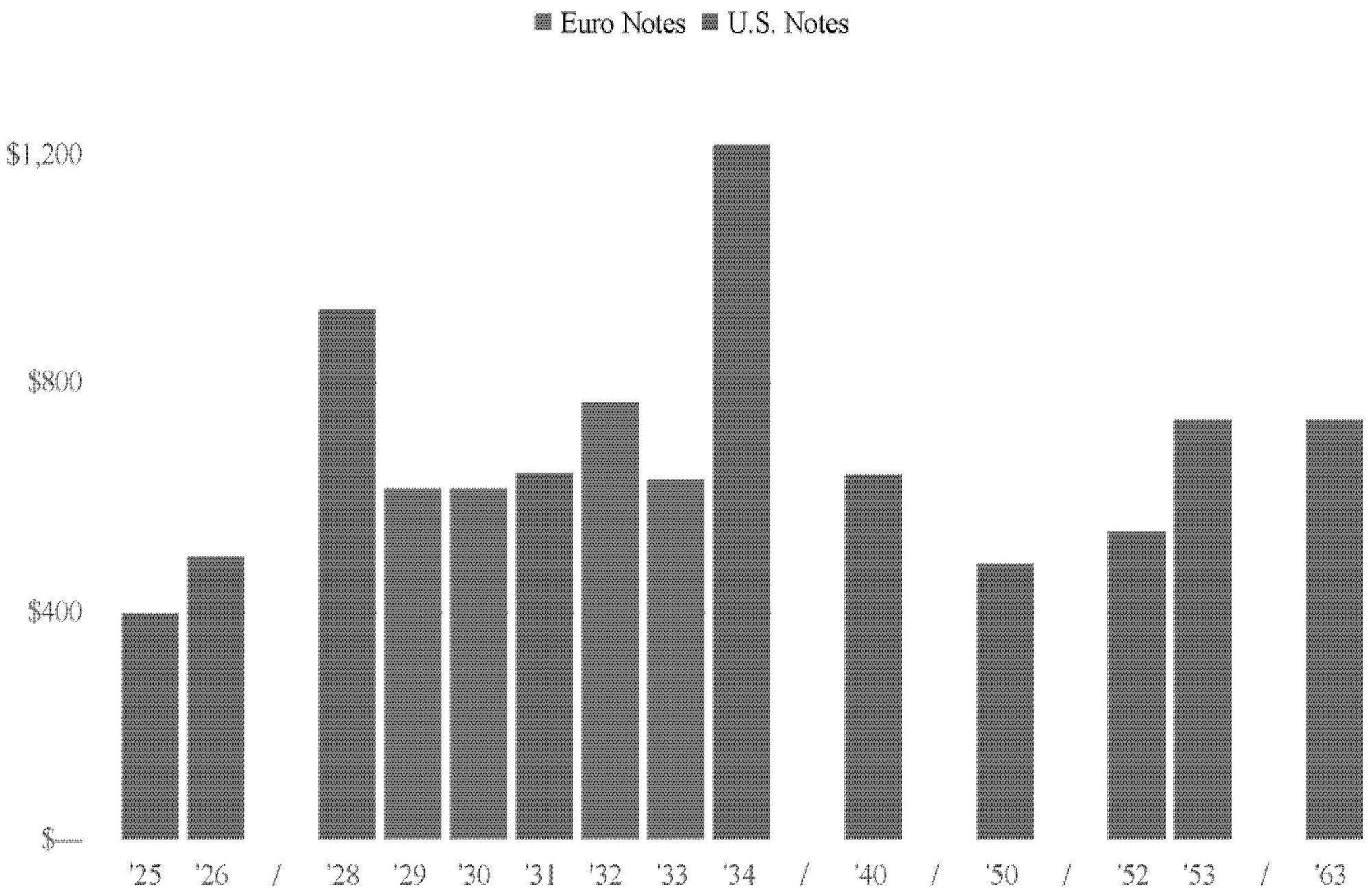
The following table presents our quarterly cash dividends paid per common share on our outstanding common stock:

	2024	2023
First quarter	$ 0.22	$ 0.20
Second quarter	0.24	0.22
Third quarter	0.24	0.22
Fourth quarter	0.24	0.22
Total	$ 0.94	$ 0.86

See "Cash Dividends on Common Stock," of Note 12, "Nasdaq Stockholders' Equity," to the consolidated financial statements for further discussion of the dividends.

Debt Obligations

The debt obligations, by contractual maturity, at December 31, 2024 are as follows (in U.S. Dollar millions):



In the fourth quarter of 2024, we repurchased an aggregate amount of $181 million of outstanding notes, primarily related to the 2025 Notes, 2028 Notes and 2034 Notes. In February 2025, Nasdaq commenced a cash tender offer to repurchase up to an aggregate principal amount of $200 million of our 2028, 2034 and 2052 Notes.

For the year ended December 31, 2024, the weighted average interest rate on our debt obligations was approximately 3.95%. This rate can fluctuate based on changes in interest rates for our variable rate debts, changes in foreign currency exchange rates and changes in the amount and duration of outstanding debt. In addition to the 2022 Revolving 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. These European credit facilities, which are available in multiple currencies, totaled $174 million as of December 31, 2024 and $191 million as of December 31, 2023 in available liquidity, none of which was utilized.

Financing of the Adenza Acquisition

In June 2023, Nasdaq issued six series of notes for total proceeds of $5,016 million, net of debt issuance costs of $38 million, with various maturity dates ranging from 2025 to 2063. The net proceeds from these notes were used to finance the majority of the cash consideration due in connection with the Adenza acquisition.

In addition, in connection with the financing of the Adenza acquisition, we entered into the 2023 Term Loan agreement. The 2023 Term Loan provided us with the ability to borrow up to $600 million to finance a portion of the cash consideration for the Adenza acquisition and other amounts incurred in connection with this transaction. On November 1, 2023, we borrowed $599 million, net of fees, under this term loan, which was used towards payment of the cash consideration due in connection with the Adenza acquisition, a portion of which had been repaid in the fourth quarter of 2023. The term loan was fully repaid in 2024.

As of December 31, 2024, we were in compliance with the covenants of all of our debt obligations.

See Note 9, "Debt Obligations," to the consolidated financial statements for further discussion of our debt obligations.

CONTRACTUAL OBLIGATIONS AND CONTINGENT COMMITMENTS

Nasdaq has contractual obligations to make future payments under debt obligations by contract maturity, operating lease payments, and other obligations. The following table summarizes material cash requirements for known contractual and other obligations as of December 31, 2024, and the estimated timing thereof.

(in millions)	Payments Due by Period Total	<1 year	1-3 years	3-5 years	5+ years
Debt obligation by contractual maturity	$15,252	$ 761	$ 1,171	$ 2,148	$11,172
Operating lease obligations	617	75	140	129	273
Purchase obligations	384	96	115	89	84
Total	$16,253	$ 932	$ 1,426	$ 2,366	$11,529

In the table above:

- Debt obligations by contractual maturity include both principal and interest obligations. For our Euro denominated notes interest is calculated on an actual basis while all other debt obligations were primarily calculated on a 365-day basis at the contractual fixed rate multiplied by the aggregate principal amount as of December 31, 2024. See Note 9, "Debt Obligations," to the consolidated financial statements for further discussion.
- Operating lease obligations represent our undiscounted operating lease liabilities as of December 31, 2024, as well as legally binding minimum lease payments for leases signed but not yet commenced. See Note 16, "Leases," to the consolidated financial statements for further discussion of our leases.
- Purchase obligations primarily represent minimum outstanding obligations due under software license agreements. The balance as of December 31, 2024 is primarily comprised of our multi-year AWS partnership contract.

OFF-BALANCE SHEET ARRANGEMENTS

For discussion of off-balance sheet arrangements see:

- Note 15, "Clearing Operations," to the consolidated financial statements for further discussion of our non-cash default fund contributions and margin deposits received for clearing operations; and
- Note 18, "Commitments, Contingencies and Guarantees," to the consolidated financial statements for further discussion of:
  - Guarantees issued and credit facilities available;
  - Other guarantees; and
  - Routing brokerage activities.

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. Substantially all of our debt obligations are fixed-rate obligations. We may enter into transactions that expose us to interest rate risk, for which we may utilize interest rate swap agreements to manage that risk.

Financial Investments

As of December 31, 2024, 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. The impact of an immediate increase to market interest rates, uniformly, by a hypothetical 100 basis points from levels as of December 31, 2024, would not have a material impact on our financial statements.

Debt Obligations

As of December 31, 2024, substantially all of our debt obligations are 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 9, "Debt Obligations," to the 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 2022 Revolving 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 December 31, 2024, there were no outstanding borrowings under our 2022 Revolving Credit Facility or commercial paper program.

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 years ended December 31, 2024 and 2023 is presented in the following tables:

	Euro	Swedish Krona	Canadian Dollar	Other Foreign Currencies	U.S. Dollar
	(in millions, except currency rate)				
Year Ended December 31, 2024					
Average foreign currency rate to the U.S. dollar	1.082	0.095	0.730	#	N/A
Percentage of revenues less transaction-based expenses	7.9%	3.4%	0.7%	3.7%	84.3%
Percentage of operating income	11.8%	(5.9)%	(7.8)%	(10.5)%	112.4%
Impact of a 10% adverse currency fluctuation on revenues less transaction-based expenses	$(37)	$(16)	$(3)	$(17)	$—
Impact of a 10% adverse currency fluctuation on operating income	$(21)	$(11)	$(14)	$(19)	$—

	Euro	Swedish Krona	Canadian Dollar	Other Foreign Currencies	U.S. Dollar
	(in millions, except currency rate)				
Year Ended December 31, 2023					
Average foreign currency rate to the U.S. dollar	1.081	0.094	0.741	#	N/A
Percentage of revenues less transaction-based expenses	6.6%	4.0%	0.8%	3.0%	85.6%
Percentage of operating income	10.7%	(3.8)%	(7.0)%	(8.3)%	108.4%
Impact of a 10% adverse currency fluctuation on revenues less transaction-based expenses	$(26)	$(15)	$(3)	$(12)	$—
Impact of a 10% adverse currency fluctuation on operating income	$(17)	$(6)	$(11)	$(13)	$—

Represents multiple foreign currency rates.
N/A Not applicable.

The adverse impacts shown in the preceding tables should be viewed individually by currency and not in aggregate due to the correlation between changes in exchange rates for certain currencies. Additionally, the table does not include the offsetting impact of our hedging programs.

We may use foreign exchange contracts to hedge a portion of our forecasted foreign currency denominated revenues and expenses in the normal course of business. We do not use these contracts for speculative trading purposes. We hedge these cash flow exposures to reduce the risk that our earnings and cash flows will be adversely affected by changes in exchange rates. These foreign exchange contracts are carried at fair value, with maturities that can range up to 24 months. We record changes in fair value of these cash flow hedges of foreign currency denominated revenue and expenses in accumulated other comprehensive loss in the Consolidated Balance Sheets, until the forecasted transaction occurs. When the forecasted transaction affects earnings, we reclassify the related gain or loss on the cash flow hedge to revenue or operating expenses, as applicable. In the event the underlying forecasted transaction does not occur, or it becomes probable that it will not occur, we reclassify the gain or loss on the related cash flow hedge from accumulated other comprehensive loss to revenue or operating expenses, as applicable. As of December 31, 2024, the fair value of our derivatives designated as cash flow hedging instruments are not material.

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 in the Consolidated Balance Sheets.

Our primary exposure to net assets in foreign currencies as of December 31, 2024 is presented in the following table:

	Net Assets	Impact of a 10% Adverse Currency Fluctuation
	(in millions)	
Swedish Krona	$ 2,737	$ (274)
British Pound	136	(14)
Norwegian Krone	134	(13)
Canadian Dollar	107	(11)
Australian Dollar	89	(9)

In the table above, Swedish Krona includes goodwill of $2,028 million and intangible assets, net of $439 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 the 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 consolidated financial position and results of operations.

We also are exposed to credit risk through our clearing operations with Nasdaq Clearing. See Note 15, "Clearing Operations," to the 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 remit to the members interest earned at prevailing market rates, less a spread, 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.

CRITICAL ACCOUNTING POLICIES AND ESTIMATES

The preparation of financial statements and related disclosures in conformity with U.S. GAAP requires management to make judgments, assumptions, and estimates that affect the amounts reported in the consolidated financial statements and accompanying notes. Note 2, "Summary of Significant Accounting Policies," to the consolidated financial statements describes the significant accounting policies and methods used in the preparation of the consolidated financial statements. The accounting policies described below are significantly affected by critical accounting estimates. Such accounting policies require significant judgments, assumptions, and estimates used in the preparation of the consolidated financial statements, and actual results could differ materially from the amounts reported based on these policies.

Revenue Recognition

As part of our market technology product offering, within our Capital Markets Technology business, we enter into certain long-term contracts with customers to develop customized technology solutions, license the right to use software and provide support and other services to our customers which results in these contracts containing multiple performance obligations. We allocate the contract transaction price to each performance obligation using our best estimate of the standalone selling price of each distinct good or service in the contract. In instances where standalone selling price is not directly observable, such as when we do not sell the product or service separately, we determine the standalone selling price predominantly through an expected cost plus a margin approach.

We generally recognize revenue over time as our customers simultaneously receive and consume the benefits provided by our performance because our customer controls the asset for which we are creating, our performance does not create an asset with alternative use, and we have a right to payment for performance completed to date. For these services, we recognize revenue over time using costs incurred to date relative to total estimated costs at completion to measure progress toward satisfying our performance obligation. Incurred costs represent work performed, which corresponds with, and thereby depicts, the transfer of control to the customer.

Accounting for our long-term contracts requires judgment relative to assessing risks and their impact on the estimate of revenues and costs. Our estimates are impacted by factors such as the potential for schedule and technical issues, productivity and the complexity of work performed. Revenue and cost estimates for our long-term contracts are reviewed and reassessed at least quarterly. When adjustments in estimated total contract costs are required, any changes in the estimated revenues from prior estimates are recognized in the current period for the effect of such change. If estimates of total costs to be incurred on a contract exceed estimates of total revenues, a provision for the entire estimated loss on the contract is recorded in the period in which the loss is determined.

Our Calypso product, also part of our Capital Markets Technology business, provides cross-asset, front-to-back trading, treasury, risk and collateral management solutions for the financial markets. This offering is also provided as an on-premises software solution. A license for on-premises software provides customers with the right to use the software at its current state at the time made available to the customer. These contracts generally consist of the following distinct performance obligations: license and PCS. In allocating the contractual price to each performance obligation, we have used our best estimate of the stand-alone selling price. Consideration is first allocated to performance obligations with established stand-alone selling prices based on observable evidence, with the residual being split between license and PCS.

License revenue is recognized upfront at the point in time when the software is made available to the customer as this is the point the user of the software can direct the use of and obtain substantially all of the remaining benefits from the software license. PCS revenue is recognized over time on a ratable basis over the contract period beginning on the date that our service is made available to the customer since the customer receives and consumes the benefit as Nasdaq provides the service.

Accounting for these contracts requires judgment relative to the allocation of the contractual price to each performance obligation.

Due to the significance of judgment in the estimation process, as discussed above, changes in assumptions and estimates may adversely or positively affect financial performance in future periods.

For further discussion related to recognition of these revenues, see "Revenue From Contracts with Customers - Revenue Recognition - Capital Markets Technology," of Note 2, "Summary of Significant Accounting Policies," to the consolidated financial statements.

Business Combination

We account for business acquisitions under the acquisition method of accounting. The assets acquired and liabilities assumed in connection with business acquisitions are recorded at the date of acquisition at their estimated fair values, with any excess of the purchase price over the estimated fair values of the net assets acquired recorded as goodwill. Within one year from the date of acquisition, we may update the value allocated to the assets acquired and

liabilities assumed, and the resulting goodwill balance, based on information received regarding the valuation of such assets and liabilities that was not available at the time of purchase.

We use various methods to determine fair value depending on the type of assets acquired and liabilities assumed. We make estimates and assumptions about projected future cash flows including, but not limited to, forecasted revenue, cash flows, attrition rates, long term growth rates, royalty rates, EBITDA margin and discount rates.

Significant judgment is required in estimating the fair value of assets acquired and liabilities assumed and in assigning useful lives to certain definite-lived intangible and tangible assets. Accordingly, we may engage third-party valuation specialists to assist in these determinations. The fair value estimates are based on available information as of the acquisition date and assumptions deemed reasonable by management but are inherently uncertain.

In the third quarter of 2024 we recorded a purchase accounting adjustment to the estimated purchase price allocation shown above, and disclosed as of December 31, 2023. This adjustment relates to the impact of the change from upfront to ratable revenue recognition for AxiomSL on-premises contracts entered into prior to the acquisition date, as described above, and decreased accrued income (which reflects revenue earned but not yet billed and included in receivables above) by $46 million, increased deferred revenue by $56 million and increased goodwill by $77 million, net of a deferred tax asset of $25 million. During 2023 and 2022, we have not recorded any material measurement period adjustments to purchase price allocations.

See Note 4, "Acquisition," to the consolidated financial statements for further discussion of the Adenza Acquisition.

Goodwill, Indefinite-Lived Intangible Assets and Related Impairment Testing

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 recognize specifically identifiable intangibles, such as customer relationships, technology, exchange and clearing registrations, trade names and licenses when a specific right or contract is acquired. Goodwill and intangible assets deemed to have indefinite useful lives, primarily exchange and clearing registrations, are not amortized but instead are tested for impairment at least annually as of October 1 and more frequently whenever events or changes in circumstances indicate that the fair value of the asset may be less than its carrying amount, 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. We perform our goodwill impairment test at the reporting unit level for our three reporting units: Capital Access Platforms, Financial Technology and Market Services segments.

When testing goodwill and indefinite-lived intangible assets for impairment, we have the option of first performing a qualitative assessment to determine whether it is more likely than not that the fair value of a reporting unit or indefinite-lived intangible asset is less than their respective carrying amounts as the basis to determine if it is necessary to perform a quantitative impairment test. If we choose not to complete a qualitative assessment, or if the initial assessment indicates that it is more likely than not that the carrying amount of a reporting unit or the carrying amount of an indefinite-lived intangible asset exceeds their respective estimated fair values, a quantitative test is required. Our decision to perform a qualitative impairment assessment in a given year is influenced by a number of factors, including but not limited to, the size of the reporting unit's goodwill, the significance of the excess of the reporting unit's estimated fair value or the indefinite-lived intangible asset's fair value over their respective carrying amounts at the last quantitative assessment date, and the amount of time in between quantitative fair value assessments.

In performing a quantitative impairment test, we compare the fair value of each reporting unit and indefinite-lived intangible asset with their respective carrying amounts. The fair value of each reporting unit is estimated using a combination of a discounted cash flow valuation, which incorporates assumptions regarding future growth rates, terminal values, and discount rates, as well as guideline public company valuations, which incorporates relevant trading multiples of comparable companies and other factors. The estimates and assumptions used consider historical performance and are consistent with the assumptions used in determining future profit plans for each reporting unit, which are approved by our board of directors. The fair value of indefinite-lived intangible assets is primarily determined on the basis of estimated discounted value, using the Greenfield Approach for exchange and clearing registrations and licenses, and the relief from royalty approach or excess earnings approach for trade names, both of which incorporate assumptions regarding future revenue projections and discount rates. If the carrying amounts of the reporting unit or the indefinite-lived intangible asset exceed their respective fair values, an impairment charge is recognized in an amount equal to the difference, limited to the total amount of goodwill allocated to that reporting unit or the total carrying value of the indefinite-lived intangible asset.

The following table presents the carrying value of goodwill for our reportable segments at the time of our 2024 annual impairment test:

	October 1, 2024
	(in millions)
Capital Access Platforms	$ 4,210
Financial Technology	7,945
Market Services	2,010
	$ 14,165

In 2024, we performed a qualitative impairment test for goodwill on all reporting units and indefinite-lived intangible assets, as the excesses of their fair values over their respective carrying amounts, at the time of the last quantitative test in 2023, were significant. In conducting the qualitative assessment, we evaluated the performance of each of these reporting units and indefinite-lived intangible assets since the last quantitative test, as well as future financial projections to determine if there were any changes in the key inputs used to determine their respective fair values. We also considered the qualitative factors in FASB ASC Topic 350, "Intangibles–Goodwill and Other," as well as other relevant events and circumstances. Based on the results of the qualitative assessment for each reporting unit and indefinite-lived intangible asset, and the predominance of positive indicators and the weight of such indicators, we concluded that the fair values of our reporting units and indefinite-lived intangible assets are more likely than not greater than their respective carrying amounts and as a result, quantitative analyses were not needed. No impairment of goodwill or indefinite-lived intangible assets was recorded in 2024, 2023 and 2022.

Although we believe our estimates of fair value are reasonable, the determination of certain valuation inputs is subject to management's judgment. Changes in these inputs could materially affect the results of our impairment review. If our forecasts of cash flows or other key inputs are negatively revised in the future, the estimated fair value of each reporting unit and of our indefinite-lived intangible assets would be adversely impacted, potentially leading to an impairment in the future that could materially affect our operating results.

Subsequent to our annual impairment test, no indications of impairment were identified.

Other Long-Lived Assets and Related Impairment

We review our other long-lived assets, such as finite-lived intangible assets, property and equipment, and operating lease assets for potential impairment when there is evidence that events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable. The carrying amount of an asset is not recoverable if it exceeds the sum of the undiscounted cash flows expected to result from the use and eventual disposition of the asset. Fair value of finite-lived intangible assets and property and equipment is based on various valuation techniques. Any required impairment loss is measured as the amount by which the carrying amount of the asset exceeds its fair value and is recorded as a reduction in the carrying amount of the related asset and a charge to operating results.

There were no material finite-lived intangible assets impairment charges in 2024, 2023 and 2022.

We recorded pre-tax, non-cash property and equipment asset impairment charges, primarily in relation to our restructuring programs of $37 million in 2024, $12 million in 2023 and $8 million in 2022. See Note 20, "Restructuring Charges," to the consolidated financial statements for a discussion of these plans.

In 2023, we initiated a review of our real estate and facility capacity requirements due to our new and evolving work models. As a result of this ongoing review, we recorded impairment charges of $23 million in 2023 of which $18 million related to operating lease asset impairment and exit costs and is included in occupancy expense in the Consolidated Statements of Income and $5 million related to impairment of leasehold improvements, which are recorded in depreciation and amortization expense in the Consolidated Statements of Income.

No material impairments were recorded to reduce the carrying value of our other long-lived assets during 2024, 2023 or 2022.

Income Taxes

Estimates and judgments are required in the calculation of certain tax liabilities and in the determination of the recoverability of certain deferred tax assets, which arise from net operating loss carryforwards, tax credit carryforwards and temporary differences between the tax and financial statement recognition of revenues and expenses. Our deferred tax assets are reduced by a valuation allowance if it is more likely than not that some portion or all of the recorded deferred tax assets will not be realized in future periods. Management is required to determine whether a tax position is more likely than not to be sustained upon examination, including resolution of any related appeals or litigation processes, based on the technical merits of the position. Once it is determined that a position meets the recognition thresholds, the position is measured to determine the amount of benefit to be recognized in the consolidated financial statements.

In assessing the need for a valuation allowance, we consider all available evidence including past operating results, the existence of cumulative losses in the most recent fiscal years, estimates of future taxable income and the feasibility of tax planning strategies. In the event that we change our determination as to the amount of deferred tax assets that can be realized, we will adjust our valuation allowance with a corresponding impact to the provision for income taxes in the period in which such determination is made.

In addition, the calculation of our tax liabilities involves uncertainties in the application of tax regulations in the U.S. and other tax jurisdictions. We recognize potential liabilities for anticipated tax audit issues in such jurisdictions based on our estimate of whether, and the extent to which, additional taxes and interest may be due. While we believe that our tax liabilities reflect the probable outcome of identified tax uncertainties, it is reasonably possible that the ultimate resolution of any tax matter may be greater or less than the

amount accrued. If events occur and the payment of these amounts ultimately proves unnecessary, the reversal of the liabilities would result in tax benefits being recognized in the period when we determine the liabilities are no longer necessary. If our estimate of tax liabilities proves to be less than the ultimate assessment, a further charge to expense would result.

Item 7A. Quantitative and Qualitative Disclosures About Market Risk

Information about quantitative and qualitative disclosures about market risk is incorporated herein by reference from "Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations - Quantitative and Qualitative Disclosures About Market Risk."

Item 8. Financial Statements and Supplementary Data

Nasdaq's consolidated financial statements, including Consolidated Balance Sheets as of December 31, 2024 and 2023, Consolidated Statements of Income for the years ended December 31, 2024, 2023 and 2022, Consolidated Statements of Comprehensive Income for the years ended December 31, 2024, 2023 and 2022, Consolidated Statements of Changes in Stockholders' Equity for the years ended December 31, 2024, 2023 and 2022, Consolidated Statements of Cash Flows for the years ended December 31, 2024, 2023 and 2022 and notes to our consolidated financial statements, together with a report thereon of Ernst & Young LLP, dated February 21, 2025, are attached hereto as pages F-1 through F-44 and incorporated by reference herein.

Item 9. Changes in and Disagreements with Accountants on Accounting and Financial Disclosure

None.

Item 9A. Controls and Procedures

Disclosure Controls and Procedures

Nasdaq's management, with the participation of Nasdaq's 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 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 December 31, 2024 that have materially affected, or are reasonably likely to materially affect, Nasdaq's internal control over financial reporting.

Management's Report on Internal Control Over Financial Reporting

Management is responsible for the preparation and integrity of the consolidated financial statements appearing in the reports that we file with the SEC. The consolidated financial statements were prepared in conformity with U.S. generally accepted accounting principles and include amounts based on management's estimates and judgments.

Management is also responsible for establishing and maintaining adequate internal control over Nasdaq's financial reporting. Although there are inherent limitations in the effectiveness of any system of internal control over financial reporting, or ICFR, we maintain a system of internal control that is designed to provide reasonable assurance as to the fair and reliable preparation and presentation of the consolidated financial statements, as well as to safeguard assets from unauthorized use or disposition that could have a material effect on the financial statements.

Our management assessed the effectiveness of our internal control over financial reporting as of December 31, 2024, based on criteria established in Internal Control—Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO) (2013 framework). This evaluation included review of the documentation of controls, evaluation of the design effectiveness of controls, testing of the operating effectiveness of controls and a conclusion on this evaluation. Based on its assessment, our management believes that, as of December 31, 2024, our internal control over financial reporting is effective.

Ernst & Young LLP, an independent registered public accounting firm, has issued an attestation report on Nasdaq's internal control over financial reporting, which is included herein.

Report of Independent Registered Public Accounting Firm

To the Stockholders and the Board of Directors of Nasdaq, Inc.

Opinion on Internal Control over Financial Reporting

We have audited Nasdaq, Inc.'s internal control over financial reporting as of December 31, 2024, based on criteria established in Internal Control—Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework) (the COSO criteria). In our opinion, Nasdaq, Inc. (the Company) maintained, in all material respects, effective internal control over financial reporting as of December 31, 2024, based on the COSO criteria.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the consolidated balance sheets of the Company as of December 31, 2024 and 2023, the related consolidated statements of income, comprehensive income, changes in stockholders' equity and cash flows for each of the three years in the period ended December 31, 2024, and the related notes and our report dated February 21, 2025 expressed an unqualified opinion thereon.

Basis for Opinion

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

We conducted our audit in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects.

Our audit included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, testing and evaluating the design and operating effectiveness of internal control based on the assessed risk, and performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

Definition and Limitations of Internal Control Over Financial Reporting

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

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

/s/ Ernst & Young LLP

New York, New York
February 21, 2025

Item 9B. Other Information

During the three months ended December 31, 2024, none of the Company's directors or officers adopted, terminated or modified a "Rule 10b5-1 trading arrangement" or "non-Rule 10b5-1 trading arrangement" (as such terms are defined in Item 408 of Regulation S-K) except as follows and each of which is intended to satisfy the affirmative defense of Rule 10b5-1(c): (i) on November 1, 2024, Bradley J. Peterson, Executive Vice President and Chief Information Officer/ Chief Technology Officer, adopted a Rule 10b5-1 trading plan for the sale of our common stock in the following amounts: (a) up to 100% of the net vested shares resulting from the vesting of 4,719 restricted stock units on April 1, 2025, (b) up to 100% of the net vested shares resulting from the vesting of 22,494 restricted stock units on July 1, 2025 and (c) up to 100% of the net vested shares upon the settlement of 28,020 performance share units on or about February 19, 2025, with each of the foregoing subject to certain conditions and which plan expires on August 1, 2025 and (ii) on December 12, 2024, Sarah Youngwood, Executive Vice President and Chief Financial Officer, adopted a Rule 10b5-1 trading plan for the sale of 14,959 shares of our common stock, subject to certain conditions and which expires on March 31, 2025. Vested shares are net of tax withholding.

Item 9C. Disclosure Regarding Foreign Jurisdictions that Prevent Inspections

Not applicable.

PART III

Item 10. Directors, Executive Officers and Corporate Governance

Information about Nasdaq's directors, as required by Item 401 of Regulation S-K, is incorporated by reference, if applicable, from the discussion under the caption "Director Nominees" in Nasdaq's Proxy Statement. Information about Nasdaq's executive officers, as required by Item 401 of Regulation S-K, is incorporated by reference from the discussion under the caption "Other Items-Executive Officers" in the Proxy Statement. Information about Section 16 reports, as required by Item 405 of Regulation S-K, is incorporated by reference from the discussion under the caption "Other Items-Delinquent Section 16(a) Reports" in the Proxy Statement. Information about Nasdaq's code of ethics, as required by Item 406 of Regulation S-K, is incorporated by reference from the discussion under the caption "Operating with Integrity" in the Proxy Statement. Information about Nasdaq's nomination procedures, Audit & Risk Committee and Audit & Risk Committee financial experts, as required by Items 407(c)(3), 407(d)(4) and 407(d)(5) of Regulation S-K, is incorporated by reference from the discussions under the headings "Director Nominees" and "Board Committees" in the Proxy Statement.

Nasdaq has an insider trading policy governing the purchase, sale and other dispositions of Nasdaq's securities that applies to all Nasdaq personnel, including directors, officers, employees, and other covered persons, as well as Nasdaq itself. Nasdaq also follows procedures for the repurchase of its securities. Nasdaq believes that its insider trading policy is reasonably designed to promote compliance with insider trading laws, rules and regulations, as well as applicable listing standards. A copy of Nasdaq's insider trading policy is filed as Exhibit 19.1 to this Annual Report on Form 10-K.

Item 11. Executive Compensation

Information about Nasdaq's director and executive compensation, as required by Items 402, 407(e)(4) and 407(e)(5) of Regulation S-K, is incorporated by reference from the discussions under the headings "Director Compensation" and "Executive Compensation" (except under "Pay versus Performance") in the Proxy Statement.

Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters

Information about security ownership of certain beneficial owners and management, as required by Item 403 of Regulation S-K, is incorporated by reference from the discussion under the heading "Other Items-Security Ownership of Certain Beneficial Owners and Management" in the Proxy Statement.

Equity Compensation Plan and ESPP Information

Nasdaq's Equity Plan provides for the issuance of our equity securities to all employees and directors as part of their compensation plan.

In addition, in jurisdictions where participation in the ESPP is permitted, all our employees are eligible. Employees may purchase shares of our common stock at a 15% discount to the lesser of the closing price of our common stock on (i) the first trading day of the offering period or (ii) the last trading day of the offering period. Offering periods under the ESPP are six months in duration. As of December 31, 2024, all our employees are eligible to participate.

The Equity Plan and the ESPP have been previously approved by our stockholders. The following table sets forth information regarding outstanding options and shares reserved for future issuance under all of Nasdaq's compensation plans as of December 31, 2024.

Plan Category	Number of shares to be issued upon exercise of outstanding options, warrants and rights(a)	Weighted-average exercise price of outstanding options, warrants and rights(b)	Number of shares remaining available for future issuance under equity compensation plans (excluding shares reflected in column(a))(c)
Equity compensation plans approved by stockholders	1,420,323	$ 41.79	33,615,389
Equity compensation plans not approved by stockholders	—	—	—
Total	1,420,323	$ 41.79	33,615,389

In the table above:

- As of December 31, 2024, we also had 6,353,018 shares to be issued upon vesting of outstanding restricted stock and PSUs.
- The number of shares remaining available for future issuance under equity compensation plans (excluding shares reflected in column (a) includes 22,886,514 shares of common stock that may be awarded pursuant to the Equity Plan and (b) 10,728,875 shares of common stock that may be issued pursuant to the ESPP.

Item 13. Certain Relationships and Related Transactions, and Director Independence

Information about certain relationships and related transactions, as required by Item 404 of Regulation S-K, is incorporated herein by reference from the discussion under the heading "Other Items-Certain Relationships and Related Transactions" in the Proxy Statement. Information about director independence, as required by Item 407(a) of Regulation S-K, is incorporated herein by reference from the discussion under the heading "Director Nominees" in the Proxy Statement.

Item 14. Principal Accountant Fees and Services

Information about principal accountant fees and services, as required by Item 9(e) of Schedule 14A, is incorporated herein by reference from the discussion under the heading "Annual Evaluation and 2025 Selection of the Independent Auditors" in the Proxy Statement.

PART IV

Item 15. Exhibits and Financial Statement Schedules

(a)(1) Financial Statements

See "Index to Consolidated Financial Statements."

(a)(2) Financial Statement Schedules

All schedules are omitted because they are not applicable or the required information is included in the consolidated financial statements or notes.

(a)(3) Exhibits

Exhibit Number	
2.1	Share Purchase Agreement, dated as of November 18, 2020, by and among Osprey Acquisition Corporation, a wholly owned subsidiary of Nasdaq, Verafin Holdings Inc., certain shareholders of Verafin (the "Sellers"), and Shareholder Representative Services LLC, solely in its capacity as the representative of the Sellers (incorporated herein by reference to Exhibit 2.2 to the Annual Report on Form 10-K for the year ended December 31, 2020 filed on February 23, 2021).†
2.2	Amendment to Share Purchase Agreement, dated as of February 11, 2021, by and among Osprey Acquisition Corporation, a wholly owned subsidiary of Nasdaq, Verafin Holdings Inc., certain shareholders of Verafin (the "Sellers"), and Shareholder Representative Services LLC, solely in its capacity as the representative of the Sellers (incorporated herein by reference to Exhibit 2.3 to the Annual Report on Form 10-K for the year ended December 31, 2020 filed on February 23, 2021).
2.3	Agreement and Plan of Merger, dated as of June 10, 2023, by and among Nasdaq, Inc., Argus Merger Sub 1, Inc., Argus Merger Sub 2, LLC, Adenza Holdings, Inc. and Adenza Parent, LP. (incorporated herein by reference to Exhibit 2.1 to the Current Report on Form 8-K filed on June 12, 2023).†
3.1	Amended and Restated Certificate of Incorporation of Nasdaq (incorporated herein by reference to Exhibit 3.1 to the Current Report on Form 8-K filed on January 28, 2014).
3.1.1	Certificate of Elimination of Nasdaq's Series A Convertible Preferred Stock (incorporated herein by reference to Exhibit 3.1.1 to the Current Report on Form 8-K filed on January 28, 2014).
3.1.2	Certificate of Amendment of Nasdaq's Amended and Restated Certificate of Incorporation (incorporated herein by reference to Exhibit 3.1 to the Current Report on Form 8-K filed on November 19, 2014).

3.1.3	Certificate of Amendment of Nasdaq's Amended and Restated Certificate of Incorporation (incorporated herein by reference to Exhibit 3.1 to the Current Report on Form 8-K filed on September 8, 2015).
3.1.4	Certificate of Amendment of Nasdaq's Amended and Restated Certificate of Incorporation (incorporated herein by reference to Exhibit 3.1 to the Current Report on Form 8-K filed on July 20, 2022).
3.2	Nasdaq's By-Laws (incorporated herein by reference to Exhibit 3.2 to the Current Report on Form 8-K filed on November 21, 2016).
4.1	Form of Common Stock certificate (incorporated herein by reference to Exhibit 4.1 to the Quarterly Report on Form 10-Q for the quarter ended September 30, 2015 filed on November 4, 2015).
4.2	Stockholders' Agreement, dated as of February 27, 2008, between Nasdaq, Inc. (f/k/a The NASDAQ OMX Group, Inc.) and Borse Dubai Limited (incorporated herein by reference to Exhibit 10.2 to the Current Report on Form 8-K filed on March 3, 2008).
4.2.1	First Amendment to Stockholders' Agreement, dated as of February 19, 2009, between Nasdaq, Inc. (f/k/a The NASDAQ OMX Group, Inc.) and Borse Dubai Limited (incorporated herein by reference to Exhibit 4.10.1 to the Annual Report on Form 10-K for the year ended December 31, 2008 filed on February 27, 2009).
4.2.2	Second Amendment to Nasdaq Stockholders' Agreement, dated as of March 19, 2024, by and between Nasdaq, Inc. and Borse Dubai Limited (incorporated herein by reference to Exhibit 4.1 to the Current Report on Form 8-K filed on March 20, 2024).
4.3	Registration Rights Agreement, dated as of February 27, 2008, among Nasdaq, Inc. (f/k/a The NASDAQ OMX Group, Inc.), Borse Dubai Limited and Borse Dubai Nasdaq Share Trust (incorporated herein by reference to Exhibit 10.3 to the Current Report on Form 8-K filed on March 3, 2008).
4.3.1	First Amendment to Registration Rights Agreement, dated as of February 19, 2009, among Nasdaq, Inc. (f/k/a The NASDAQ OMX Group, Inc.), Borse Dubai Limited and Borse Dubai Nasdaq Share Trust (incorporated herein by reference to Exhibit 4.11.1 to the Annual Report on Form 10-K for the year ended December 31, 2008 filed on February 27, 2009).
4.4	Stockholders' Agreement, dated as of December 16, 2010, between Nasdaq, Inc. (f/k/a The NASDAQ OMX Group, Inc.) and Investor AB (incorporated herein by reference to Exhibit 4.12 to the Annual Report on Form 10-K for the year ended December 31, 2010 filed on February 24, 2011).
4.4.1	First Amendment to Nasdaq Stockholders' Agreement, dated as of December 14, 2022, between Nasdaq, Inc. and Investor AB (incorporated herein by reference to Exhibit 4.1 to the Current Report on Form 8-K filed on December 16, 2022).
4.5	Stockholders' Agreement, dated as of November 1, 2023, by and among Nasdaq, Inc., Adenza Parent, LP and Thoma Bravo, L.P. (incorporated herein by reference to Exhibit 4.1 to the Current Report on Form 8-K filed on November 3, 2023).
4.6	Registration Rights Agreement, dated as of November 1, 2023, by and among Nasdaq, Inc. and Adenza Parent, LP. (incorporated herein by reference to Exhibit 4.2 to the Current Report on Form 8-K filed on November 3, 2023).
4.7	Indenture, dated as of June 7, 2013, between Nasdaq, Inc. (f/k/a The NASDAQ OMX Group, Inc.) and Wells Fargo Bank, National Association, as Trustee (incorporated herein by reference to Exhibit 4.1 to the Current Report on Form 8-K filed on June 10, 2013).
4.7.1	Fourth Supplemental Indenture, dated as of June 7, 2016, among Nasdaq, Inc. and Wells Fargo Bank, National Association, as Trustee (incorporated herein by reference to the Current Report on Form 8-K filed on June 7, 2016).
4.8	Sixth Supplemental Indenture, dated as of April 1, 2019, among Nasdaq, Inc., Wells Fargo Bank, National Association, as Trustee, and HSBC Bank USA, National Association, as paying agent and as registrar and transfer agent (incorporated herein by reference to Exhibit 4.2 to the Form 8-A filed on April 1, 2019).
4.9	Seventh Supplemental Indenture, dated February 13, 2020, among Nasdaq, Inc., Wells Fargo Bank, National Association, as Trustee, and HSBC Bank USA, National Association, as paying agent and as registrar and transfer agent (incorporated herein by reference to Exhibit 4.2 to the Company's Form 8-A filed on February 13, 2020).
4.10	Eighth Supplemental Indenture, dated April 28, 2020, by and between Nasdaq, Inc. and Wells Fargo Bank, National Association, as Trustee (incorporated herein by reference to Exhibit 4.2 to the Current Report on Form 8-K filed on April 28, 2020).
4.11	Tenth Supplemental Indenture, dated December 21, 2020, by and between Nasdaq, Inc. and Wells Fargo Bank, National Association, as Trustee (incorporated herein by reference to Exhibit 4.3 to the Current Report on Form 8-K filed on December 21, 2020).
4.12	Eleventh Supplemental Indenture, dated December 21, 2020, by and between Nasdaq, Inc. and Wells Fargo Bank, National Association, as Trustee (incorporated herein by reference to Exhibit 4.4 to the Current Report on Form 8-K filed on December 21, 2020).

4.13	Twelfth Supplemental Indenture, dated July 30, 2021, by and among Nasdaq, Inc., Wells Fargo Bank, National Association, as Trustee and HSBC Bank USA, National Association, as registrar and transfer agent (incorporated herein by reference to Exhibit 4.2 to the Company's Form 8-A filed on July 30, 2021).
4.14	Thirteenth Supplemental Indenture, dated as of March 7, 2022, by and between Nasdaq, Inc. and Computershare Trust Company, N.A. (as successor to Wells Fargo Bank, National Association), as trustee (incorporated herein by reference to Exhibit 4.2 to the Company's Current Report on Form 8-K filed on March 7, 2022).
4.15	Fourteenth Supplemental Indenture, dated as of June 28, 2023, by and between Nasdaq, Inc. and Computershare Trust Company, N.A. (as successor to Wells Fargo Bank, National Association), as trustee (incorporated herein by reference to Exhibit 4.2 to the Current Report on Form 8-K filed on June 28, 2023).
4.16	Fifteenth Supplemental Indenture, dated as of June 28, 2023, by and between Nasdaq, Inc. and Computershare Trust Company, N.A. (as successor to Wells Fargo Bank, National Association), as trustee (incorporated herein by reference to Exhibit 4.3 to the Current Report on Form 8-K filed on June 28, 2023).
4.17	Sixteenth Supplemental Indenture, dated as of June 28, 2023, by and between Nasdaq, Inc. and Computershare Trust Company, N.A. (as successor to Wells Fargo Bank, National Association), as trustee (incorporated herein by reference to Exhibit 4.4 to the Current Report on Form 8-K filed on June 28, 2023).
4.18	Seventeenth Supplemental Indenture, dated as of June 28, 2023, by and between Nasdaq, Inc. and Computershare Trust Company, N.A. (as successor to Wells Fargo Bank, National Association), as trustee (incorporated herein by reference to Exhibit 4.5 to the Current Report on Form 8-K filed on June 28, 2023).
4.19	Eighteenth Supplemental Indenture, dated as of June 28, 2023, by and between Nasdaq, Inc. and Computershare Trust Company, N.A. (as successor to Wells Fargo Bank, National Association), as trustee (incorporated herein by reference to Exhibit 4.6 to the Current Report on Form 8-K filed on June 28, 2023).
4.20	Nineteenth Supplemental Indenture, dated as of June 28, 2023, by and between Nasdaq, Inc. and Computershare Trust Company, N.A. (as successor to Wells Fargo Bank, National Association), as trustee and HSBC Bank USA, National Association, as paying agent, registrar and transfer agent (incorporated herein by reference to Exhibit 4.7 to the Current Report on Form 8-K filed on June 28, 2023).
4.21	Description of Securities (incorporated herein by reference to Exhibit 4.21 to the Annual Report on Form 10-K for the year ended December 31, 2023 filed on February 21, 2024).
10.1	Amended and Restated Board Compensation Policy, effective on June 21, 2023 (incorporated herein by reference to Exhibit 10.1 to the Quarterly Report on Form 10-Q for the quarter ended June 30, 2023 filed on August 2, 2023).*
10.2	Nasdaq Executive Corporate Incentive Plan, effective as of January 1, 2015 (incorporated herein by reference to Exhibit 10.1 to the Current Report on Form 8-K filed on May 11, 2015).*
10.3	Nasdaq, Inc. Equity Incentive Plan (as amended and restated as of April 24, 2018) (incorporated herein by reference to Exhibit 10.1 to the Form S-8 filed on May 25, 2018).*
10.4	Form of Nasdaq Non-Qualified Stock Option Award Certificate (incorporated herein by reference to Exhibit 10.3 to the Annual Report on Form 10-K for the year ended December 31, 2010 filed on February 24, 2011).*
10.5	Form of Nasdaq Restricted Stock Unit Award Certificate (employees) (incorporated herein by reference to Exhibit 10.1 to the Quarterly Report on Form 10-Q for the quarter ended June 30, 2024 filed on August 6, 2024).*
10.6	Form of Nasdaq Restricted Stock Unit Award Certificate (directors) (incorporated herein by reference to Exhibit 10.2 to the Quarterly Report on Form 10-Q for the quarter ended June 30, 2024 filed on August 6, 2024).*
10.7	Form of Nasdaq Three-Year Performance Share Unit Agreement (incorporated herein by reference to Exhibit 10.3 to the Quarterly Report on Form 10-Q for the quarter ended June 30, 2024 filed on August 6, 2024).*
10.7.1	Form of Nasdaq Two-Year Performance Share Unit Agreement (incorporated herein by reference to Exhibit 10.4 to the Quarterly Report on Form 10-Q for the quarter ended June 30, 2024 filed on August 6, 2024).*
10.8	Form of Nasdaq Continuing Obligations Agreement (incorporated by reference to Exhibit 10.9 to the Company's Annual Report on Form 10-K for the year ended December 31, 2021 filed on February 23, 2022).
10.9	Amended and Restated Supplemental Executive Retirement Plan, dated as of December 17, 2008 (incorporated herein by reference to Exhibit 10.6 to the Annual Report on Form 10-K for the year ended December 31, 2008 filed on February 27, 2009).*
10.10	Amendment No. 1 to Amended and Restated Supplemental Executive Retirement Plan, effective as of December 31, 2008 (incorporated herein by reference to Exhibit 10.6.1 to the Annual Report on Form 10-K for the year ended December 31, 2008 filed on February 27, 2009).*

10.11	Nasdaq Supplemental Employer Retirement Contribution Plan, dated as of December 17, 2008 (incorporated herein by reference to Exhibit 10.7 to the Annual Report on Form 10-K for the year ended December 31, 2008 filed on February 27, 2009).*
10.12	Nasdaq, Inc. Deferred Compensation Plan, effective July 1, 2022 (incorporated herein by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed on June 16, 2022).*
10.13	Nonqualified Stock Option Award Certificate to Adena T. Friedman from Nasdaq, Inc. in connection with grant made on January 3, 2017 (incorporated herein by reference to Exhibit 10.1 to the Quarterly Report on Form 10-Q for the quarter ended September 30, 2017 filed on November 7, 2017).*
10.14	Employment Agreement between Nasdaq and Adena Friedman, made and entered into on November 19, 2021 and effective as of January 1, 2022 (incorporated herein by reference to Exhibit 10.14 to the Company's Annual Report on Form 10-K for the year ended December 31, 2021 filed on February 23, 2022).*
10.15	Nonqualified Stock Option Award Certificate to Adena T. Friedman from Nasdaq, Inc. in connection with grant made on January 3, 2022 (incorporated herein by reference to Exhibit 10.15 to the Company's Annual Report on Form 10-K for the year ended December 31, 2021 filed on February 23, 2022).*
10.17	Employment Agreement by and between Nasdaq, Inc. and Bradley J. Peterson, dated June 22, 2022 (incorporated herein by reference to Exhibit 10.5 to the Quarterly Report on Form 10-Q for the quarter ended June 30, 2022 filed on August 3, 2022).*
10.18	Employment Offer Letter by and between Nasdaq, Inc. and Michelle Daly dated January 29, 2021 (incorporated herein by reference to Exhibit 10.1 to the Current Report on Form 8-K filed on May 3, 2021).*
10.19	General Release and Separation Agreement by and between Nasdaq, Inc. and Ann M. Dennison, dated as of August 31, 2023 (incorporated herein by reference to Exhibit 10.1 to the Quarterly Report on Form 10-Q for the quarter ended September 30, 2023 filed on November 3, 2023).*
10.20	Employment Offer Letter by and between Nasdaq, Inc. and Sarah Youngwood, dated as of August 31, 2023 (incorporated herein by reference to Exhibit 10.2 to the Quarterly Report on Form 10-Q for the quarter ended September 30, 2023 filed on November 3, 2023).*
10.21	Nasdaq Change in Control Severance Plan For Non-CEO Presidents, Executive Vice Presidents and Senior Vice Presidents, effective November 26, 2013, as amended December 6, 2022 (incorporated herein by reference to Exhibit 10.19 to the Annual Report on Form 10-K for the year ended December 31, 2022, filed on February 22, 2023.*
10.22	Amended and Restated Credit Agreement, dated as of December 16, 2022, among Nasdaq, Inc., the various lenders and issuing bank party thereto and Bank of America, N.A., as administrative agent (incorporated herein by reference to Exhibit 10.1 to the Current Report on Form 8-K filed on December 16, 2022).†
10.23	Amendment No. 1 to Amended and Restated Credit Agreement, dated as of March 29, 2023, among Nasdaq, Inc., the Lenders party hereto, Bank of America, N.A., as administrative agent and BofA Securities, Inc., as Sustainability Coordinator (incorporated herein by reference to Exhibit 10.1 to the Quarterly Report on Form 10-Q for the quarter ended March 30, 2023 filed on May 4, 2023).†
10.24	Amendment No. 2 to Amended and Restated Credit Agreement, dated as of June 16, 2023, among Nasdaq, Inc., a Delaware corporation, the lenders party thereto and Bank of America, N.A., as administrative agent (incorporated herein by reference to Exhibit 10.1 to the Current Report on Form 8-K filed on June 20, 2023).
10.25	Amendment No. 3 to Amended and Restated Credit Agreement, dated as of August 2, 2024, among Nasdaq, Inc., a Delaware corporation, the lenders party thereto and Bank of America, N.A., as administrative agent (incorporated herein by reference to Exhibit 10.1 to the Quarterly Report on Form 10-Q for the quarter ended September 30, 2024 filed on October 29, 2024).†
10.26	Amendment No. 4 to Amended and Restated Credit Agreement, dated as of December 16, 2024, among Nasdaq, Inc., a Delaware corporation, the lenders party thereto, Bank of America, N.A., as administrative agent and BofA Securities, Inc., as sustainability coordinator.†
10.27	Term Loan Credit Agreement, dated as of June 28, 2023, among Nasdaq, Inc., the lenders and other parties party thereto, and Bank of America, N.A., as Administrative Agent (incorporated herein by reference to Exhibit 10.1 to the Current Report on Form 8-K filed on June 28, 2023).†
10.28	Form of Commercial Paper Dealer Agreement between Nasdaq, Inc., as Issuer, and the Dealer party thereto (incorporated herein by reference to Exhibit 10.3 to the Current Report on Form 8-K filed on April 26, 2017).

10.29	Verafin Holdings Inc. Amended and Restated Management Incentive Plan, effective as of October 3, 2022 (incorporated herein by reference to Exhibit 10.24 to the Annual Report on Form 10-K for the year ended December 31, 2022, filed on February 22, 2023).*
10.30	Verafin Holdings Inc. Amended and Restated Management Incentive Plan Award Agreement, by and between Verafin Solutions ULC and Brendan Brothers, dated as of January 11, 2023 (incorporated by reference herein to Exhibit 10.25 to the Annual Report on Form 10-K for the year ended December 31, 2022, filed on February 22, 2023).*
11	Statement regarding computation of per share earnings (incorporated herein by reference from Note 13 to the consolidated financial statements under Part II, Item 8 of this Form 10-K).
19.1	Insider Trading Policy.
21.1	List of all subsidiaries.
23.1	Consent of Ernst & Young LLP.
24.1	Powers of Attorney.
31.1	Certification of Chief Executive Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002 ("Sarbanes-Oxley").
31.2	Certification of Executive Vice President and Chief Financial Officer pursuant to Section 302 of Sarbanes-Oxley.
32.1	Certifications Pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of Sarbanes-Oxley.
97.1	Supplemental Executive Officer Recoupment Policy (incorporated by reference herein to Exhibit 97.1 to the Annual Report on Form 10-K for the year ended December 31, 2023 filed on February 21, 2024).*
101	The following materials from the Nasdaq, Inc. Annual Report on Form 10-K for the year ended December 31, 2024, formatted in iXBRL (Inline eXtensible Business Reporting Language): (i) Consolidated Balance Sheets as of December 31, 2024 and December 31, 2023; (ii) Consolidated Statements of Income for the years ended December 31, 2024, 2023 and 2022 (iii) Consolidated Statements of Comprehensive Income for the years ended December 31, 2024, 2023 and 2022; (iv) Consolidated Statements of Changes in Stockholders' Equity for the years ended December 31, 2024, 2023 and 2022; (v) Consolidated Statements of Cash Flows for the years ended December 31, 2024, 2023 and 2022; and (vi) notes to consolidated financial statements.
104	Cover Page Interactive Data File, formatted in iXBRL and contained in Exhibit 101.

* Management contract or compensatory plan or arrangement.

† Schedules have been omitted pursuant to Items 601(b)(2)(ii) or 601(b)(10)(iv) of Regulation S-K.

(b) Exhibits:

See Item 15(a)(3) above.

(c) Financial Statement Schedules:

All schedules are omitted because they are not applicable or the required information is included in the consolidated financial statements or notes.

Item 16. Form 10-K Summary

None.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized, on February 21, 2025.

Nasdaq, Inc.
(Registrant)

By:	/s/ Adena T. Friedman
Name:	**Adena T. Friedman**
Title:	**Chief Executive Officer**
Date:	February 21, 2025

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the registrant and in the capacities indicated as of February 21, 2025.

By:	/s/ Adena T. Friedman
Name:	**Adena T. Friedman**
Title:	Chief Executive Officer and Chair of the Board
By:	/s/ Sarah Youngwood
Name:	**Sarah Youngwood**
Title:	Executive Vice President and Chief Financial Officer
By:	/s/ Michelle Daly
Name:	**Michelle Daly**
Title:	Senior Vice President, Controller and Principal Accounting Officer
By:	*
Name:	**Melissa M. Arnoldi**
Title:	Director
By:	*
Name:	**Charlene T. Begley**
Title:	Director
By:	*
Name:	**Essa Kazim**
Title:	Director
By:	*
Name:	**Thomas A. Kloet**
Title:	Director
By:	*
Name:	**Kathryn A. Koch**
Title:	Director
By:	*
Name:	**Holden Spaht**
Title:	Director
By:	*
Name:	**Michael R. Splinter**
Title:	Director
By:	*
Name:	**Johan Torgeby**
Title:	Director
By:	*
Name:	**Toni Townes-Whitley**
Title:	Director
By:	*
Name:	**Jeffery W. Yabuki**
Title:	Director
By:	*
Name:	**Alfred W. Zollar**
Title:	Director

* Pursuant to Power of Attorney

By:	/s/ John A. Zecca
Name:	**John A. Zecca**
Title:	Attorney-in-Fact

Nasdaq, Inc.

INDEX TO CONSOLIDATED FINANCIAL STATEMENTS

The following consolidated financial statements of Nasdaq, Inc. and its subsidiaries are presented herein on the page indicated:

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Report of Independent Registered Public Accounting Firm

To the Stockholders and the Board of Directors of Nasdaq, Inc.

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of Nasdaq, Inc. (the Company) as of December 31, 2024 and 2023, the related consolidated statements of income, comprehensive income, changes in stockholders' equity and cash flows for each of the three years in the period ended December 31, 2024, and the related notes (collectively referred to as the "consolidated financial statements"). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company at December 31, 2024 and 2023, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2024, in conformity with U.S. generally accepted accounting principles.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the Company's internal control over financial reporting as of December 31, 2024, based on criteria established in Internal Control-Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework), and our report dated February 21, 2025 expressed an unqualified opinion thereon.

Basis for Opinion

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

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

Critical Audit Matter

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

Calypso and AxiomSL on-premises license revenue recognition

Description of the Matter	As described in Note 2 to the consolidated financial statements, the Company recognizes revenue within its Regulatory Technology and Capital Markets Technology products for AxiomSL and Calypso on-premises license agreements, respectively. The AxiomSL on-premises software offering includes both license and post-contract customer support, which includes frequent and ongoing mandatory regulatory updates. Both the AxiomSL on-premises license and the post-contract customer support, inclusive of the frequent and ongoing mandatory regulatory updates are accounted for as a single performance obligation and recognized ratably over the contract term. For the on-premises Calypso capital markets product, distinct performance obligations are recognized for the license and post-contract customer support and the performance obligation of the on-premises license revenue is recognized upfront at the point in time when the software is made available to the user.

Auditing the Company's initial identification of performance obligations along with the timing over which those performance obligations are satisfied for the acquired AxiomSL and Calypso on-premise license agreements required complex judgment.

How We Addressed the Matter in Our Audit

We obtained an understanding, performed a walkthrough of the process and evaluated the design and tested the operating effectiveness of controls over the Company's processes for identifying performance obligations and determining the timing over which the performance obligations are satisfied with respect to these products.

To test the Company's judgments and conclusions related to the identification of performance obligations and timing of satisfaction of those performance obligations, our audit procedures included, among others, obtaining an understanding of the Company's AxiomSL and Calypso service offerings and evaluating management's conclusions regarding which were distinct. We involved subject matter resources to assist in testing management's identification of performance obligations and determining timing over which they are satisfied. We read a sample of executed contracts to assess management's evaluation of significant terms, including the determination of distinct performance obligations.

/s/ Ernst & Young LLP

We have served as the Company's auditor since 1986.

New York, New York
February 21, 2025

Nasdaq, Inc.
Consolidated Balance Sheets
(in millions, except share and par value amounts)

	December 31, 2024	December 31, 2023
Assets		
Current assets:		
Cash and cash equivalents	$ 592	$ 453
Restricted cash and cash equivalents	31	20
Default funds and margin deposits (including restricted cash and cash equivalents of $4,383 and $6,645, respectively)	5,664	7,275
Financial investments	184	188
Receivables, net	1,022	929
Other current assets	293	231
Total current assets	7,786	9,096
Property and equipment, net	593	576
Goodwill	13,957	14,112
Intangible assets, net	6,905	7,443
Operating lease assets	375	402
Other non-current assets	779	665
Total assets	$ 30,395	$ 32,294
Liabilities		
Current liabilities:		
Accounts payable and accrued expenses	$ 269	$ 332
Section 31 fees payable to SEC	319	84
Accrued personnel costs	325	303
Deferred revenue	711	594
Other current liabilities	215	146
Default funds and margin deposits	5,664	7,275
Short-term debt	399	291
Total current liabilities	7,902	9,025
Long-term debt	9,081	10,163
Deferred tax liabilities, net	1,594	1,642
Operating lease liabilities	388	417
Other non-current liabilities	230	220
Total liabilities	19,195	21,467
Commitments and contingencies		
Equity		
Nasdaq stockholders' equity:		
Common stock, $0.01 par value, 900,000,000 shares authorized, shares issued: 598,920,378 at December 31, 2024 and 598,014,520 at December 31, 2023; shares outstanding: 575,062,217 at December 31, 2024 and 575,159,336 at December 31, 2023	6	6
Additional paid-in capital	5,530	5,496
Common stock in treasury, at cost: 23,858,161 shares at December 31, 2024 and 22,855,184 shares at December 31, 2023	(647)	(587)
Accumulated other comprehensive loss	(2,099)	(1,924)
Retained earnings	8,401	7,825
Total Nasdaq stockholders' equity	11,191	10,816
Noncontrolling interests	9	11
Total equity	11,200	10,827
Total liabilities and equity	$ 30,395	$ 32,294

See accompanying notes to consolidated financial statements.

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

	Year Ended December 31,		
	2024	2023	2022
Revenues:			
Capital Access Platforms	$ 1,972	$ 1,770	$ 1,682
Financial Technology	1,621	1,099	864
Market Services	3,771	3,156	3,632
Other revenues	36	39	48
Total revenues	7,400	6,064	6,226
Transaction-based expenses:			
Transaction rebates	(2,026)	(1,838)	(2,092)
Brokerage, clearance and exchange fees	(725)	(331)	(552)
Revenues less transaction-based expenses	4,649	3,895	3,582
Operating expenses:			
Compensation and benefits	1,324	1,082	1,003
Professional and contract services	152	128	140
Technology and communication infrastructure	281	233	207
Occupancy	112	129	104
General, administrative and other	109	113	125
Marketing and advertising	54	47	51
Depreciation and amortization	613	323	258
Regulatory	55	34	33
Merger and strategic initiatives	35	148	82
Restructuring charges	116	80	15
Total operating expenses	2,851	2,317	2,018
Operating income	1,798	1,578	1,564
Interest income	28	115	7
Interest expense	(414)	(284)	(129)
Other income (loss)	21	(1)	2
Net income (loss) from unconsolidated investees	16	(7)	31
Income before income taxes	1,449	1,401	1,475
Income tax provision	334	344	352
Net income	1,115	1,057	1,123
Net loss attributable to noncontrolling interests	2	2	2
Net income attributable to Nasdaq	$ 1,117	$ 1,059	$ 1,125
Per share information:			
Basic earnings per share	$ 1.94	$ 2.10	$ 2.28
Diluted earnings per share	$ 1.93	$ 2.08	$ 2.26
Cash dividends declared per common share	$ 0.94	$ 0.86	$ 0.78

See accompanying notes to consolidated financial statements.

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

	Year Ended December 31,		
	2024	2023	2022
Net income	$ 1,115	$ 1,057	$ 1,123
Other comprehensive income (loss):			
Foreign currency translation gains (losses)	(135)	39	(375)
Income tax benefit (expense)[1]	(45)	18	(32)
Foreign currency translation, net	(180)	57	(407)
Employee benefit plan adjustment	17	11	5
Income tax expense	(4)	(3)	(2)
Employee benefit plan, net	13	8	3
Unrealized gain (loss) on derivatives instruments, net	(8)	2	—
Total other comprehensive income (loss), net of tax	(175)	67	(404)
Comprehensive income	940	1,124	719
Comprehensive loss attributable to noncontrolling interests	2	2	2
Comprehensive income attributable to Nasdaq	$ 942	$ 1,126	$ 721

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

See accompanying notes to consolidated financial statements.

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

	Year Ended December 31,					
	2024		2023		2022	
	Shares	$	Shares	$	Shares	$
Common stock						
Beginning balance	575	6	492	5	500	5
Acquisition-related stock issuance	—	—	86	1	—	—
Ending balance		6		6		5
Additional paid-in capital						
Beginning balance		5,496		1,445		1,949
Share repurchase program	(2)	(145)	(5)	(269)	(5)	(308)
ASR agreement	—	—	—	—	(6)	(325)
Share-based compensation	2	141	3	122	3	106
Acquisition-related stock issuance	—	—	—	4,169	—	—
Other issuances of common stock, net	1	38	1	29	1	23
Ending balance		5,530		5,496		1,445
Common stock in treasury, at cost						
Beginning balance		(587)		(515)		(437)
Other employee stock activity	(1)	(60)	(2)	(72)	(1)	(78)
Ending balance		(647)		(587)		(515)
Accumulated other comprehensive loss						
Beginning balance		(1,924)		(1,991)		(1,587)
Other comprehensive income (loss)		(175)		67		(404)
Ending balance		(2,099)		(1,924)		(1,991)
Retained earnings						
Beginning balance		7,825		7,207		6,465
Net income attributable to Nasdaq		1,117		1,059		1,125
Cash dividends declared and paid		(541)		(441)		(383)
Ending balance		8,401		7,825		7,207
Total Nasdaq stockholders' equity		11,191		10,816		6,151
Noncontrolling interests						
Beginning balance		11		13		10
Net activity related to noncontrolling interests		(2)		(2)		3
Ending balance		9		11		13
Total Equity	575	$11,200	575	$10,827	492	$ 6,164

See accompanying notes to consolidated financial statements.

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

	Year Ended December 31,		
	2024	2023	2022
Cash flows from operating activities:			
Net income	$ 1,115	$ 1,057	$ 1,123
Adjustments to reconcile net income to net cash provided by operating activities:			
Depreciation and amortization	613	323	258
Share-based compensation	141	122	106
Deferred income taxes	(67)	68	38
Extinguishment of debt and bridge fees	3	25	16
Non-cash restructuring charges	37	12	—
Net (income) loss from unconsolidated investees	(16)	7	(31)
Operating lease asset impairments	—	13	—
Adenza purchase accounting adjustment	32	—	—
Other reconciling items included in net income	35	30	28
Net change in operating assets and liabilities:			
Receivables, net	(193)	3	(101)
Other assets	(50)	9	98
Accounts payable and accrued expenses	(60)	149	19
Section 31 fees payable to SEC	235	(160)	181
Accrued personnel costs	34	13	—
Deferred revenue	67	88	16
Other liabilities	13	(63)	(45)
Net cash provided by operating activities	1,939	1,696	1,706
Cash flows from investing activities:			
Purchases of securities	(206)	(712)	(322)
Proceeds from sales and redemptions of securities	199	719	320
Acquisition of businesses, net of cash and cash equivalents acquired	—	(5,766)	(41)
Purchases of property and equipment	(207)	(158)	(152)
Investments related to default funds and margin deposits, net[(1)]	(707)	(74)	211
Other investing activities	(32)	(3)	33
Net cash provided by (used in) investing activities	(953)	(5,994)	49
Cash flows from financing activities:			
Proceeds from (repayments of) commercial paper, net	(291)	(371)	238
Repayments of debt and credit commitment	(521)	(260)	(1,097)
Proceeds from issuances of debt, net of issuance costs	—	5,608	541
Repurchases of common stock	(145)	(269)	(308)
ASR agreement	—	—	(325)
Dividends paid	(541)	(441)	(383)
Payments related to employee shares withheld for taxes	(60)	(72)	(78)
Default funds and margin deposits	(1,030)	22	2,440
Other financing activities	27	3	8
Net cash provided by (used in) financing activities	(2,561)	4,220	1,036
Effect of exchange rate changes on cash and cash equivalents and restricted cash and cash equivalents	(537)	202	(1,293)
Net increase (decrease) in cash and cash equivalents and restricted cash and cash equivalents	(2,112)	124	1,498
Cash and cash equivalents, restricted cash and cash equivalents at beginning of period	7,118	6,994	5,496
Cash and cash equivalents, restricted cash and cash equivalents at end of period	$ 5,006	$ 7,118	$ 6,994
Reconciliation of Cash, Cash Equivalents and Restricted Cash and Cash Equivalents			
Cash and cash equivalents	$ 592	$ 453	$ 502
Restricted cash and cash equivalents	31	20	22
Restricted cash and cash equivalents (default funds and margin deposits)	4,383	6,645	6,470
Total	$ 5,006	$ 7,118	$ 6,994
Supplemental Disclosure Cash Flow Information			
Interest paid	$ 405	$ 177	$ 116
Income taxes paid, net of refund	$ 358	$ 254	$ 274

(1) 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 15, "Clearing Operations."

See accompanying notes to consolidated financial statements.

1. ORGANIZATION AND NATURE OF OPERATIONS

Nasdaq is a global technology company serving corporate clients, investment managers, banks, brokers, and exchange operators as they navigate and interact with the global capital markets and the broader financial system. We aspire to deliver world-leading platforms that improve the liquidity, transparency, and integrity of the global economy. Our diverse offering of data, analytics, software, exchange capabilities, and client-centric services enables clients to optimize and execute their business vision with confidence.

Our organizational structure aligns our businesses with the foundational shifts that are driving the evolution of the global financial system. We manage, operate and provide our products and services in three business segments: Capital Access Platforms, Financial Technology and Market Services.

For further discussion of our businesses, see "Products and Services," of "Part I, Item 1. Business."

Capital Access Platforms

Our Capital Access Platforms segment comprises Data & Listing Services, Index and Workflow & Insights.

Our Data business distributes historical and real-time market data to sell-side customers, the institutional investing community, retail online brokers, proprietary trading firms and other venues, as well as internet portals and data distributors. Our data products can enhance the transparency of market activity within our exchanges and provide critical information to professional and non-professional investors globally.

Our Listing Services business operates listing platforms in the U.S. and Europe and provides 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.

As of December 31, 2024, a total of 5,249 companies listed securities on our U.S., Nasdaq Nordic, Nasdaq Baltic and Nasdaq First North exchanges. As of December 31, 2024, there were 4,075 total listings on The Nasdaq Stock Market, including 768 ETPs. The combined market capitalization in the U.S. was approximately $34.4 trillion. In Europe, the Nasdaq Nordic and Nasdaq Baltic exchanges, together with Nasdaq First North, were home to 1,174 listed companies with a combined market capitalization of approximately $2.0 trillion.

Our Index business develops and licenses Nasdaq-branded indices and financial products. We also license cash-settled futures, options and options on futures on our indices. As of December 31, 2024, 401 ETPs listed on 28 exchanges in over 20 countries tracked a Nasdaq index and accounted for $647 billion in AUM.

Workflow & Insights includes our analytics and corporate solutions businesses. Our analytics business provides asset managers, investment consultants and institutional asset owners with information and analytics to make data-driven investment decisions, deploy their resources more productively, and provide liquidity solutions for private funds. Through our eVestment and Solovis solutions, 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.

The Nasdaq Fund Network and Nasdaq Data Link are additional platforms in our suite of investment data analytics offerings and data management tools.

Our corporate solutions business serves both public and private companies and organizations through our Investor Relations Intelligence, Sustainability Solutions and Governance Solutions products. 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, and various non-profit organizations to hospitals and healthcare systems. We help organizations enhance their ability to understand and expand their global shareholder base, improve corporate governance, and navigate the evolving sustainability landscape through our suite of advanced technology, analytics, reporting and consulting services.

Financial Technology

Our Financial Technology segment comprises Financial Crime Management Technology, Regulatory Technology and Capital Markets Technology businesses.

Financial Crime Management Technology includes our Nasdaq Verafin solution, a cloud-based platform to help financial institutions detect, investigate, and report money laundering and financial fraud.

Regulatory Technology comprises our surveillance and AxiomSL solutions. Our surveillance solutions are designed for banks, brokers and other market participants to assist them in complying with market abuse and integrity rules and regulations. In addition, we provide regulators and exchanges with a platform for surveillance. AxiomSL is a global leader in risk data management and regulatory reporting solutions for the financial industry, including banks, broker dealers and asset managers. Its unique enterprise data management platform delivers data lineage, risk aggregation, analytics, workflow automation, reconciliation, validation and audit functionality, as well as disclosures. AxiomSL's platform supports compliance across a wide range of global and local regulations.

Capital Markets Technology includes market technology, trade management services and Calypso solutions. Our market technology business 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 market technology solutions are utilized by leading markets in North America, Europe and Asia as well as emerging markets in the Middle East, Latin America, and Africa. Our trade management services provide market participants with a wide variety of alternatives for connecting to and accessing our markets for a fee. Our marketplaces may be accessed via a number of different protocols used for quoting, order entry, trade reporting and connectivity to various data feeds. We also 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. Calypso is a leading platform providing cross-asset, front-to-back trading, treasury, risk and collateral management solutions. The Calypso solution provides customers with a single platform designed from the outset to enable consolidation, innovation and growth.

Market Services

Our Market Services segment includes revenues from equity derivatives trading, cash equity trading, Nordic fixed income trading & clearing, Nordic commodities and U.S. Tape plans data. We operate 19 exchanges 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 2023, we entered into an agreement to sell our Nordic power trading and clearing business, which was subsequently terminated in June 2024. In January 2025, we entered into a new agreement to transfer existing open positions in our Nordic power derivatives trading and clearing business to a European exchange. The completion of this transaction is subject to customary regulatory approvals. Revenues from this business will continue to be reflected in other revenues in the Consolidated Statements of Income for all periods, and in our Corporate segment for our segment disclosures. Prior to June 2023, these revenues were included in our Market Services segment. Additionally, certain data revenues from this business that were previously included in our Capital Access Platforms segment are also reflected in Other revenues in the Consolidated Statements of Income for all periods, and in our Corporate segment for our segment disclosures.

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.

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Basis of Presentation and Principles of Consolidation

The 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. See "Equity Method Investments" within "Investments" below for further discussion.

The accompanying 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.

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

Use of Estimates

In preparing our 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 the consolidated balance sheets. At least quarterly, we evaluate our assumptions, judgments and estimates, and make changes as deemed necessary.

Foreign Currency

Foreign denominated assets and liabilities are remeasured into the functional currency at exchange rates in effect at the balance sheet date and recorded through the income statement. Gains or losses resulting from foreign currency transactions are remeasured using the rates on the dates on which those elements are recognized during the period, and are included in general, administrative and other expense in the Consolidated Statements of Income.

Translation gains or losses resulting from translating our subsidiaries' financial statements from the local functional currency to the reporting currency, net of tax, are included in accumulated other comprehensive loss in the Consolidated Balance Sheets. Assets and liabilities are translated at the balance sheet date while revenues and expenses are translated at the date the transaction occurs or at an applicable average rate.

Cash and Cash Equivalents

Cash and cash equivalents include all non-restricted cash in banks and highly liquid investments with original maturities of 90 days or less at the time of purchase. Such equivalent investments included in cash and cash equivalents in the Consolidated Balance Sheets were $373 million as of December 31, 2024 and $122 million as of December 31, 2023. Cash equivalents are carried at cost plus accrued interest, which approximates fair value due to the short maturities of these investments.

Restricted Cash

Restricted cash and cash equivalents, which was $31 million as of December 31, 2024 and $20 million as of December 31, 2023, is restricted from withdrawal due to a contractual or regulatory requirement or not available for general use and as such is classified as restricted in the Consolidated Balance Sheets. As of December 31, 2024 and 2023, restricted cash and cash equivalents primarily includes funds held for regulatory capital for our trading and clearing businesses.

Default Funds and Margin Deposits

Nasdaq Clearing members' cash contributions are included in default funds and margin deposits in the Consolidated Balance Sheets as both a current asset and a current liability. 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. 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 Consolidated Balance Sheets as Nasdaq Clearing does not take legal ownership of these assets and the risks and rewards remain with the clearing members.

Receivables, net

Our receivables are concentrated with our customers which primarily include corporate clients, banks, investment managers, brokers, and exchange operators. Receivables are shown net of allowance for credit losses. The allowance is maintained at a level that management believes to be sufficient to absorb expected losses over the life of our accounts receivable portfolio. The allowance is increased by the provision for bad debts, which is included in general, administrative and other expense in the Consolidated Statements of Income, and decreased by the amount of charge-offs, net of recoveries.

The allowance is primarily based on an aging methodology. This method applies loss rates based on historical loss information which is disaggregated by business segment and, as deemed necessary, is adjusted for other factors and considerations that could impact collectibility. Additionally, we consider corporate default rate averages over an extended period as compared to the period covered by our historical loss data and include an adjustment to historical loss percentages for current conditions and expected future conditions if necessary.

In circumstances where a specific customer's inability to meet its financial obligations is known (i.e., bankruptcy filings), we determine whether a specific provision for bad debts is required. Accounts receivable are written-off against the allowance when collection efforts cease. Due to changing economic, business and market conditions, we review the allowance quarterly and make changes to the allowance through the provision for bad debts as appropriate. If circumstances change (i.e., higher than expected defaults or an unexpected material adverse change in a major customer's ability to pay), our estimates of recoverability could be reduced by a material amount. The total allowance netted against receivables in the Consolidated Balance Sheets was $10 million as of December 31, 2024 and $18 million as of December 31, 2023. Any provision for bad debt or write-off recorded during the year was immaterial.

Investments

Purchases and sales of investment securities are recognized on settlement date.

Financial Investments

Financial investments are comprised of trading securities bought principally to meet regulatory capital requirements mainly for our clearing operations at Nasdaq Clearing. These investments are classified as trading securities as they are generally sold in the near term, with changes in fair value included in other income (loss) in the Consolidated Statements of Income.

Fair value is generally obtained from third-party pricing sources. When available, quoted market prices are used to determine fair value. If quoted market prices are not available, fair values are estimated using pricing models with observable market inputs. The inputs to the valuation models vary by the type of security being priced but are typically benchmark yields, reported trades, broker-dealer quotes, and prices of similar assets. Pricing models generally do not entail material subjectivity because the methodologies employed use inputs observed from active markets. See "Fair Value Measurements" below for further discussion of fair value measures.

Equity Securities

Investments in equity securities with readily determinable fair values (other than those accounted for under the equity method or those that result in consolidation of the investee) are measured at fair value and any changes in fair value are recognized in other income (loss) in the Consolidated Statements of Income.

Equity investments without readily determinable fair values are accounted for under the measurement alternative, under which investments are measured at cost, less any impairment, plus or minus changes resulting from observable price changes in orderly transactions for the identical or a similar investment of the same issuer on a prospective basis. We assess relevant transactions that occur on or before the balance sheet date to identify observable price changes, and we regularly monitor these investments to evaluate whether there is an indication that the investment is impaired, based on the share price from the investee's latest financing round, the performance of the investee in relation to its own operating targets, the investee's liquidity and cash position, and general market conditions. If a qualitative assessment indicates that the security is impaired, Nasdaq will estimate the fair value of the security and, if the fair value is less than the carrying amount of the security, will recognize an impairment loss in net income equal to the difference in the period the impairment occurs. See Note 6, "Investments," for further discussion of our equity securities.

For the years ended December 31, 2024, 2023 and 2022, no material adjustments were made to the carrying value of our equity securities.

Our investments in equity securities are included in other non-current assets in the Consolidated Balance Sheets, as we intend to hold these investments for more than one year.

Equity Method Investments

In general, the equity method of accounting is used when we own 20% to 50% of the outstanding voting stock of a company or when we are able to exercise significant influence over the operating and financial policies of a company. We have certain investments in which we have determined that we have significant influence and as such account for the investments under the equity method of accounting. 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. We evaluate our equity method investments for other-than-temporary declines in value by considering a variety of factors such as the earnings capacity of the investment and the fair value of the investment compared to its carrying amount. In addition, for investments where the market value is readily determinable, we consider the underlying stock price. If the estimated fair value of the investment is less than the carrying amount and management considers the decline in value to be other than temporary, the excess of the carrying amount over the estimated fair value is recognized in net income in the period the impairment occurs. See Note 6, "Investments," for further discussion of our equity method investments.

No material impairments were recorded to reduce the carrying value of our equity method investments in 2024, 2023 or 2022.

Derivative Financial Instruments and Hedging Activities

Non-Designated Derivatives

We use foreign exchange forward contracts to manage foreign currency exposure of intercompany loans, accounts receivable, accounts payable and other balance sheet items. These contracts are not designated as hedges for financial reporting purposes. The change in fair value of these contracts is recognized in general, administrative and other expense in the Consolidated Statements of Income and offsets the foreign currency exposure.

As of December 31, 2024 and 2023, the fair value of our derivative instruments were immaterial.

Derivatives designated as cash flow hedges

We enter into foreign currency contracts and designate them as cash flow hedges to manage forecasted foreign currency revenue and expenses. To receive hedge accounting treatment, all hedging relationships are formally documented at the inception of the hedge, and the hedges must be highly effective in offsetting changes to future cash flows on the hedged transactions. The change in fair value of these contracts is recorded, net of tax, in accumulated other comprehensive loss in the Consolidated Balance Sheets until the forecasted transaction occurs. When the forecasted transaction affects earnings, we reclassify the related gain or loss on the foreign currency revenue or foreign currency expense to revenue or operating expense, as applicable.

As of December 31, 2024 and 2023, the fair value of our derivative instruments designated as cash flow hedges were immaterial.

Net Investment Hedges

Net assets of our foreign subsidiaries are exposed to volatility in foreign currency exchange rates. We may utilize net investment hedges to offset the translation adjustment arising from re-measuring our investment in foreign subsidiaries.

Our Euro 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. Any increase or decrease related to the remeasurement of these notes into U.S. dollars is recorded in accumulated other comprehensive loss in the Consolidated Balance Sheets. See "Net Investment Hedge" of Note 9, "Debt Obligations," for further discussion.

Property and Equipment, net

Property and equipment, including leasehold improvements, are carried at cost less asset impairment charges and accumulated depreciation and amortization. Depreciation and amortization are recognized using the straight-line method over the estimated useful lives of the related assets, which range from 10 to 40 years for buildings and improvements, 3 to 5 years for data processing equipment, and 5 to 10 years for furniture and equipment.

Leasehold improvements are amortized using the straight-line method over the shorter of their estimated useful lives or the remaining term of the related lease.

We develop systems solutions for both internal and external use. Certain costs incurred in connection with developing or obtaining internal use software are capitalized. In addition, certain costs of computer software to be sold, leased, or otherwise marketed as a separate product or as part of a product or process are capitalized beginning when a product's technological feasibility has been established and ending when a product is available for general release. Technological feasibility is established upon completion of a detailed program design or, in its absence, completion. Prior to reaching technological feasibility, all costs are charged to expense. Unamortized capitalized costs are included in data processing equipment and software, within property and equipment, net in the Consolidated Balance Sheets. Capitalized software costs are amortized on a straight-line basis over the estimated useful lives of the software, generally 5 to 10 years. Amortization of these costs is included in depreciation and amortization expense in the Consolidated Statements of Income.

Implementation costs incurred in a cloud computing arrangement that is a service contract are capitalized as a prepaid asset, primarily included in other current assets in the Consolidated Balance Sheets, and are amortized over the expected service period in the relevant expense category in the Consolidated Statements of Income.

Property and equipment are subject to impairment testing when events or conditions indicate that the carrying amount of an asset may not be recoverable. For internal use software, an impairment charge is recognized when the carrying amount of the internal use software exceeds its fair value and is not recoverable. For software to be sold, leased, or marketed, the carrying amount of the software is compared to its net realizable value, which represents the estimated future gross revenues from that product reduced by the estimated future costs of completing and disposing of that product. The amount by which the carrying amount exceeds the net realizable value shall be written off. Any required impairment loss is recorded as a reduction in the carrying amount of the related asset and a charge to operating results.

See Note 7, "Property and Equipment, net," for further discussion.

Leases

At inception, we determine whether a contract is or contains a lease. We have operating leases which are primarily real estate leases for our U.S. and European headquarters and for general office space. As of December 31, 2024, these leases have varying lease terms with remaining maturities ranging up to 12 years. Operating lease balances are included in operating lease assets, other current liabilities, and operating lease liabilities in the Consolidated Balance Sheets. We do not have any leases classified as finance leases.

Operating lease assets represent our right to use an underlying asset for the lease term and lease liabilities represent our obligation to make lease payments arising from the lease. Operating lease assets and liabilities are recognized at commencement date based on the present value of lease payments over the lease term. Since our leases do not provide an implicit rate, we use our incremental borrowing rate based on the estimated rate of interest for collateralized borrowing over a similar term of the lease payments at commencement date in determining the present value of lease payments. The operating lease asset also includes any lease payments made and excludes lease incentives. Our lease terms include options to extend or terminate the lease when we are reasonably certain that we will exercise that option. Lease expense for lease payments is recognized on a straight-line basis over the lease term. Certain of our lease agreements include rental payments adjusted periodically for inflation based on an index or rate. These payments are included in the initial measurement of the operating lease liability and operating lease asset. However, rental payments that are based on a change in an index or a rate are considered variable lease payments and are expensed as incurred.

We have lease agreements with lease and non-lease components, which are accounted for as a single performance obligation to the extent that the timing and pattern of transfer are similar for the lease and non-lease components and the lease component qualifies as an operating lease. We do not recognize lease liabilities and operating lease assets for leases with a term of 12 months or less. We recognize these lease payments on a straight-line basis over the lease term.

We review our operating lease assets for potential impairment when there is evidence that events or changes in circumstances indicate that the carrying amount of the asset may not be recoverable. We fully impair our lease assets for locations that we vacate with no intention to sublease.

See Note 16, "Leases," for further discussion.

Goodwill and Indefinite-Lived Intangible Assets

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 recognize specifically identifiable intangibles, such as customer relationships, technology, exchange and clearing registrations, trade names and licenses when a

specific right or contract is acquired. Goodwill and intangible assets deemed to have indefinite useful lives, primarily exchange and clearing registrations, are not amortized but instead are tested for impairment at least annually as of October 1 and more frequently whenever events or changes in circumstances indicate that the fair value of the asset may be less than its carrying amount, 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. When testing goodwill and indefinite-lived intangible assets for impairment, we have the option of first performing a qualitative assessment to determine whether it is more likely than not that the fair value of a reporting unit or indefinite-lived intangible asset is less than their respective carrying amounts as the basis to determine if it is necessary to perform a quantitative impairment test. If we choose not to complete a qualitative assessment, or if the initial assessment indicates that it is more likely than not that the carrying amount of a reporting unit or the carrying amount of an indefinite-lived intangible asset exceeds their respective estimated fair values, a quantitative test is required.

In performing a quantitative impairment test, we compare the fair value of each reporting unit and indefinite-lived intangible asset with their respective carrying amounts. If the carrying amounts of the reporting unit or the indefinite-lived intangible asset exceed their respective fair values, an impairment charge is recognized in an amount equal to the difference, limited to the total amount of goodwill allocated to that reporting unit or the total carrying value of the indefinite-lived intangible asset.

There was no impairment of goodwill or indefinite-lived intangible assets for the years ended December 31, 2024, 2023 and 2022. Future disruptions to our business and 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 or indefinite-lived intangible asset impairment charges in the future.

Other Long-Lived Assets

We review our other long-lived assets, such as finite-lived intangible assets, property and equipment and operating lease assets, for potential impairment when there is evidence that events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable. The carrying amount of an asset is not recoverable if it exceeds the sum of the undiscounted cash flows expected to result from the use and eventual disposition of the asset. Fair value of finite-lived intangible assets and property and equipment is based on various valuation techniques. Any required impairment loss is measured as the amount by which the carrying amount of the asset exceeds its fair value and is recorded as a reduction in the carrying amount of the related asset and a charge to operating results. We fully impair our lease assets for locations that we vacate with no intention to sublease.

There were no material finite-lived intangible assets impairment charges in 2024, 2023 and 2022. We recorded pre-tax, non-cash property and equipment asset impairment charges, primarily in relation to our restructuring programs of $37 million in 2024, $12 million in 2023, and $8 million in 2022. See Note 20, "Restructuring Charges," for further discussion. There were no material operating lease assets impairments in 2024 and 2022. As a result of the review of our real estate and facility capacity requirements, for the year ended December 31, 2023, we recorded impairment charges of $23 million, of which $13 million related to operating lease asset impairment. See Note 16, "Leases," for further discussion.

Revenue Recognition and Transaction-Based Expenses

Revenue From Contracts With Customers

Our revenue recognition policies under FASB ASC Topic 606, "Revenue from Contracts with Customers," or Topic 606, are described in the following paragraphs.

Contract Balances

Substantially all of our revenues are considered to be revenues from contracts with customers. The related accounts receivable balances are recorded in the Consolidated Balance Sheets as receivables which are net of an allowance for credit losses. We do not have obligations for warranties, returns or refunds to customers.

The majority of our contracts with customers do not have significant variable consideration. We do not have a material amount of revenues 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 contract durations that are one-year or greater, the portion of transaction price allocated to unsatisfied performance obligations is included in Note 3, "Revenue From Contracts With Customers." Our deferred revenue primarily arises from contract liabilities related to our fees for annual and initial listings, workflow & insights, financial crime management technology, regulatory technology, and capital markets technology contracts. Deferred revenue is the only significant contract asset or liability as of December 31, 2024 and 2023. See Note 8, "Deferred Revenue," for our discussion of deferred revenue balances, activity, and expected timing of recognition. See "Revenue Recognition" below for further descriptions of our revenue contracts.

Sales commissions earned by our sales force are considered incremental and recoverable costs of obtaining a contract with a customer. These costs are deferred and amortized on a straight-line basis over the period of benefit that we have determined to be the contract term or estimated service period. Sales commissions for renewal contracts are deferred and amortized on a straight-line basis over the related contractual renewal period. Amortization expense is included in compensation and benefits expense in the Consolidated Statements of Income. The balance of deferred costs and related amortization expense are not material to our consolidated financial statements. Sales commissions are expensed when incurred if contract durations are one year or less. Sales taxes are excluded from transaction prices.

Certain judgments and estimates were used in the identification and timing of satisfaction of performance obligations and the related allocation of transaction price and are discussed below. We believe that these represent a faithful depiction of the transfer of services to our customers.

Revenue Recognition

Our primary revenue contract classifications are described below. Revenues are categorized based on similar economic characteristics of the nature, amount, timing and uncertainty of our revenues and cash flows.

Capital Access Platforms

Data and Listings

Data revenues are earned from U.S. and European proprietary data products. We earn revenues primarily based on the number of data subscribers and distributors of our data. Data revenues are subscription-based and are recognized on a monthly basis.

Listing services revenues primarily include initial listing fees and annual renewal fees. Under Topic 606, the initial listing fee is allocated to multiple performance obligations including initial and subsequent listing services and corporate solutions products (when a company qualifies to receive certain complimentary IPO products under the applicable Nasdaq rule), as well as a customer's material right to renew the option to list on our exchanges. In performing this allocation, the standalone selling price of the performance obligations is based on the initial and annual listing fees and the standalone selling price of the IPO complimentary services is based on its market value. All listing fees are billed upfront and the identified performance obligations are satisfied over time since the customer receives and consumes the benefit as Nasdaq provides the listing service. The amount of revenue related to the IPO complimentary services performance obligation is recognized ratably over a three-year period, which is based on contract terms, with the remaining revenue recognized ratably over six years which is based on our historical listing experience and projected future listing duration.

In the U.S., annual renewal fees are charged to listed companies based on their number of outstanding shares at the end of the prior year and are recognized ratably over the following twelve-month period since the customer receives and consumes the benefit as Nasdaq provides the service. Annual fees are charged to newly listed companies on a pro-rata basis, based on outstanding shares at the time of listing and recognized over the remainder of the year. European annual renewal fees, which are received from companies listed on our Nasdaq Nordic and Nasdaq Baltic exchanges and Nasdaq First North, are directly related to the listed companies' market capitalization on a trailing twelve-month basis and are recognized ratably over the following twelve-month period since the customer receives and consumes the benefit as Nasdaq provides the service.

Index

We develop and license Nasdaq-branded indices and financial products and provide index data products for third-party clients. Revenues primarily include license fees from these branded indices and financial products in the U.S. and abroad. We primarily have two types of license agreements: asset-based licenses and transaction-based licenses. Customers are charged based on a percentage of AUM for licensed products, per the agreement, on a monthly or quarterly basis. These revenues are recognized over the term of the license agreement since the customer receives and consumes the benefit as Nasdaq provides the service. Revenue from index data subscriptions are recognized on a monthly basis. Customers are charged based on transaction volume or a minimum contract amount, or both. If a customer is charged based on transaction volume, we recognize revenue when the transaction occurs. If a customer is charged based on a minimum contract amount, we recognize revenue on a pro-rata basis over the licensing term since the customer receives and consumes the benefit as Nasdaq provides the service.

Workflow & Insights

Workflow & Insights includes our analytics and corporate solutions products.

Analytics revenues are earned from investment content and analytics products. We earn revenues primarily based on the number of content and analytics subscribers and distributors. Subscription agreements are generally one to three years in term, payable in advance, and provide for automatic renewal. Subscription-based revenues are recognized over time on a ratable basis over the contract period beginning on the date that our service is made available to the customer since the customer receives and consumes the benefit as Nasdaq provides the service.

Our corporate solutions business includes our Investor Relations Intelligence, Governance Solutions and Sustainability Solutions products, which serve both public and private companies and organizations.

Corporate solutions revenues primarily include subscription and transaction-based income from our investor relations intelligence and governance solutions products and services. Subscription-based revenues earned are recognized over time on a ratable basis over the contract period beginning on the date that our service is made available to the customer since the customer receives and consumes the benefit as Nasdaq provides the service. Generally, fees are billed in advance and the contract provides for automatic renewal. As part of subscription agreements, customers can also be charged usage fees based upon actual usage of the services provided. Revenues from usage fees are recognized at a point in time when the service is provided.

Financial Technology

Financial Crime Management Technology

Our financial crime management technology business, which includes our Nasdaq Verafin solution, primarily consists of SaaS revenues. We enter into subscription agreements which allow customers access to our cloud platform. Subscription agreements are generally three years in term, payable in advance, with the option of automatic renewal for some products. Subscription-based revenues are recognized over time on a ratable basis over the contract period beginning on the date that our service is made available to the customer since the customer receives and consumes the benefit as Nasdaq provides the service.

Regulatory Technology

Regulatory Technology includes AxiomSL and surveillance solutions.

AxiomSL solutions

AxiomSL provides financial institutions with risk & financial regulatory reporting and risk management solutions. The products can be offered as an on-premises or as a cloud service agreement.

The AxiomSL on-premises software offering includes license and PCS, which includes frequent and ongoing mandatory regulatory updates. Historically, the license and the PCS were considered distinct performance obligations, with license revenue recognized upfront at the point in time when the software is made available to the customer, and support is recognized over time on a ratable basis over the contract period beginning on the date that our service is made available to the customer. During the third quarter of 2024, as part of finalizing the purchase accounting of the Adenza acquisition, and based on new information obtained on the frequent and ongoing mandatory regulatory updates to AxiomSL's regulatory reporting software, which are critical to the utility and value of the product for the client, we noted that the software license and PCS constitute a single, combined performance obligation and would be recognized ratably over the contract term. See Note 3, "Revenue from contracts with customers," for further discussion.

AxiomSL can also be offered as a cloud service whereby the software is hosted and managed for customers. These hosted agreements generally include a license, hosting services and maintenance services. We have determined that these services are not distinct in the context of the hosting arrangement as the customer cannot benefit from the license or maintenance without the hosting services. Cloud revenues are recognized over time on a ratable basis over the contract period beginning on the date that our service is made available to the customer since the customer receives and consumes the benefit as Nasdaq provides the service.

Surveillance

Our surveillance solutions are primarily SaaS based. We enter into subscription agreements which allow customers access to our cloud platform or a connection to our servers to access the software. We recognize revenue from these agreements over time on a ratable basis over the contract period beginning on the date that our service is made available to the customer since the customer receives and consumes the benefit as Nasdaq provides the service.

Capital Markets Technology

Capital Markets Technology includes our Calypso and market technology solutions as well as trade management services.

Calypso solutions

Our Calypso product offering includes on-premises and cloud service agreements. We recognize revenue from cloud service agreements similar to our revenue recognition for the AxiomSL agreements discussed above.

For our on-premises offering, a license provides customers with the right to use the software at its current state at the time it is made available to the customer. These contracts generally consist of the following distinct performance obligations: license and PCS. In allocating the contractual price to each performance obligation, we have used our best estimate of the stand-alone selling price. Consideration is first allocated to performance obligations with established stand-alone selling prices based on observable evidence.

License revenue is recognized upfront at the point in time when the software is made available to the customer as this is the point the user of the software can direct the use of and obtain substantially all of the remaining benefits from the software license. PCS revenue is recognized over time on a ratable basis over the contract period beginning on the date that our service is made available to the customer since the customer receives and consumes the benefit as Nasdaq provides the service.

Professional services, offered for our Calypso and market technology customers, are typically billed on a time and expense basis and revenue is recognized based on actual hours incurred. Nasdaq also offers fixed price contract agreements where revenue is recognized using the input method to measure progress towards complete satisfaction of the services, because the customer simultaneously receives and consumes the benefits provided by the Company.

Market technology solutions

Our market technology revenues primarily consist of software, license and support revenues, SaaS revenues, and change request revenues.

We enter into long-term contracts with customers to develop customized technology solutions, license the right to use software, and provide support and other services to our customers. We also enter into agreements to modify the system solutions sold by Nasdaq after delivery has occurred. In addition, we enter into subscription agreements which allow customers to connect to our servers to access our software.

Our long-term contracts with customers to develop customized technology solutions, license the right to use software and provide support and other services to our customers have multiple performance obligations. The performance obligations are generally: (i) software license and installation service and (ii) software support. We have determined that the software license and installation service are not distinct as the license and the customized installation service are inputs to produce the combined output, a functional and integrated software system.

For contracts with multiple performance obligations, we allocate the contract transaction price to each performance obligation using our best estimate of the standalone selling price of each distinct good or service in the contract. In instances where standalone selling price is not directly observable, such as when we do not sell the product or service separately, we determine the standalone selling price predominantly through an expected cost plus a margin approach. Revenues related to the market technology contracts described above represented 5.8%, 11.3% and 13.4% of total Capital Markets Technology revenue for the years ended December 31, 2024, 2023 and 2022, respectively.

Contract modifications are routine in the performance of our contracts. Contracts are often modified to account for changes in contract specifications or requirements. In most instances, contract modifications are for goods and services that are not distinct, and, therefore, are accounted for as part of the existing contract.

For our long-term contracts, payments are generally made throughout the contract life and can be dependent on either reaching certain milestones or paid upfront in advance of the service period depending on the stage of the contract. For subscription agreements, contract payment terms can be quarterly, annually or monthly, in advance. For all other contracts, payment terms vary.

We generally recognize revenue over time as our customers simultaneously receive and consume the benefits provided by our performance because our customer controls the asset for which we are creating, our performance does not create an asset with alternative use, and we have a right to payment for performance completed to date. For these services, we recognize revenue over time using costs incurred to date relative to total estimated costs at completion to measure progress toward satisfying our performance obligation. Incurred costs represent work performed, which corresponds with, and thereby depicts, the transfer of control to the customer. Contract costs generally include labor and direct overhead. For software support and update services, and for subscription agreements which allow customers to connect to our servers to access our software, we generally recognize revenue ratably over the service period beginning on the date our service is made available to the customer since the customer receives and consumes the benefit consistently over the period as Nasdaq provides the services.

Accounting for our long-term contracts requires judgment relative to assessing risks and their impact on the estimate of revenues and costs. Our estimates are impacted by factors such as the potential for schedule and technical issues, productivity, and the complexity of work performed. When adjustments in estimated total contract costs are required, any changes in the estimated revenues from prior estimates are recognized in the current period for the effect of such change. If estimates of total costs to be incurred on a contract exceed estimates of total revenues, a provision for the entire estimated loss on the contract is recorded in the period in which the loss is determined.

Market Technology SaaS revenues are recognized similar to our AxiomSL and Calypso solutions.

Trade management services

Through our trade management services, we provide market participants with a wide variety of alternatives for connecting to and accessing our markets for a fee. We also offer market participants colocation services, whereby we charge firms for cabinet space and power to house their own equipment and servers within our data centers. These participants are charged monthly fees for cabinet space, connectivity and support in accordance with our published fee schedules. These fees are recognized on a monthly basis when the performance obligation is met. We also earn revenues from annual and monthly exchange membership and registration fees. Revenues for monthly exchange membership and registration fees are recognized on a monthly basis as the service is provided. Revenues from annual fees for exchange membership and registration fees are recognized ratably over

the following twelve-month period since the customer receives and consumes the benefit as Nasdaq provides the service.

Market Services

Transaction-Based Trading and Clearing

Transaction-based trading and clearing includes equity derivative trading and clearing, cash equity trading and FICC revenues. Nasdaq charges transaction fees for trades executed on our exchanges, as well as on orders that are routed to and executed on other market venues. Nasdaq charges clearing fees for contracts cleared with Nasdaq Clearing.

In the U.S., transaction fees are based on trading volumes for trades executed on our U.S. exchanges and in Europe, transaction fees are based on the volume and value of traded and cleared contracts. In Canada, transaction fees are based on trading volumes for trades executed on our Canadian exchange.

Nasdaq satisfies its performance obligation for trading services upon the execution of a customer trade and clearing services when a contract is cleared, as trading and clearing transactions are substantially complete when they are executed and we have no further obligation to the customer at that time. Transaction-based trading and clearing fees can be variable and are based on trade volume tiered discounts. Transaction revenues, as well as any tiered volume discounts, are calculated and billed monthly in accordance with our published fee schedules. In the U.S., we also pay liquidity payments to customers based on our published fee schedules. We use these payments to improve the liquidity on our markets and therefore recognize those payments as a cost of revenue.

For U.S. equity derivative trading, we credit a portion of the per share execution charge to the market participant that provides the liquidity. For U.S. and Canadian cash equity trading, including for The Nasdaq Stock Market, Nasdaq PSX and Nasdaq CXC, we credit a portion of the per share execution charge to the market participant that provides the liquidity, and for Nasdaq BX and Nasdaq CX2, we credit a portion of the per share execution charge to the market participant that takes the liquidity. We record these credits as transaction rebates that are included in transaction-based expenses in the Consolidated Statements of Income. These transaction rebates are paid on a monthly basis and the amounts due are included in accounts payable and accrued expenses in the Consolidated Balance Sheets.

In the U.S., we pay Section 31 fees to the SEC for supervision and regulation of securities markets. We pass these costs along to our customers through our equity derivative trading and clearing fees and our cash equity trading fees. We collect the fees as a pass-through charge from organizations executing eligible trades on our options exchanges and our cash equity platforms and we recognize these amounts in transaction-based expenses when incurred. Section 31 fees received are included in cash and cash equivalents in the Consolidated Balance Sheets at the time of receipt and, as required by law, the amount due to the SEC is remitted semiannually and recorded as Section 31 fees payable to the SEC in the Consolidated Balance Sheets until paid. Since the amount recorded as revenues is equal to the amount recorded as transaction-based expenses, there is no impact on our revenues less transaction-based expenses. As we hold the cash received until payment to the SEC, we earn interest income on the related cash balances.

Under our Limitation of Liability Rule and procedures, we may, subject to certain caps, provide compensation for losses directly resulting from our systems' actual failure to correctly process an order, quote, message or other data into our platform. We do not record a liability for any potential claims that may be submitted under the Limitation of Liability Rule unless they meet the provisions required in accordance with U.S. GAAP. As such, losses arising as a result of the rule are accrued and charged to expense only if the loss is probable and estimable.

U.S. Tape Plans

For U.S. Tape plans, revenues are collected monthly based on published fee schedules and distributed quarterly to the U.S. exchanges based on a formula required by Regulation NMS that takes into account both trading and quoting activity. These revenues are presented on a net basis as all indicators of principal versus agent reporting under U.S. GAAP have been considered in analyzing the appropriate presentation of the revenue sharing. The following are primary indicators of net reporting:

- We are the administrator for the UTP plan, in addition to being a participant in the plan. In our unique role as administrator, we facilitate the collection and dissemination of revenues on behalf of the plan participants. As a participant, we share in the net distribution of revenues according to the plan on the same terms as all other plan participants.
- The operating committee of the plan, which comprises representatives from each of the participants, including us solely in our capacity as a plan participant, is responsible for setting the level of fees to be paid by distributors and subscribers and taking action in accordance with the provisions of the plan, subject to SEC approval.
- Risk of loss on the revenue is shared equally among plan participants according to the plan.

Other Revenues

For the years ended December 31, 2024, 2023 and 2022, Other revenues include revenues related to our Nordic power derivatives trading and clearing business, see "Market Services" of Note 1, "Organization and Nature of Operations," for further discussion. In June 2023, we entered into an agreement to sell our Nordic power trading and clearing business, which was subsequently terminated in June 2024. In January 2025, we entered into a new agreement to transfer existing open positions in our Nordic power derivatives trading and clearing business to a European exchange. The completion of this transaction is subject to customary regulatory approvals. Revenues from this business will continue to be reflected in Other revenues. Prior to June 2023, these revenues were included in our Market Services and Capital Access Platforms segments.

For the years ended December 31, 2023 and 2022, Other revenues also include a transitional services agreement associated with a divested business. For the year ended December 31, 2022, Other revenues also include revenues related to our Nordic broker services business for which we completed the wind-down in June 2022. Prior to June 2022, these revenues were included in our Market Services and Capital Access Platforms segments.

Earnings Per Share

We present both basic and diluted earnings per share. Basic earnings per share is computed by dividing net income attributable to Nasdaq by the weighted-average number of common shares outstanding for the period. Diluted earnings per share is computed by dividing net income attributable to Nasdaq by the weighted-average number of common shares and common share equivalents outstanding during the period and reflects the assumed conversion of all dilutive securities, which primarily consist of restricted stock, PSUs, and employee stock options. Common share equivalents are excluded from the computation in periods for which they have an anti-dilutive effect. Stock options for which the exercise price exceeds the average market price over the period are anti-dilutive and, accordingly, are excluded from the calculation. Shares which are considered contingently issuable are included in the computation of dilutive earnings per share on a weighted average basis when management determines the applicable performance criteria would have been met if the performance period ended as of the date of the relevant computation. See Note 13, "Earnings Per Share," for further discussion.

Pension, SERP and Other Post-Retirement Benefit Plans

In June 2023, we terminated our U.S. pension plan and took steps to wind down the plan and transfer the resulting liability to an insurance company. This process was completed in 2024. See Note 10, "Retirement Plans," for further discussion.

We maintain nonqualified SERPs for certain senior executives and other post-retirement benefit plans for eligible employees in the U.S. 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 nonqualified SERPs and other post-retirement benefit plans are measured using actuarial valuations. Actuarial gains and losses are recorded in accumulated other comprehensive loss in the Consolidated Balance Sheets. We assess our nonqualified SERPs and other post-retirement benefit plan assumptions on an annual basis. In evaluating these assumptions, we consider many factors, including evaluation of the discount rate, which is modified to reflect the prevailing market rates at the measurement date of a high-quality fixed-income debt instrument portfolio that would provide the future cash flows needed to pay the benefit obligations as they come due. Actuarial assumptions are based upon management's best estimates and judgment. See Note 10, "Retirement Plans," for further discussion.

Share-Based Compensation

Nasdaq uses the fair value method of accounting for share-based awards. Share-based awards, or equity awards, include restricted stock, PSUs, and stock options. The fair value of restricted stock awards and PSUs, other than PSUs granted with market conditions, is determined based on the grant date closing stock price less the present value of future cash dividends. We estimate the fair value of PSUs granted with market conditions using a Monte Carlo simulation model at the date of grant. The fair value of stock options are estimated using the Black-Scholes option-pricing model.

We generally recognize compensation expense for equity awards on a straight-line basis over the requisite service period of the award, taking into account an estimated forfeiture rate. Granted but unvested shares are generally forfeited upon termination of employment.

Excess tax benefits or expense related to employee share-based payments, if any, are recognized as income tax benefit or expense in the Consolidated Statements of Income when the awards vest or are settled.

Nasdaq also has an ESPP that allows eligible employees to purchase a limited number of shares of our common stock at six-month intervals, called offering periods, at 85.0% of the lower of the fair market value on the first or the last day of each offering period. The 15.0% discount given to our employees is included in compensation and benefits expense in the Consolidated Statements of Income.

See Note 11, "Share-Based Compensation," for further discussion.

Merger and Strategic Initiatives

We incur incremental direct merger and strategic initiative costs relating to various completed and potential acquisitions, divestitures, and other strategic opportunities. These costs generally include integration costs, as well as legal, due diligence and other third-party transaction costs and are expensed as incurred.

Fair Value Measurements

Fair value is defined as the price that would be received from selling an asset or paid to transfer a liability, or the exit price, in an orderly transaction between market participants at the measurement date. When determining the fair value measurements for assets and liabilities required or permitted to be either recorded or disclosed at fair value, we consider the principal or most advantageous market in which we would transact, and we also consider assumptions that market participants would use when pricing the asset or liability. Fair value measurement establishes a hierarchy of valuation techniques based on whether the inputs to those valuation techniques are observable or unobservable. Observable inputs reflect market data obtained from independent sources, while unobservable inputs reflect Nasdaq's market assumptions. These two types of inputs create the following fair value hierarchy:

- *Level 1:* Quoted prices for identical instruments in active markets.
- *Level 2:* Quoted prices for similar instruments in active markets; quoted prices for identical or similar instruments in markets that are not active; and model-derived valuations whose inputs are observable or whose significant value drivers are observable.
- *Level 3:* Instruments whose significant value drivers are unobservable.

This hierarchy requires the use of observable market data when available.

See Note 14, "Fair Value of Financial Instruments," for further discussion.

Tax Matters

We use the asset and liability method to determine income taxes on all transactions recorded in the consolidated financial statements. Deferred tax assets (net of valuation allowances) and deferred tax liabilities are presented net by jurisdiction as either a non-current asset or liability in the Consolidated Balance Sheets, as appropriate. Deferred tax assets and liabilities are determined based on differences between the financial statement carrying amounts and the tax basis of existing assets and liabilities (i.e., temporary differences) and are measured at the enacted rates that will be in effect when these differences are realized. If necessary, a valuation allowance is established to reduce deferred tax assets to the amount that is more likely than not to be realized.

In order to recognize and measure our unrecognized tax benefits, management determines whether a tax position is more likely than not to be sustained upon examination, including resolution of any related appeals or litigation processes, based on the technical merits of the position. Once it is determined that a position meets the recognition thresholds, the position is measured to determine the amount of benefit to be recognized in the consolidated financial statements. Interest and/or penalties related to income tax matters are recognized in income tax expense.

Subsequent Events

We have evaluated subsequent events through the issuance date of this Annual Report on Form 10-K.

Recent Accounting Developments

In December 2023, the FASB issued ASU 2023-09, "Income Taxes (Topic 740): Improvements to Income Tax Disclosures." ASU 2023-09 enhances income tax disclosure requirements by requiring public entities to provide additional information in its tax rate reconciliation and additional disclosures about income taxes paid. The update is effective for annual periods beginning after December 15, 2024. This update should be applied prospectively, but entities have the option to apply it retrospectively. The adoption of this standard only impacts disclosures and is not expected to have a material impact on the Company's consolidated financial statements.

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 years ended December 31, 2024, 2023 and 2022:

	Year Ended December 31,		
	2024	2023	2022
	(in millions)		
Capital Access Platforms			
Data & Listing Services	$ 754	$ 749	$ 727
Index	706	528	486
Workflow & Insights	512	493	469
Financial Technology			
Financial Crime Management Technology	273	223	176
Regulatory Technology	352	212	130
Capital Markets Technology	996	664	558
Market Services, net	1,020	987	988
Other revenues	36	39	48
Revenues less transaction-based expenses	$4,649	$3,895	$3,582

Substantially all revenues from the Capital Access Platforms and Financial Technology segments were recognized over time for the years ended December 31, 2024, 2023 and 2022. For the years ended December 31, 2024, 2023 and 2022, approximately 95.3%, 93.0% and 93.2%, respectively, of Market Services revenues were recognized at a point in time and 4.7%, 7.0% and 6.8%, respectively, were recognized over time.

During the third quarter of 2024, as part of finalizing the purchase accounting of the Adenza acquisition, we implemented a change to the accounting treatment of the revenues associated with AxiomSL on-premises subscription contracts, which are included in the Regulatory Technology business within the Financial Technology segment. Starting in the third quarter of 2024, we began recognizing AxiomSL's subscription-based revenues on a ratable basis over the contract term. The change reflects new information obtained on the frequent and ongoing mandatory updates to AxiomSL's regulatory reporting software, which are critical to the utility and value of the product for the client. As a result of this change, we recognized a one-time revenue reduction of $32 million in the third quarter of 2024, reflecting the net impact of the accounting change since the date of the Adenza acquisition. See Note 4, "Acquisition," for further discussion on the measurement period adjustment.

Contract Balances

Substantially all of our revenues are considered to be revenues from contracts with customers. The related accounts receivable balances are recorded in the Consolidated Balance Sheets as receivables, which are net of allowance for doubtful accounts of $10 million as of December 31, 2024 and $18 million as of December 31, 2023. There were no material upward or downward adjustments to the allowance during the year ended December 31, 2024. We do not have obligations for warranties, returns or refunds to customers.

Deferred revenue is the only significant contract asset or liability as of December 31, 2024. Deferred revenue represents consideration received that is yet to be recognized as revenue for unsatisfied performance obligations. See Note 8, "Deferred Revenue," for our discussion on deferred revenue balances, activity, and expected timing of recognition.

We do not provide disclosures about the 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, and therefore not included below. For our Financial Crime Management Technology, Regulatory Technology, Capital Markets Technology and Workflow & Insights contracts, the portion of transaction price allocated to unsatisfied performance obligations is presented in the table below. The timing in the table below is based on our best estimates as, for certain contracts, the recognition is primarily dependent upon the completion of customization and any significant modifications made pursuant to existing contracts. 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 December 31, 2024:

	Financial Crime Management Technology	Regulatory Technology	Capital Markets Technology	Workflow & Insights	Total
	(in millions)				
2025	$ 297	$ 342	$ 338	$ 178	$1,155
2026	245	223	270	109	847
2027	155	111	195	49	510
2028	60	69	129	16	274
2029	16	19	76	5	116
2030+	3	12	214	—	229
Total	$ 776	$ 776	$ 1,222	$ 357	$3,131

4. ACQUISITION

In June 2023, we entered into a definitive agreement to acquire Adenza, a provider of mission-critical risk management and regulatory software to the financial services industry, for $5.75 billion in cash (subject to customary post-closing adjustments) and a fixed amount of 85.6 million shares of Nasdaq common stock, based on the volume-weighted average price per share over 15 consecutive trading days prior to signing. Nasdaq issued approximately $5.0 billion of debt, and entered into a $600 million term loan, and used the proceeds for the cash portion of the consideration. See "Senior Unsecured Notes" and "2023 Term Loan" in "Financing of the Adenza Acquisition" of Note 9, "Debt Obligations," for further discussion.

On November 1, 2023, Nasdaq completed the acquisition of Adenza for a total purchase consideration of $9,984 million, which comprises the following:

	(in millions, except price per share)
Shares of Nasdaq common stock issued	85.6
Closing price per share of Nasdaq common stock on November 1, 2023	$ 48.71
Fair value of equity portion of the purchase consideration	$ 4,170
Cash consideration	$ 5,814
Total purchase consideration	$ 9,984

At the closing of the transaction, the 85.6 million shares of Nasdaq common stock were issued to Thoma Bravo, the sole shareholder of Adenza, and represented approximately 15% of the outstanding shares of Nasdaq. For further discussion on the rights of common stockholders refer to "Common Stock" of Note 12, "Nasdaq Stockholders' Equity." This acquisition is part of our Financial Technology segment.

On July 26, 2024, Nasdaq announced a secondary public offering of 41.6 million shares of our common stock held by Thoma Bravo, which was offered to the public at $65.30 per share. Nasdaq did not receive any proceeds from this offering of the shares held by Thoma Bravo. Concurrently, Nasdaq entered into a share repurchase agreement with Thoma Bravo and repurchased 1.2 million shares of our common stock from this offering. Nasdaq used cash on hand and borrowings under our commercial paper program to fund the share repurchase amount of $77 million. At the completion of these transactions, Thoma Bravo held 42.8 million shares of Nasdaq common stock, representing approximately 7.4% of the outstanding shares of Nasdaq.

The amounts in the table below represent the preliminary allocation of the purchase price to the acquired intangible assets, the deferred tax liability on the acquired intangible assets and other assets acquired and liabilities assumed based on their preliminary respective estimated fair values on the date of acquisition.

The excess purchase price over the net tangible and acquired intangible assets has been recorded as goodwill. The goodwill recognized is attributable primarily to expected synergies and is assigned to our Financial Technology segment.

	(in millions)
Goodwill	$ 5,933
Acquired intangible assets	5,050
Receivables, net	236
Other net assets acquired	153
Cash and cash equivalents	48
Accrued personnel costs	(44)
Deferred revenue	(130)
Deferred tax liability on acquired intangible assets	(1,262)
Total purchase consideration	$ 9,984

In the third quarter of 2024, we recorded a purchase accounting adjustment to the estimated purchase price allocation shown above and disclosed as of December 31, 2023. This adjustment relates to the impact of the change from upfront to ratable revenue recognition for AxiomSL on-premises contracts entered into prior to the acquisition date, as described above, and decreased accrued income (which reflects revenue earned but not yet billed and included in receivables above) by $46 million, increased deferred revenue by $56 million and increased goodwill by $77 million, net of a deferred tax asset of $25 million. In the fourth quarter of 2024, we finalized the purchase accounting for this acquisition.

Intangible Assets

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

	Customer Relationships	Technology	Trade Names	Total Acquired Intangible Assets
Intangible asset value (in millions)	$ 3,740	$ 950	$ 360	$ 5,050
Discount rate used	9.5 %	8.5 %	8.5 %	
Estimated average useful life	22 years	6 years	20 years	

Customer Relationships

Customer relationships represent the 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.

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 15 years.

Technology

As part of our acquisition of Adenza, we acquired developed technology relating to AxiomSL and Calypso.

Methodology

The developed technology was valued using the income approach, specifically the relief-from-royalty method, which 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 rate used reflects 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."

Trade Names

As part of our acquisition of Adenza, we acquired the AxiomSL and Calypso trade names. The trade names are recognized in the industry and carry a reputation for quality. As such, the reputation and positive recognition embodied in the trade names is a valuable asset to Nasdaq.

Methodology

The AxiomSL and Calypso trade names were valued using the income approach, specifically the relief-from-royalty method 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 names relative to the overall business as discussed above in "Customer Relationships."

Pro Forma Results and Acquisition-Related Costs

From the date of acquisition through December 31, 2023, Adenza revenues of $149 million were included in Financial Technology revenues in the Consolidated Statement of Income and Adenza operating income of $55 million was included in our operating income in the Consolidated Statement of Income.

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

Supplemental Pro Forma Information (Unaudited)

The unaudited supplemental pro forma financial information presented below is for illustrative purposes only and is not necessarily indicative of the financial position or results of operations that would have been realized if the acquisition had been completed on the date indicated, does not reflect synergies that might have been achieved, nor is it indicative of future operating results or financial position.

The following supplemental pro forma financial information presents the combined results of operations as if Adenza had been acquired as of January 1, 2022. The pro forma adjustments are based upon currently available information and certain assumptions we believe are reasonable under the circumstances. These adjustments primarily include a net increase in amortization expense that would have been recognized due to acquired identifiable intangible assets, a net increase to interest expense to reflect the additional borrowings for the financing of the Adenza acquisition net of the interest expense relating to the repayment of Adenza's historical debt, and the related income tax effects of the adjustments noted above.

The unaudited supplemental pro forma financial information for the periods presented is as follows:

	Year Ended December 31,	
	2023	2022
	(in millions)	
Pro forma revenues less transaction-based expenses	$ 4,329	$ 4,096
Pro forma operating income	1,485	1,476
Pro forma net income attributable to Nasdaq	822	812

5. GOODWILL AND ACQUIRED INTANGIBLE ASSETS

Goodwill

The following table presents the changes in goodwill by business segment during the year ended December 31, 2024:

	(in millions)
Capital Access Platforms	
Balance at December 31, 2023	$ 4,214
Foreign currency translation adjustments	(87)
Balance at December 31, 2024	$ 4,127
Financial Technology	
Balance at December 31, 2023	$ 7,873
Measurement period adjustment	77
Foreign currency translation adjustments	(25)
Balance at December 31, 2024	$ 7,925
Market Services	
Balance at December 31, 2023	$ 2,025
Foreign currency translation adjustments	(120)
Balance at December 31, 2024	$ 1,905
Total	
Balance at December 31, 2023	$ 14,112
Measurement period adjustments	77
Foreign currency translation adjustments	(232)
Balance at December 31, 2024	$ 13,957

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 years ended December 31, 2024, 2023 and 2022; 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. See Note 4, "Acquisition," for a description of the measurement period adjustment recorded during the third quarter of 2024.

Acquired Intangible Assets

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

	December 31, 2024	December 31, 2023
	(in millions)	
Finite-Lived Intangible Assets		
Gross Amount		
Technology	$ 1,234	$ 1,254
Customer relationships	5,720	5,743
Trade names and other	417	417
Foreign currency translation adjustment	(237)	(194)
Total gross amount	$ 7,134	$ 7,220
Accumulated Amortization		
Technology	$ (348)	$ (169)
Customer relationships	(1,164)	(912)
Trade names and other	(43)	(21)
Foreign currency translation adjustment	153	120
Total accumulated amortization	$ (1,402)	$ (982)
Net Amount		
Technology	$ 886	$ 1,085
Customer relationships	4,556	4,831
Trade names and other	374	396
Foreign currency translation adjustment	(84)	(74)
Total finite-lived intangible assets	$ 5,732	$ 6,238
Indefinite-Lived Intangible Assets		
Exchange and clearing registrations	$ 1,257	$ 1,257
Trade names	121	121
Licenses	52	52
Foreign currency translation adjustment	(257)	(225)
Total indefinite-lived intangible assets	$ 1,173	$ 1,205
Total intangible assets, net	$ 6,905	$ 7,443

There was no impairment of intangible assets for the years ended December 31, 2024, 2023 and 2022.

The following tables present our amortization expense for acquired finite-lived intangible assets:

	Year Ended December 31,		
	2024	2023	2022
	(in millions)		
Amortization expense	$ 488	$ 206	$ 153

The table below presents the estimated future amortization expense (excluding the impact of foreign currency translation adjustments of $84 million as of December 31, 2024) of acquired finite-lived intangible assets as of December 31, 2024:

	(in millions)
2025	$ 499
2026	494
2027	494
2028	460
2029	420
2030+	3,449
Total	$ 5,816

6. INVESTMENTS

The following table presents the details of our investments:

	December 31, 2024	December 31, 2023
	(in millions)	
Financial investments	$ 184	$ 188
Equity method investments	417	380
Equity securities	121	87

Financial Investments

Financial investments are comprised of trading securities, primarily highly rated European government debt securities, of which $171 million as of December 31, 2024 and $168 million as of December 31, 2023 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 December 31, 2024 and 2023, 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 Consolidated Balance Sheets. No material impairments were recorded for the years ended December 31, 2024, 2023 and 2022.

Net income (loss) recognized from our equity interest in the earnings and losses of these equity method investments was $16 million, $(7) million and $31 million for the years ended December 31, 2024, 2023 and 2022, respectively.

Equity Securities

The carrying amounts of our equity securities are included in other non-current assets in the 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 years ended December 31, 2024, 2023 and 2022. As of December 31, 2024 and December 31, 2023, our equity securities primarily represent various strategic minority investments made through our corporate venture program.

7. PROPERTY AND EQUIPMENT, NET

The following table presents our major categories of property and equipment, net:

	December 31, 2024	December 31, 2023
	(in millions)	
Data processing equipment and software	$ 905	$ 913
Furniture, equipment and leasehold improvements	294	325
Total property and equipment	1,199	1,238
Less: accumulated depreciation and amortization and impairment charges	(606)	(662)
Total property and equipment, net	$ 593	$ 576

Depreciation and amortization expense for property and equipment was $125 million for the year ended December 31, 2024, $117 million for the year ended December 31, 2023, and $105 million for the year ended December 31, 2022. These amounts are included in depreciation and amortization expense in the Consolidated Statements of Income.

We recorded pre-tax, non-cash property and equipment asset impairment charges on capitalized software that was retired and accelerated depreciation expense on certain assets as a result of a decrease in their useful life, primarily in relation to our restructuring programs of $37 million in 2024, $12 million in 2023 and $8 million in 2022. These charges are included in restructuring charges in the Consolidated Statements of Income. See Note 20, "Restructuring Charges," for further discussion. There were no other material impairments of property and equipment recorded in 2024, 2023 and 2022.

As of December 31, 2024, 2023 and 2022, we did not own any real estate properties.

8. DEFERRED REVENUE

Deferred revenue represents consideration received that is yet to be recognized as revenue. The changes in our deferred revenue during the year ended December 31, 2024 are reflected in the following table:

	Balance at December 31, 2023	Additions	Revenue Recognized	Adjustments	Balance at December 31, 2024
			(in millions)		
Capital Access Platforms:					
Initial Listings	$ 97	$ 30	$ (36)	$ (2)	$ 89
Annual Listings	3	2	(2)	(1)	2
Workflow & Insights	180	192	(178)	—	194
Financial Technology:					
Financial Crime Management Technology	123	146	(117)	(4)	148
Regulatory Technology	68	87	(63)	55	147
Capital Markets Technology	183	177	(173)	(2)	185
Other	21	15	(11)	(2)	23
Total	$ 675	$ 649	$ (580)	$ 44	$ 788

In the above table:

- Additions 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 primarily reflect foreign currency translation adjustments and the impact of the measurement period adjustment recorded during the third quarter of 2024. See Note 4, "Acquisition," for a description of the measurement period adjustment.
- Other primarily includes deferred revenue from our non-U.S. listing of additional shares fees and our Index business. These fees are included in our Capital Access Platforms segment.

As of December 31, 2024, we estimate that our deferred revenue will be recognized in the following years:

Fiscal year ended:	2025	2026	2027	2028	2029	2030+	Total
				(in millions)			
Capital Access Platforms:							
Initial Listings	$ 34	$ 28	$ 15	$ 6	$ 4	$ 2	$ 89
Annual Listings	2	—	—	—	—	—	2
Workflow & Insights	192	2	—	—	—	—	194
Financial Technology:							
Financial Crime Management Technology	144	2	1	1	—	—	148
Regulatory Technology	146	1	—	—	—	—	147
Capital Markets Technology	179	3	2	1	—	—	185
Other	14	5	3	1	—	—	23
Total	$ 711	$ 41	$ 21	$ 9	$ 4	$ 2	$ 788

The timing of recognition of deferred revenue related to certain contracts represents our best estimates as the recognition is primarily dependent upon the completion of customization and any significant modifications made pursuant to existing contracts.

9. DEBT OBLIGATIONS

The following table presents the changes in the carrying amounts of our debt obligations during the year ended December 31, 2024:

	December 31, 2023	Additions	Payments, Foreign Currency Translation and Accretion	December 31, 2024
Short-term debt:				
Commercial paper	$ 291	$ 997	$ (1,288)	$ —
2025 Notes	497	—	(98)	399
Total short-term debt	$ 788	$ 997	$ (1,386)	$ 399
Long-term debt - senior unsecured notes:				
2026 Notes	499	—	—	499
2028 Notes	991	—	(56)	935
2029 Notes	658	—	(40)	618
2030 Notes	658	—	(41)	617
2031 Notes	645	—	—	645
2032 Notes	819	—	(50)	769
2033 Notes	674	—	(41)	633
2034 Notes	1,239	—	(19)	1,220
2040 Notes	644	—	—	644
2050 Notes	487	—	—	487
2052 Notes	541	—	—	541
2053 Notes	738	—	—	738
2063 Notes	738	—	—	738
2023 Term Loan	339	—	(339)	—
2022 Revolving Credit Facility	(4)	—	1	(3)
Total long-term debt	$ 9,666	$ —	$ (585)	$ 9,081
Total debt obligations	$ 10,454	$ 997	$ (1,971)	$ 9,480

Refer to "About this Form 10-K" for further details about the aggregate principal amounts issued, coupon rates and maturities of the senior unsecured notes in the table above. Euro Notes are denominated in Euro. Additionally, the 2025 Notes were reclassified to short-term debt as of December 31, 2024, including the balance as of December 31, 2023, for presentation purposes.

Commercial Paper Program

Our U.S. dollar commercial paper program is supported by our 2022 Revolving Credit Facility, which provides liquidity support for the repayment of commercial paper issued through this program. See "2022 Revolving 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.

Senior Unsecured Notes

Our 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 December 31, 2024, the amounts in the table above reflect the aggregate principal amount, which is net of discount and debt issuance costs, which are being accreted and amortized through interest expense over the life of the applicable notes. The accretion of the discount and amortization of the debt issuance costs was $13 million for the year ended December 31, 2024. Our Euro Notes are adjusted for 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. In the fourth quarter of 2024, we repurchased an aggregate amount of $181 million of outstanding notes, primarily related to the 2025 Notes, 2028 Notes, and 2034 Notes.

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.

The Euro Notes pay interest annually. All other notes pay interest semi-annually. The U.S. dollar senior unsecured notes coupon rates may vary with Nasdaq's debt rating, to the extent Nasdaq is downgraded below investment grade, up to an upward rate adjustment not to exceed 2%.

Net Investment Hedge

Our Euro 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. Our Euro denominated 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. Accordingly, the remeasurement of these notes is recorded in accumulated other comprehensive loss in the Consolidated Balance Sheets. For the year ended December 31, 2024, the impact of translation decreased the U.S. dollar value of our Euro denominated notes by $175 million.

Financing of the Adenza Acquisition

Senior Unsecured Notes

In June 2023, Nasdaq issued six series of notes for total proceeds of $5,016 million, net of debt issuance costs of $38 million, with various maturity dates ranging from 2025 to 2063. The net proceeds from these notes were used to finance the majority of the cash consideration due in connection with the Adenza acquisition. For further discussion of the Adenza acquisition, see Note 4, "Acquisition."

2023 Term Loan

In June 2023, in connection with the financing of the Adenza acquisition, we entered into a term loan credit agreement, or the 2023 Term Loan. The 2023 Term Loan provided us with the ability to borrow up to $600 million to finance a portion of the cash consideration for the Adenza acquisition, for repayment of certain debt of Adenza and its subsidiaries, and to pay fees, costs and expenses related to the transaction. On November 1, 2023, we borrowed $599 million, net of fees, under this term loan towards payment of the cash consideration due in connection with the Adenza acquisition, a portion of which had been repaid in the fourth quarter of 2023. The term loan was fully repaid in 2024.

Credit Facilities

2022 Revolving Credit Facility

In December 2022, Nasdaq amended and restated its previously issued $1.25 billion five-year revolving credit facility, with a new maturity date of December 16, 2027. Nasdaq intends to use funds available under the 2022 Revolving 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 2022 Revolving Credit Facility at any time in whole or in part, without penalty.

As of December 31, 2024, no amounts were outstanding on the 2022 Revolving Credit Facility. The $(3) million balance represents unamortized debt issuance costs which are being amortized 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 SOFR (or a successor rate to SOFR), the base rate (as defined in the 2022 Revolving Credit Facility 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 0.100% to 0.250%, 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 years ended December 31, 2024 and 2023.

The 2022 Revolving 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 2022 Revolving Credit Facility includes an option for Nasdaq to increase the available aggregate amount by up to $750 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. These credit facilities, in aggregate, totaled $174 million as of December 31, 2024 and $191 million as of December 31, 2023 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 years ended December 31, 2024 and 2023.

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

Debt Covenants

As of December 31, 2024, we were in compliance with the covenants of all of our debt obligations.

10. RETIREMENT PLANS

Defined Contribution Savings Plan

We sponsor a 401(k) plan, which is a voluntary defined contribution savings 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. The following table presents the savings plan expense for the years ended December 31, 2024, 2023 and 2022, which is included in compensation and benefits expense in the Consolidated Statements of Income:

	Year Ended December 31,		
	2024	2023	2022
	(in millions)		
Savings Plan expense	$ 19	$ 19	$ 17

Pension, SERP and Other Post-Retirement Benefit Plans

In June 2023, we terminated our U.S. pension plan and took steps to wind down the plan and transfer the resulting liability to an insurance company. This process was completed in 2024. These steps included settling all future obligations under our U.S. pension plan through a combination of lump sum payments to eligible, electing participants (completed in 2023) and the transfer of any remaining benefits to a third-party insurance company through a group annuity contract. In connection with the plan termination and partial settlement, a pre-tax charge of $9 million was recorded to compensation and benefits expense in 2023. We finalized the transfer of any remaining benefits during the first quarter of 2024 and recorded an additional settlement pre-tax charge of $23 million to compensation and benefits expense in the Consolidated Statements of Income. This was offset by a $19 million adjustment to Other Comprehensive Income and a $4 million cash settlement.

We continue to maintain nonqualified SERPs for certain senior executives and other post-retirement benefit plans for eligible employees in the U.S. 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 Consolidated Statements of Income:

	Year Ended December 31,		
	2024	2023	2022
	(in millions)		
Retirement Plans expense	$ 54	$ 34	$ 24

Nonqualified Deferred Compensation Plan

We sponsor a nonqualified deferred compensation plan, 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 and were immaterial for the years ended December 31, 2024, 2023 and 2022.

11. 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. Generally, annual employee awards are granted on or about April 1st of each year.

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 years ended December 31, 2024, 2023 and 2022, which is included in compensation and benefits expense in the Consolidated Statements of Income:

	Year Ended December 31,		
	2024	2023	2022
	(in millions)		
Share-based compensation expense before income taxes	$ 141	$ 122	$ 106

Common Shares Available Under Our Equity Plan

As of December 31, 2024, we had approximately 22.9 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% on the first anniversary of the grant date, 33% on the second anniversary of the grant date, and the remainder on the third anniversary of the grant date. Restricted stock awards granted to employees at or above the manager level generally vest 33% on the second anniversary of the grant date, 33% on the third anniversary of the grant date, and the remainder on the fourth anniversary of the grant date.

The following table summarizes our restricted stock activity for the years ended December 31, 2024, 2023 and 2022:

	Restricted Stock	
	Number of Awards	Weighted-Average Grant Date Fair Value
Unvested at December 31, 2021	4,399,020	$ 35.39
Granted	1,785,138	57.65
Vested	(1,525,442)	31.22
Forfeited	(278,203)	42.07
Unvested at December 31, 2022	4,380,513	45.48
Granted	1,850,790	52.66
Vested	(1,703,252)	38.21
Forfeited	(318,752)	51.15
Unvested at December 31, 2023	4,209,299	51.15
Granted	1,874,976	60.16
Vested	(1,614,071)	47.48
Forfeited	(291,337)	55.57
Unvested at December 31, 2024	4,178,867	$ 56.30

As of December 31, 2024, $128 million of total unrecognized compensation cost related to restricted stock is expected to be recognized over a weighted-average period of 2.1 years.

PSUs

We grant three-year PSUs to certain eligible employees. PSUs are based on performance measures that impact the amount of shares that each PSU eligible individual receives, subject to the satisfaction of applicable market performance conditions, with a three-year cumulative performance period that vest at the end of the performance period and which settle in shares of our common stock. 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. Beginning in 2024, we replaced the exchange company peer group with the S&P 500 GICS 4020 Index, which is a blend of exchanges, as well as data, financial technology and banking companies to align more closely with Nasdaq's diverse business and competitors. 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.

In 2024, we also granted PSUs with a two-year performance period to certain eligible executives at the senior vice president level and above. These PSUs are based on performance measures relating to the implementation of certain integration actions in connection with the Adenza acquisition. Achievement of the targets impacts the amount of shares that each PSU eligible individual receives. The PSUs have a two-year performance period and will vest one year after the end of the performance period, and settle in shares of our common stock. The award issuance under this program will be between 0.0% and 200.0% of the number of PSUs granted.

Grants of PSUs that were issued in 2022 with a three-year performance period exceeded the applicable performance metrics. As a result, an additional 32,802 units above the original aggregate target amount will be granted in the first quarter of 2025 and will be fully vested upon issuance.

The following weighted-average assumptions were used to determine the weighted-average fair values of the outstanding PSU awards granted under the three-year PSU program during the years ended December 31, 2024 and 2023:

	2024 Grants	2023 Grant
Weighted-average risk-free interest rate	4.50%	3.87%
Expected volatility	24.50%	23.94%
Weighted-average grant date share price	$ 62.38	$ 54.68
Weighted-average fair value at grant date	$ 78.67	$ 55.36

The following table summarizes our PSU activity for the years ended December 31, 2024, 2023 and 2022:

	PSUs	
	Three-Year Program	
	Number of Awards	Weighted-Average Grant Date Fair Value
Unvested at December 31, 2021	2,292,372	$ 45.01
Granted	1,495,092	45.66
Vested	(1,735,842)	32.57
Forfeited	(85,080)	52.27
Unvested at December 31, 2022	1,966,542	$ 56.44
Granted	1,693,065	47.14
Vested	(1,552,311)	37.59
Forfeited	(98,974)	57.51
Unvested at December 31, 2023	2,008,322	$ 62.86
Granted	1,282,300	73.91
Vested	(961,331)	73.14
Forfeited	(155,140)	62.80
Unvested at December 31, 2024	2,174,151	$ 64.83

In the table above, in addition to the annual employee grant described above, the granted amount also includes additional awards granted based on overachievement of performance metrics.

As of December 31, 2024, the total unrecognized compensation cost related to the PSU program is $65 million and is expected to be recognized over a weighted-average period of 1.5 years.

Stock Options

There were no stock option awards granted for the years ended December 31, 2024 and 2023. In January 2022, our Chief Executive Officer received an aggregate of 613,872 performance-based non-qualified stock options in connection with a new five-year employment agreement.

There were no stock options exercised for the years ended December 31, 2024, 2023 and 2022.

A summary of our outstanding and exercisable stock options at December 31, 2024, 2023 and 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	806,451	$ 22.23		
Granted	613,872	$ 67.49		
Outstanding at December 31, 2022	1,420,323	$ 41.79		
Outstanding at December 31, 2023	1,420,323	$ 41.79		
Outstanding at December 31, 2024	1,420,323	$ 41.79	4.2	$ 50
Exercisable at December 31, 2024	806,451	$ 22.23	2.0	$ 44

As of December 31, 2024, the aggregate pre-tax intrinsic value of the outstanding and exercisable stock options in the above table was $50 million and represents the difference between our closing stock price on December 31, 2024 of $77.31 and the exercise price, times the number of shares that would have been received by the option holder had the option holder exercised the stock options on that date. This amount can change based on the fair market value of our common stock. As of December 31, 2024 and 2023, 0.8 million outstanding stock options were exercisable and the exercise price was $22.23.

ESPP

We have an ESPP under which approximately 10.7 million shares of our common stock were available for future issuance as of December 31, 2024. 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.

	Year Ended December 31,		
	2024	2023	2022
Number of shares purchased by employees	675,064	687,688	591,820
Weighted-average price of shares purchased	$ 49.16	$ 42.33	$ 43.54
Compensation expense (in millions)	$ 9	$ 7	$ 8

12. NASDAQ STOCKHOLDERS' EQUITY

Common Stock

As of December 31, 2024, 900,000,000 shares of our common stock were authorized, 598,920,378 shares were issued and 575,062,217 shares were outstanding. As of December 31, 2023, 900,000,000 shares of our common stock were authorized, 598,014,520 shares were issued and 575,159,336 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 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 23,858,161 shares of common stock in treasury as of December 31, 2024 and 22,855,184 shares as of December 31, 2023, 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 of December 31, 2024, the remaining aggregate authorized amount under the existing share repurchase program was $1.7 billion.

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, reported based on settlement date, for the year ended December 31, 2024:

	Year Ended December 31, 2024
Number of shares of common stock repurchased	2,344,609
Average price paid per share	$ 61.94
Total purchase price (in millions)	$ 145

In the table above, the number of shares of common stock repurchased excludes an aggregate of 1,002,977 shares withheld to satisfy tax obligations of the grantee upon the vesting of restricted stock and PSUs, and these repurchases are excluded from our repurchase program. Shares repurchased pursuant to the stock repurchase agreement with Thoma Bravo executed in July 2024 are included in the table above. See Note 4, "Acquisition," for further discussion.

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

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 December 31, 2024 and December 31, 2023, no shares of preferred stock were issued or outstanding.

Cash Dividends on Common Stock

During 2024, 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 29, 2024	$ 0.22	March 14, 2024	$ 127	March 28, 2024
April 24, 2024	0.24	June 14, 2024	138	June 28, 2024
July 24, 2024	0.24	September 13, 2024	138	September 27, 2024
October 22, 2024	0.24	December 6, 2024	138	December 20, 2024
			$ 541	

The total amount paid of $541 million was recorded in retained earnings in the Consolidated Balance Sheets at December 31, 2024.

In January 2025, the board of directors approved a regular quarterly cash dividend of $0.24 per share on our outstanding common stock. The dividend is payable on March 28, 2025 to shareholders of record at the close of business on March 14, 2025. The estimated aggregate payment of this dividend is $138 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 shareholders with regular and increasing dividends as earnings and cash flows increase.

13. EARNINGS PER SHARE

The following tables set forth the computation of basic and diluted earnings per share:

	Year Ended December 31,		
	2024	2023	2022
	(in millions, except share and per share amounts)		
Numerator:			
Net income attributable to common shareholders	$ 1,117	$ 1,059	$ 1,125
Denominator:			
Weighted-average common shares outstanding for basic earnings per share	575,428,536	504,909,392	492,420,787
Weighted-average effect of dilutive securities - Employee equity awards	3,760,986	3,483,590	5,436,778
Weighted-average common shares outstanding for diluted earnings per share	579,189,522	508,392,982	497,857,565
Basic and diluted earnings per share:			
Basic earnings per share	$ 1.94	$ 2.10	$ 2.28
Diluted earnings per share	$ 1.93	$ 2.08	$ 2.26

In the table above, employee equity awards from our PSU program, which are considered contingently issuable, are included in the computation of dilutive 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 the years ended December 31, 2024, 2023 and 2022.

14. 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 December 31, 2024 and 2023.

	December 31, 2024			
	Total	Level 1	Level 2	Level 3
	(in millions)			
European government debt securities	$ 166	$ 166	$ —	$ —
Swedish mortgage bonds	13	—	13	—
Time deposits	5	—	5	—
Total assets at fair value	$ 184	$ 166	$ 18	$ —

	December 31, 2023			
	Total	Level 1	Level 2	Level 3
	(in millions)			
European government debt securities	$ 170	$ 170	$ —	$ —
State-owned enterprises and municipal securities	11	—	11	—
Swedish mortgage bonds	7	—	7	—
Total assets at fair value	$ 188	$ 170	$ 18	$ —

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.

We have certain investments, primarily our investment in OCC, which are 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 December 31, 2024, 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 2022 Revolving 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. We are also exposed to changes in interest rates on amounts outstanding from the sale of commercial paper under our commercial paper program. The fair value of our remaining debt obligations utilizing discounted cash flow analyses for our floating rate debt, and prevailing market rates for our fixed rate debt was $8.8 billion as of December 31, 2024 and $10.0 billion as of December 31, 2023. The discounted cash flow analyses are based on borrowing rates currently available to us for debt with similar terms and maturities. 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 9, "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 December 31, 2024 and December 31, 2023, there were no non-financial assets measured at fair value on a non-recurring basis.

15. 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. In January 2025, we entered into an agreement to transfer existing open positions in our Nordic power derivatives trading and clearing business to a European exchange. The completion of this transaction is subject to customary regulatory approvals. See "Market Services" of Note 1, "Organization and Nature of Operations," for further discussion. Additionally, beginning in January 2025, Nasdaq is no longer offering seafood derivatives clearing.

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.

Default Fund Contributions and Margin Deposits

As of December 31, 2024, clearing member default fund contributions and margin deposits were as follows:

	December 31, 2024		
	Cash Contributions	Non-Cash Contributions	Total Contributions
	(in millions)		
Default fund contributions	$ 968	$ 139	$ 1,107
Margin deposits	4,696	5,084	9,780
Total	$ 5,664	$ 5,223	$ 10,887

Of the total default fund contributions of $1,107 million, Nasdaq Clearing can utilize $1,068 million as capital resources in the event of a counterparty default. The remaining balance of $39 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 one year or less, reverse repurchase agreements and multilateral development bank debt securities. Investments in reverse repurchase agreements range in maturity from 2 to 14 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 $5,664 million as of December 31, 2024 and $7,275 million as of December 31, 2023, in accordance with its investment policy as follows:

	December 31, 2024	December 31, 2023
	(in millions)	
Demand deposits	$ 3,616	$ 5,344
Central bank certificates	767	1,301
Restricted cash and cash equivalents	**$ 4,383**	**$ 6,645**
European government debt securities	465	306
Reverse repurchase agreements	610	209
Multilateral development bank debt securities	206	115
Investments	**$ 1,281**	**$ 630**
Total	**$ 5,664**	**$ 7,275**

In the table above, the change from December 31, 2023 to December 31, 2024 includes currency translation adjustments of $525 million for restricted cash and cash equivalents and $56 million for investments.

For the years ended December 31, 2024, 2023, and 2022, investments related to default funds and margin deposits, net includes purchases of investment securities of $33,693 million, $53,657 million and $47,525 million, respectively, and proceeds from sales and redemptions of investment securities of $32,986 million, $53,583 million and $47,736 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 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 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.

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 December 31, 2024, Nasdaq Clearing committed capital totaling $129 million to the liability waterfall and overall regulatory capital, in the form of government debt securities, which are recorded as financial investments in the 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 Consolidated Balance Sheets as both a current asset and a current liability. Pledged margin collateral is not recorded in the Consolidated Balance Sheets as all risks and rewards of collateral ownership, including interest, belong to the counterparty.

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 comprises 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 December 31, 2024.

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% 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 December 31, 2024;
- 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 $19 million as of December 31, 2024.

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 $70 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:

	December 31, 2024
	(in millions)
Commodity and seafood options, futures and forwards	$ 21
Fixed-income options and futures	627
Stock options and futures	197
Index options and futures	44
Total	$ 889

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 years ended December 31, 2024 and 2023:

	Year Ended December 31,	
	2024	2023
Commodity and seafood options, futures and forwards	234,622	233,194
Fixed-income options and futures	18,830,460	19,175,402
Stock options and futures	23,530,035	20,728,290
Index options and futures	35,069,931	40,009,367
Total	77,665,048	80,146,253

In the table above, the total volume in cleared power related to commodity contracts was 160 Terawatt hours (TWh) and 422 TWh for the years ended December 31, 2024 and 2023, respectively.

Resale and Repurchase Agreements Contracts Outstanding and Cleared

The outstanding contract value of resale and repurchase agreements was $200 million and $580 million as of December 31, 2024 and 2023, respectively. The total number of resale and repurchase agreements contracts cleared was 4,929,765 and 4,669,740 for the years ended December 31, 2024 and 2023, respectively.

16. 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	December 31, 2024	December 31, 2023
Assets:		(in millions)	
Operating lease assets	Operating lease assets	$ 375	$ 402
Liabilities:			
Current lease liabilities	Other current liabilities	$ 55	$ 62
Non-current lease liabilities	Operating lease liabilities	388	417
Total lease liabilities		$ 443	$ 479

The following table summarizes Nasdaq's lease cost:

	Year Ended December 31,		
	2024	2023	2022
	(in millions)		
Operating lease cost	$ 78	$ 88	$ 75
Variable lease cost	37	44	32
Sublease income	(3)	(3)	(3)
Total lease cost	$ 112	$ 129	$ 104

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

In the first quarter of 2023, we initiated a review of our real estate and facility capacity requirements due to our new and evolving work models. As a result of this ongoing review, for the year ended December 31, 2023, we recorded impairment charges of $23 million, of which $13 million related to operating lease asset impairment and is included in operating lease cost in the table above, $5 million related to exit costs and is included in variable lease cost in the table above and $5 million related to impairment of leasehold improvements, which are recorded in depreciation and amortization expense in the Consolidated Statements of Income. We fully impaired our lease assets for locations that we vacated with no intention to sublease. Substantially all of the property, equipment and leasehold improvements associated with the vacated leased office space were fully impaired as there are no expected future cash flows for these items.

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

	December 31, 2024
	(in millions)
2025	$ 72
2026	60
2027	57
2028	55
2029	53
2030+	231
Total lease payments	$ 528
Less: interest	(85)
Present value of lease liabilities	$ 443

In the table above, interest is calculated using the interest rate for each lease. Present value of lease liabilities includes the current portion of $55 million.

Total lease payments in the table above excludes $83 million of legally binding minimum lease payments for leases signed but not yet commenced. This primarily relates to a new lease signed in the first quarter of 2024 for our European headquarters. This lease will commence in 2025 with a lease term of 10 years. These payments also include a data center lease for which we have not yet obtained full control of the leased premises.

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

	December 31, 2024
Weighted-average remaining lease term (in years)	9.1
Weighted-average discount rate	3.9 %

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

	Year Ended December 31,		
	2024	2023	2022
	(in millions)		
Cash paid for amounts included in the measurement of operating lease liabilities	$ 84	$ 78	$ 66
Lease assets obtained in exchange for operating lease liabilities	$ 34	$ 26	$ 137

17. INCOME TAXES

Income Before Income Tax Provision

The following table presents the domestic and foreign components of income before income tax provision:

	Year Ended December 31,		
	2024	2023	2022
	(in millions)		
Domestic	$ 1,091	$ 1,073	$ 1,216
Foreign	358	328	259
Income before income tax provision	$ 1,449	$ 1,401	$ 1,475

Income Tax Provision

The income tax provision consists of the following amounts:

	Year Ended December 31,		
	2024	2023	2022
	(in millions)		
Current income taxes provision:			
Federal	$ 166	$ 145	$ 170
State	70	52	67
Foreign	165	79	77
Total current income taxes provision	401	276	314
Deferred income taxes provision (benefit):			
Federal	(25)	51	36
State	2	8	6
Foreign	(44)	9	(4)
Total deferred income taxes (benefit) provision	(67)	68	38
Total income tax provision	$ 334	$ 344	$ 352

We have determined that undistributed earnings of certain non-U.S. subsidiaries are not considered indefinitely reinvested and would not give rise to a material tax liability when remitted. Nasdaq continues to indefinitely reinvest all other outside basis differences to the extent reversal would incur a significant tax liability. A determination of an unrecognized deferred tax liability related to such outside basis differences is not practicable.

A reconciliation of the income tax provision, based on the U.S. federal statutory rate, to our actual income tax provision for the years ended December 31, 2024, 2023 and 2022 is as follows:

	Year Ended December 31,		
	2024	2023	2022
Federal income tax provision at the statutory rate	21.0 %	21.0 %	21.0 %
State income tax provision, net of federal effect	2.9 %	3.2 %	3.8 %
Excess tax benefits related to employee share-based compensation	(0.3)%	(0.7)%	(0.9)%
Non-U.S. subsidiary earnings	1.6 %	2.5 %	1.2 %
Tax credits and deductions	(1.7)%	(0.2)%	(0.3)%
Change in unrecognized tax benefits	0.4 %	1.0 %	1.1 %
Deduction for foreign derived intangible income	(2.8)%	(1.6)%	(1.0)%
Intra-group transfer of IP	1.7 %	— %	— %
Other, net	0.3 %	(0.6)%	(1.0)%
Actual income tax provision	23.1 %	24.6 %	23.9 %

The lower effective tax rate for the year ended December 31, 2024 was primarily due to the purchase of energy tax credits made available under the Inflation Reduction Act and a reduction in U.S. taxes on international income related to the changes in our tax profile from recent acquisitions, partially offset by the completion of an intra-group transfer of certain IP assets from a wholly-owned, non-U.S. subsidiary to our U.S. headquarters, in order to better align with current and future business operations, resulted in a one-time net tax expense of $33 million.

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.

Deferred Income Taxes

The temporary differences, which give rise to our deferred tax assets and (liabilities), consisted of the following:

	December 31,	
	2024	2023
	(in millions)	
Deferred tax assets:		
Deferred revenues	$ 40	$ 19
Foreign net operating loss	3	12
Capitalized research and development costs	43	16
State net operating loss	3	3
Compensation and benefits	47	45
Deferred interest expense	63	55
Tax credits	18	26
Federal benefit of uncertain tax positions	16	12
Operating lease liabilities	113	118
Other	41	29
Gross deferred tax assets	387	335
Less: valuation allowance	—	(4)
Total deferred tax assets, net of valuation allowance	$ 387	$ 331
Deferred tax liabilities:		
Depreciation	$ (30)	$ (37)
Amortization of acquired intangible assets and goodwill	(1,698)	(1,736)
Investments	(81)	(74)
Unrealized gains	(55)	(11)
Operating lease assets	(95)	(99)
Other	(8)	(9)
Gross deferred tax liabilities	$(1,967)	$(1,966)
Net deferred tax liabilities	$(1,580)	$(1,635)
Reported as:		
Non-current deferred tax assets	$ 14	$ 7
Deferred tax liabilities, net	(1,594)	(1,642)
Net deferred tax liabilities	$(1,580)	$(1,635)

In the table above, non-current deferred tax assets are included in other non-current assets in the Consolidated Balance Sheets.

We had no valuation allowances as of December 31, 2024 and $4 million as of December 31, 2023 due to recurring operating losses in a foreign jurisdiction. Based on all available positive and negative evidence, we believe the sources of future taxable income are sufficient to realize the remainder of Nasdaq's deferred tax asset inventory.

Nasdaq has deferred tax assets associated with net operating losses, or NOLs, in U.S. state and local and non-U.S. jurisdictions with the following expiration dates:

Jurisdiction	December 31, 2024	Expiration Date
	(in millions)	
Foreign NOL	$ 3	2039-2044
U.S. state and local NOL	3	2025-2043

Unrecognized Tax Benefits

A reconciliation of the beginning and ending amount of unrecognized tax benefits is as follows:

	Year Ended December 31,		
	2024	2023	2022
	(in millions)		
Beginning balance	$ 80	$ 70	$ 57
Additions as a result of tax positions taken in prior periods	3	2	13
Additions as a result of tax positions taken in the current period	15	25	9
Reductions related to settlements with taxing authorities	(6)	(14)	(7)
Reductions as a result of lapses of the applicable statute of limitations	(8)	(3)	(2)
Ending balance	$ 84	$ 80	$ 70

Unrecognized tax benefits in the table above, if recognized in the future, would affect our effective tax rate. Nasdaq does not believe that our unrecognized tax benefits will materially change over the next 12 months.

We recognize interest and/or penalties related to income tax matters in the provision for income taxes in the Consolidated Statements of Income, which was $4 million tax expense for the year ended December 31, 2024, $3 million for the year ended December 31, 2023 and $1 million tax benefit for the year ended for December 31, 2022. Accrued interest and penalties, net of tax effect were $10 million as of December 31, 2024 and $6 million as of December 31, 2023.

Tax Audits

Nasdaq and its eligible subsidiaries file a consolidated U.S. federal income tax return and 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 return is under audit for tax year 2018 and is subject to examination by the Internal Revenue Service for the years 2021 through 2023. Several state tax returns are currently under examination by the respective tax authorities for the years 2014 through 2023. Non-U.S. tax returns are subject to examination by the respective tax authorities for the years 2019 through 2023. 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 consolidated financial position or results of operations. We do not expect to settle any material tax audits in the next twelve months.

18. 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 15, "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 December 31, 2024 and December 31, 2023. As discussed in "Other Credit Facilities," of Note 9, "Debt Obligations," we also have credit facilities primarily related to our Nasdaq Clearing operations, which are available in multiple currencies, and totaled $174 million as of December 31, 2024 and $191 million as of December 31, 2023 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 15, "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 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 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 Consolidated Balance Sheets for these arrangements.

Legal and Regulatory Matters

European Commission Matter

In September 2024, the European Commission conducted an inspection at the Nasdaq Stockholm offices. The inspection related to a potential competition law concern regarding the trading of Nordics financial derivatives. We have been cooperating with the European Commission, but are uncertain about the duration or ultimate outcome of the European Commission's review, or to the extent there is any finding against us, the nature of any remedies or the amount of any fines.

Other Matters

Except as disclosed above and in our 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 17, "Income Taxes," for further discussion.

19. BUSINESS SEGMENTS

We manage, operate and provide our products and services in three business segments: Capital Access Platforms, Financial Technology 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 three separate segments. We evaluate the performance of our segments based on several factors, of which the primary financial measure is operating income. Our CODM, who is our Chair and Chief Executive Officer, 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.

For the year ended December 31, 2024, we adopted ASU 2023-07 "Segment Reporting (Topic 280): Improvements to Reportable Segment Disclosures," and applied it retrospectively to include significant segment expenses, as defined within ASU 2023-07, that are regularly provided to our chief operating decision maker, or CODM.

The following table presents certain information regarding our business segments for the years ended December 31, 2024, 2023 and 2022:

	Year Ended December 31,		
	2024	2023	2022
	(in millions)		
Capital Access Platforms			
Total revenues	$ 1,972	$ 1,770	$ 1,682
Direct and directly consumed expenses	674	653	630
Other expenses	164	146	138
Operating income	$ 1,134	$ 971	$ 914
Depreciation and amortization	41	39	36
Purchase of property and equipment	52	53	50
Financial Technology			
Total revenues	$ 1,655	$ 1,099	$ 864
Direct and directly consumed expenses	794	536	494
Other expenses	91	69	71
Operating income	$ 770	$ 494	$ 299
Depreciation and amortization	43	36	35
Purchase of property and equipment	105	50	49
Market Services			
Total revenues	$ 3,771	$ 3,156	$ 3,632
Transaction-based expenses	(2,751)	(2,169)	(2,644)
Revenues less transaction-based expenses	$ 1,020	$ 987	$ 988
Direct and directly consumed expenses	339	330	293
Other expenses	84	75	68
Operating income	$ 597	$ 582	$ 627
Depreciation and amortization	39	34	32
Purchase of property and equipment	50	55	53
Corporate			
Total revenues	$ 2	$ 39	$ 48
Other expenses	705	508	324
Operating loss	$ (703)	$ (469)	$ (276)
Depreciation and amortization	490	214	155
Consolidated			
Total revenues	$ 7,400	$ 6,064	$ 6,226
Transaction-based expenses	(2,751)	(2,169)	(2,644)
Revenues less transaction-based expenses	$ 4,649	$ 3,895	$ 3,582
Direct and directly consumed expenses	1,807	1,519	1,417
Other expenses	1,044	798	601
Operating income	$ 1,798	$ 1,578	$ 1,564
Depreciation and amortization	613	323	258
Purchase of property and equipment	207	158	152

Direct and directly consumed expenses in the preceding table represent costs for resources directly used by the segment for revenue generating activities. Other expenses include indirect overhead costs allocated to our segments. During the first year of the integration of Adenza and Verafin, the allocation of these indirect overhead costs to the Financial Technology segment were phased in and therefore these allocations may change in the future. Other expenses also includes expenses allocated to our Corporate segment. The following table summarizes revenues and expenses allocated to our Corporate segment:

	Year Ended December 31,		
	2024	2023	2022
	(in millions)		
Revenues:			
Divested businesses	$ 36	$ 39	$ 48
Adenza purchase accounting adjustment	(34)	—	—
Expenses:			
Amortization expense of acquired intangible assets	488	206	153
Merger and strategic initiatives expense	35	148	82
Restructuring charges	116	80	15
Lease asset impairments	—	25	—
Legal and regulatory matters	20	12	26
Extinguishment of debt	4	—	16
Pension Settlement	23	9	—
Expenses - divested businesses	16	21	27
Other	3	7	5
Total expenses	$ 705	$ 508	$ 324
Operating loss	$ (703)	$ (469)	$ (276)

For further discussion of our segments' results, see "Segment Operating Results," of "Part II, Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations."

The items in the preceding table are not included in the measurement of segment profitability reviewed by our CODM, as we believe they do not contribute to a meaningful evaluation of a particular segment's ongoing operating performance. Management does not consider these items 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 the below items provide management with a useful representation of our segments' ongoing activity in each period. These items, which are presented in the tables above, include the following:

- *Revenues and expenses - divested businesses:* In June 2023, we entered into an agreement to sell our Nordic power trading and clearing business, which was subsequently terminated in June 2024. In January 2025, we entered into a new agreement to transfer existing open positions in our Nordic power derivatives trading and clearing business to a European exchange. The completion of this transaction is subject to customary regulatory approvals. Revenues and expenses related to this business for the years ended December 31, 2024, 2023 and 2022, continue to be included as revenues and expenses - divested businesses. Historically, these amounts were included in our Market Services and Capital Access Platforms segments. For 2022, this also includes the revenues and expenses of our U.S. Fixed Income business, which was previously included in our Market Services and Capital Access Platforms segments.
- *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.
- *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. For the years ended December 31, 2024 and 2023, these costs primarily relate to the Adenza acquisition. For the year ended December 31, 2024, these costs were partially offset by receipt of a fee related to the termination of the proposed divestiture of our Nordic power trading and clearing business.
- *Restructuring charges:* In the fourth quarter of 2023, following the closing of the Adenza acquisition, our management approved, committed to and initiated a restructuring program, "Adenza Restructuring" to optimize our efficiencies as a combined organization. In October 2022, following our September 2022 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 September 2024, we completed our divisional alignment program. See Note 20, "Restructuring Charges," for further discussion of these plans.
- *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. Other items primarily include:
  - *Adenza purchase accounting adjustment:* As discussed in Note 3, "Revenue from Contracts with Customers," during the third quarter of 2024, as part of finalizing the purchase accounting of the Adenza acquisition, a one-time net revenue reduction of $32 million was recorded in our Financial Technology segment, reflecting the net impact of the accounting change on AxiomSL subscription revenue from the date of the Adenza acquisition. For purposes of evaluating the performance of our segments, we have excluded the reduction of $34 million as this relates to the prior year impact of this change. We have not excluded the $2 million offsetting current year impact of this change.
  - *Lease asset impairments:* For year ended December 31, 2023, this included impairment charges related to our operating lease assets and leasehold improvements associated with vacating certain leased office space, which are recorded in occupancy and depreciation and amortization expense in the Consolidated Statements of Income. See Note 16, "Leases," for further discussion.
  - *Legal and regulatory matters:* For the year ended December 31, 2024, this primarily related to the settlement of a previously disclosed SFSA inquiry, and accruals related to certain legal matters. For the years ended December 31, 2023 and 2022, this also included accruals related to certain legal matters. For the year ended December 31, 2023, these charges were partially offset by insurance recoveries related to certain legal matters. The fine is recorded in regulatory expense and the accruals and insurance recoveries are recorded in professional and contract services and general, administrative and other expense in the Consolidated Statements of Income.
  - *Extinguishment of debt:* For the years ended December 31, 2024 and 2022, this includes a loss on extinguishment of debt, which is recorded under general, administrative and other expense in the Consolidated Statements of Income.

- *Pension settlement charge:* For the years ended December 31, 2024 and 2023, we recorded a pre-tax charge as a result of settling our U.S. pension plan. The plan was terminated and partially settled in 2023, with final settlement occurring during the first quarter of 2024. The pre-tax charge is recorded in compensation and benefits in the Consolidated Statements of Income. See Note 10, "Retirement Plans," for further discussion.

Geographic Data

The following table presents total revenues and property and equipment, net by geographic area for 2024, 2023 and 2022. Revenues are classified based upon the location of the customer. Property and equipment information is based on the physical location of the assets.

	Total Revenues	Property and Equipment, Net
	(in millions)	
2024:		
United States	$ 5,817	$ 425
All other countries	1,583	168
Total	$ 7,400	$ 593
2023:		
United States	$ 4,870	$ 367
All other countries	1,194	209
Total	$ 6,064	$ 576
2022:		
United States	$ 5,100	$ 344
All other countries	1,126	188
Total	$ 6,226	$ 532

Property and equipment, net for all other countries primarily includes assets held in Sweden. No single customer accounted for 10.0% or more of our revenues in 2024, 2023 and 2022.

20. RESTRUCTURING CHARGES

In the fourth quarter of 2023, following the closing of the Adenza acquisition, our management approved, committed to and initiated a restructuring program, "Adenza Restructuring" to optimize our efficiencies as a combined organization. We further expanded this program in the fourth quarter of 2024 to accelerate our momentum. In connection with this program, we expect to incur approximately $140 million in pre-tax charges. We have incurred costs principally related to employee-related costs, contract terminations, asset impairments and other related costs and expect to incur additional costs in these areas in an effort to accelerate efficiencies through location strategy and enhanced AI capabilities. Actions taken as part of this program are expected to be completed by the end of 2025, while certain costs may be recognized in the first half of 2026. We expect to achieve benefits primarily in the form of expense synergies.

In October 2022, following our September 2022 announcement to realign our segments and leadership, we initiated a divisional alignment program with a focus on realizing the full potential of this structure. As of September 30, 2024, we completed our divisional alignment program and recognized total pre-tax charges of $139 million over a two-year period, within the anticipated range of $115 million to $145 million.

Costs related to these programs are recorded as restructuring charges in the Consolidated Statements of Income.

The following table presents a summary of the Adenza restructuring program and our divisional alignment program charges for the years ended December 31, 2024, 2023 and 2022 as well as total program costs incurred since the inception date of each program.

	Year Ended December 31,		
	2024	2023	2022
	(in millions)		
Asset impairment charges			
Adenza restructuring	$ 28	$ —	$ —
Divisional realignment	9	12	8
Consulting services			
Adenza restructuring	5	3	—
Divisional realignment	27	34	3
Employee-related costs			
Adenza restructuring	20	6	—
Divisional realignment	8	13	3
Other			
Adenza restructuring	9	1	—
Divisional realignment	10	11	1
Total restructuring charges	$ 116	$ 80	$ 15
Total Program Costs Incurred			
Adenza restructuring	$ 72		
Divisional realignment	$ 139		