

Nasdaq

Introduction

Ato Garrett, SVP Investor Relations

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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, and highlight trends more clearly that may not otherwise be apparent when relying solely on U.S. GAAP financial measures. In addition, we believe the presentation of these measures is useful to investors for period-to-period comparisons of results as certain items do not reflect, or have less bearing on, 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 a comparative measure. Investors should not rely on any single financial measure when evaluating our business. This information should be considered as supplemental in nature and is not meant as a substitute for our operating results in accordance with U.S. GAAP. We recommend investors review the U.S. GAAP financial measures included in this presentation.

Refer to the appendix to this presentation for definitions of terms used throughout.

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Information set forth in this presentation contains forward-looking statements that involve a number of risks and uncertainties. Nasdaq cautions readers that any forward-looking information is not a guarantee of future performance and that actual results could differ materially from those contained in the forward-looking information. When used in this presentation, words such as "expects," "enables," "will," "plans," "pro forma," "target," "outlook," "estimates," and similar expressions and any other statements that are not historical facts are intended to identify forward-looking statements.

Such forward-looking statements include, but are not limited to (i) management's vision for the future of Nasdaq, projections relating to our future financial results, growth, dividend program, products and services, ability to transition to new business models or implement our new corporate structure, taxes and achievement of synergy targets related to the acquisition of Adenza, (ii) statements about the benefits of certain acquisitions and other strategic, restructuring, technology, de-leveraging, share repurchase and capital allocation commitments and initiatives, (iii) statements about the integration of our recent Adenza acquisition, (iv) our medium-term growth outlook, and (v) other statements that are not historical facts. Forward-looking statements involve a number of risks, uncertainties or other factors beyond Nasdaq's control. These factors include, but are not limited to, Nasdaq's ability to implement its strategic initiatives, economic, political and market conditions and fluctuations, geopolitical instability, government and industry regulation, interest rate risk, U.S. and global competition. Further information on these and other factors are detailed in Nasdaq's filings with the U.S. Securities and Exchange Commission, including its annual reports on Form 10-K and quarterly reports on Form 10-Q which are available on Nasdaq's investor relations website at http://ir.nasdaq.com and the SEC's website at www.sec.gov. Nasdaq undertakes no obligation to publicly update any forward-looking statement, whether as a result of new information, future events or otherwise. The forward-looking statements in this presentation do not include the potential impact of any acquisitions or divestitures that may be announced and/or completed after the date hereof.

Website Disclosure

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



Today's Agenda

Time (EST)	Session	Speaker(s)
8:00 AM – 8:05 AM	Welcome, Agenda, and Presentation Kickoff	Ato Garrett, SVP Investor Relations
8:05 AM – 8:25 AM	Strategic Overview	Adena T. Friedman, Chair & CEO
8:25 AM – 8:50 AM	Round Table Discussion: The Technology Foundation for Nasdaq	Brad Peterson, EVP & CTO/CIO, Brenda Hoffman, EVP & CTO of Financial Technology and Market Services, Hazel Dalton, SVP & CTO of Financial Crime Management Technology
8:50 AM – 9:10 AM	Capital Access Platforms	Nelson Griggs, President
9:10 AM – 9:20 AM	Break	
9:20 AM – 9:35 AM	Financial Technology Overview	Tal Cohen, President
9:35 AM – 10:05 AM	Financial Technology Deep Dives - Financial Crime Management Technology: Verafin - Regulatory Technology: AxiomSL & Surveillance - Capital Markets Technology: Marketplace Technology & Calypso	Brendan Brothers, EVP & Head of Financial Crime Management Technology Ed Probst, SVP & Head of Regulatory Technology Gil Guillaumey, SVP & Head of Capital Markets Technology
10:05 AM – 10:20 AM	Market Services	Tal Cohen, President, Kevin Kennedy EVP & Head of North American Market Services, and Roland Chai, EVP & Head of European Market Services
10:20 AM – 10:30 AM	Break	
10:30 AM – 11:00 AM	<u>Panel:</u> One Nasdaq	Valerie Bannert-Thurner, EVP & Chief Revenue Officer Financial Technology, Stephanie Champion, SVP Verafin Sales, Ben Fisbein, SVP Head of Financial Technology Sales for the Americas, Don Marigliano, SVP Head of North American Market Services Sales, Jeff Thomas EVP & Head of Corporate Platforms
11:00 AM – 11:30 AM	Financial Overview	Sarah Youngwood, EVP & CFO
11:30 AM – 12:00 PM	Q&A and Closing Remarks	All
12:00 PM – 2:00 PM	Product Showcase and Networking Lunch	



Nasdaq Kickoff Video



Nasdaq

Delivering Resilient and Scalable Growth

Adena T. Friedman, Chair & CEO

Trusted & Scaled Technology Partner

Accelerating our position as trusted partner with mission-critical capabilities serving the financial system

Dynamic & Durable Growth Platforms

Delivering scalable, profitable, durable growth across our platforms

Built for Sustained Value Creation

Maintaining laser focus on our exceptional financial profile, expense rigor, and shareholder value creation



Nasdaq Is Aligned on a Common Strategic Framework

Core Purpose

We advance economic progress for all

Long-Term Vision

We will be the trusted fabric of the world's financial system

Value Proposition

We deliver world-leading platforms that improve the liquidity, transparency, and integrity of the global economy



Uniquely Diversified Business with Strong Right to Win

Strategic Differentiators



Technology Leadership



Gold Source Data



Clients

Scaled Marquee Client Base

¹ Interbrand study, August 2022

Expertise

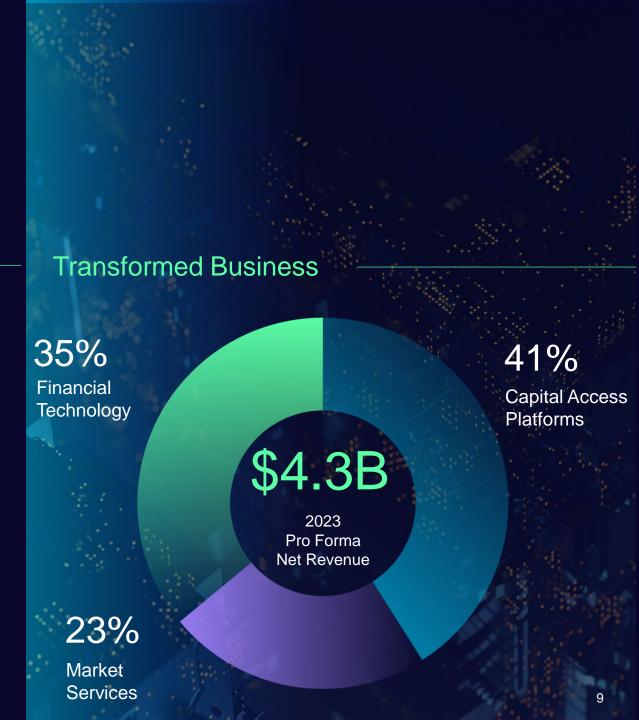
Market & Regulatory Expertise



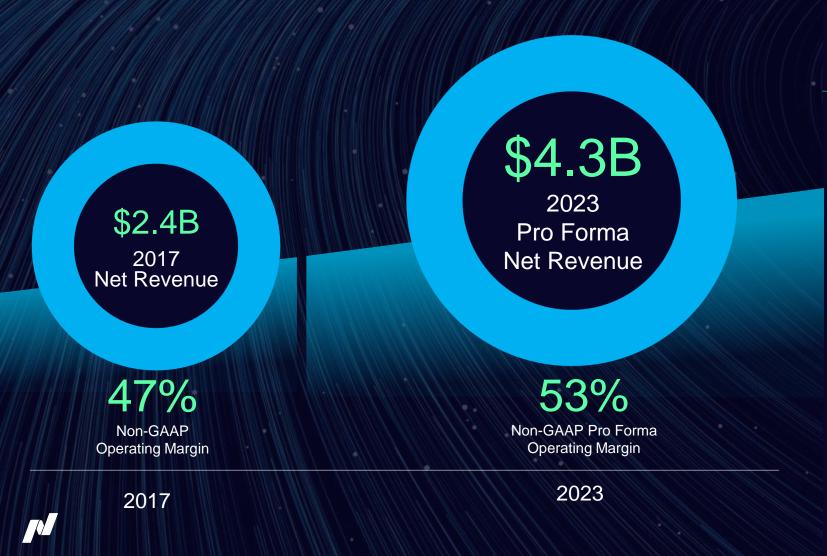
Valued Among the Top 100 Brands 1



² Revenue chart does not include 1% of "other" revenue that primarily relates to Nasdag's European power trading and clearing business, following our announcement in June 2023 to divest this business, subject to regulatory approval.



Strategic Pivot Has Delivered Higher Growth and Exceptional Profitability



Exceptional Financial Profile

8%

2017 – 2023 Revenue CAGR ~ 100%+

2017 - 2023 FCF Conversion

+600bps

2017 – 2023 Margin Improvement \$2.4B

2023 Pro Forma EBITDA

Nasdaq is a Trusted and Scaled Partner to the World's Financial System

#1

U.S. Equities Exchange and Market Share in U.S. Multi-Listed Options

74%

U.S. IPO Win Rate over Past Five Years

#1

Global Leader in Regulatory Reporting and Capital Markets Surveillance Global Leadership

3,500+

Total Clients across Financial Technology Division

130 +

Global Marketplaces Powered by Nasdaq Technology

>95%

of the Top 50 Asset Managers are Clients Large and Growing Client Base

\$8T

in Collective Assets Across Verafin's 2,500+ Financial Institutions

\$473B

of Global Assets under Management tracking Nasdaq Indices

Billions

of Global Investors Accessing Nasdaq Proprietary Market Data Globally Scale Across
Our Businesses

Our Evolution to a Scalable Platform Company

Go-to-Client Market Success **Product Performance Engineering** Measurement Clients

Three Divisions, One Nasdaq

Agile Product Development

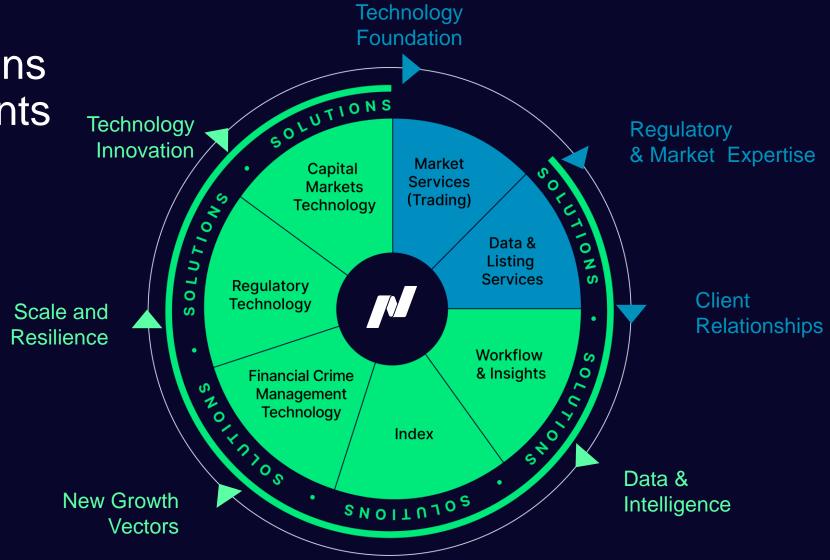
Integrated Marketing & Sales

Institutionalized Client Listening

ROIC Orientation to Client Value

Aligned Performance Metrics: ARR, Bookings, Retention

Complementary, Integrated Solutions to Serve Our Clients



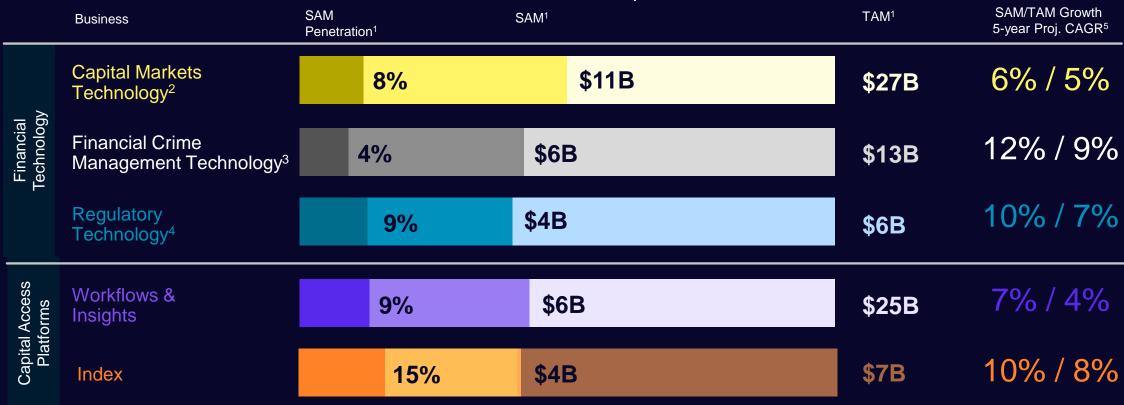


Our Business is Aligned to Capture Industry-Shaping Megatrends



Our Solutions Address Large, High-Growth Opportunities





¹ Total addressable market (TAM) based on consulting reports, public filings, and Nasdaq analysis of total spend across existing areas of opportunity for each business. Serviceable addressable market (SAM) is based on internal estimates reflecting market opportunity of external spend on existing offerings. Both TAM and SAM include the 2023 revenue for our regulated Data & Listing Services business. SAM penetration is based on 2023 Pro forma revenue, including a full year of AxiomSL & Calypso revenue. Totals may not sum due to rounding

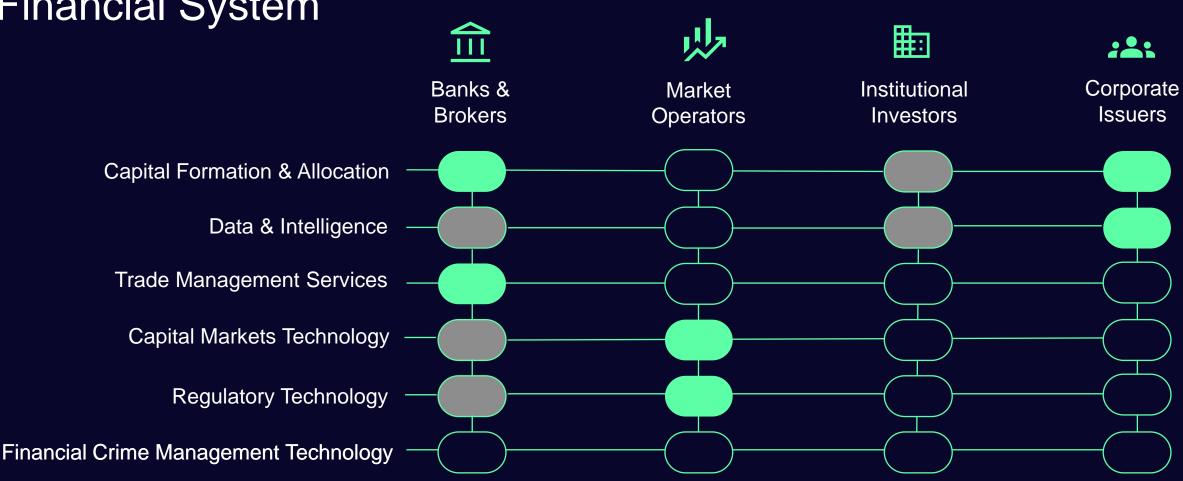
² Refers to the Marketplace Technology and Calypso businesses, including Trade Management Services. SAM penetration is based on 2023 Pro Forma Revenues, including a full year of Calypso revenues

³ Refers to Verafin

⁴ Refers Surveillance and AxiomSL. SAM penetration is based on 2023 Pro Forma Revenues, including a full year of AxiomSL revenues

⁵ Oliver Wyman analysis, in alignment with Nasdaq's TAM/SAM methodology

Serving as the Trusted Fabric to the World's Financial System



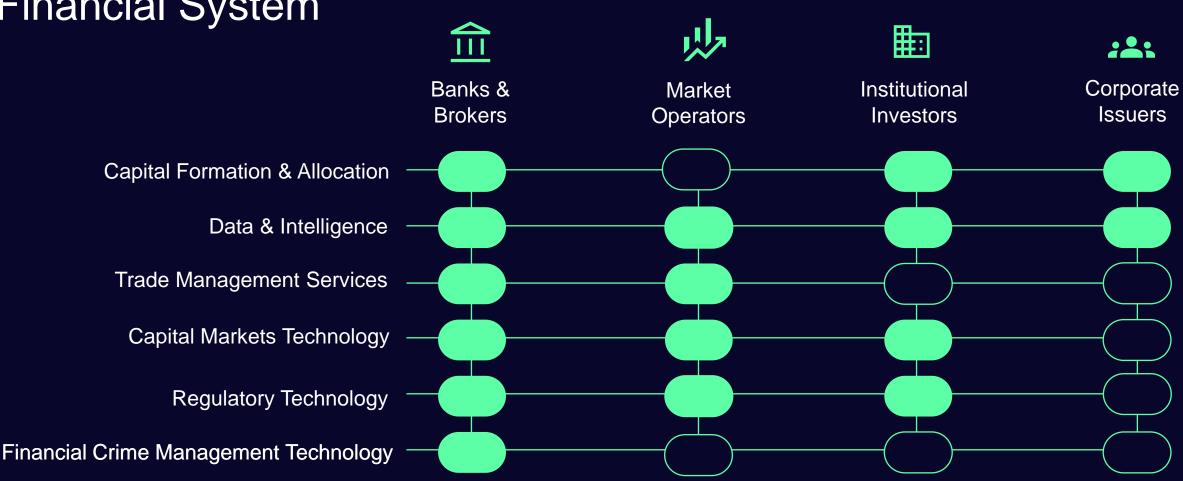




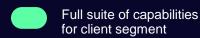


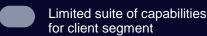
2017

Serving as the Trusted Fabric to the World's Financial System









2023

Our Priority: Deliver Resilient, Scalable Growth



ि Integrate

Deliver Cost Synergies

~70%

of targeted \$80M in net expense synergies to be actioned in 2024

Accelerate Deleveraging

4.0x

Expect to achieve leverage ratio of 4.0x, 9-12 months ahead of goal¹ and below 3.3x, at least 6 months ahead of goal¹



Integration Playbook



Accelerated Delivery



Enterprise-Wide Transformation



Amplify Innovation

100%

Al tools available to all employees by end of 2024

Drive Innovation Focus

5

Al opportunities aligned around structural thematics: coding, content, data, workflow automation, algorithmic intelligence



Technology Foundation



Al *in* the Product / on the Business



Scaled Innovation Pipeline





Drive Cross-Sell

\$100M+

in Financial Technology cross-sell revenues achieved by year-end 2027



One Nasdaq Culture



Divisional Approach



Client Data & Listening



Medium-Term Revenue and Expense Outlook¹

Medium-Term Growth Outlook

Capital Access Platforms

5-8%

Financial Technology

10-14%

Solutions

8-11%

Expense Growth

5-8%



Delivering A Compelling Investment Thesis



Trusted partner with mission-critical capabilities that enhance the liquidity, transparency, and integrity of the world's financial system



Modern technology infrastructure and gold source data underpin go-forward value creation



Decades of expertise across market infrastructure and regulation core differentiator across foundational and growth areas



Track record of strong integration execution



Scaled recurring revenue base and consistent growth with exceptional financial profile



Client Testimonial Video

Citadel



Nasdaq

The Technology Foundation for Nasdaq

Client Testimonial Video

N100



Masdaq

Capital Access Platforms

Nelson Griggs, President

Power of the Division

Enhancing value through combination of our businesses

Strategic Priorities Aligned to Trends

Investing across division to capitalize on sizable market opportunities

Well-Positioned for Continued Growth

Sustaining long-term revenue growth and margin expansion



At-A-Glance





12% Revenue CAGR (6-Year CAGR 2017-2023)

\$1.2B ARR

55% Operating Margin

Capital Access Platforms

Financial Technology

2023 Pro Forma Nasdaq Revenue

Market Services

Serving Corporate and Investor Clients as a Trusted Provider of Market Transparency





Trusted Brand & Execution Has Built Market Leadership



Valued Among the Top 100 Brands¹ <u>Listings</u>

~21%

of the world's market capitalization on Nasdaq Exchanges²

Data

Billions

of end users worldwide

<u>Index</u>

\$473B

of AUM tracking Nasdaq indices³

Corporate Solutions

>65%

of Fortune 500 companies⁴ and

>90%

of Nasdaq-100 companies⁵ are clients

Analytics

>95%

of the top 50 asset managers are clients⁶

¹ Interbrand study, August 2022

² Represents Nasdaq-listed company market capitalization of \$25T (excluding ADRs and ETPs) and estimated global market capitalization of \$119T as of year-end 2023

³ Total assets under management of ETPs tracking Nasdag indices at year-end 2023

⁴ Represents Fortune 500 companies as of January 2024 utilizing Corporate Solutions services

⁵ Represents Nasdaq-100 companies as of December 2023 utilizing Corporate Solutions services

⁶ Represents top 50 asset managers based on AUM as reported by the Thinking Ahead Institute

Capitalizing on Transformative Industry Trends



Positioned for Three Sizable Growth Opportunities

\$10B SAM¹ | **\$32B** TAM¹



¹ Total addressable market (TAM) based on consulting reports, public filings, and Nasdaq analysis of total spend across existing areas of opportunity for each business. Serviceable addressable market (SAM) is based on internal estimates reflecting the market opportunity of external spend on existing offerings. Both TAM and SAM for Capital Access Platforms include the 2023 revenue for our regulated Data & Listing Services business. SAM penetration is based on 2023 Nasdaq Capital Access Platforms revenue. Totals may not sum due to rounding.

⁴ Oliver Wyman analysis, in alignment with Nasdaq's TAM/SAM methodology



² Index TAM represents projected industry-wide index revenues for 2024

³ Sustainability TAM and SAM are a subset of the Index and Workflows & Insights addressable market figures and include Carbon Removals (Puro.earth)

Integrate, Innovate, Accelerate

Optimized for scale and sustainable growth



Supports thousands of trusted relationships with C-suite decision-makers

Drives innovation and growth



Integration of Division Enables Broad Client Reach and Unique Insights

15K+
Clients Globally

300K+
Users¹

200K+

Coverage on Corporates, Investors & Investment Strategies²

Scalability

Data Insights

Market Intelligence

Cross-Sell Opportunities

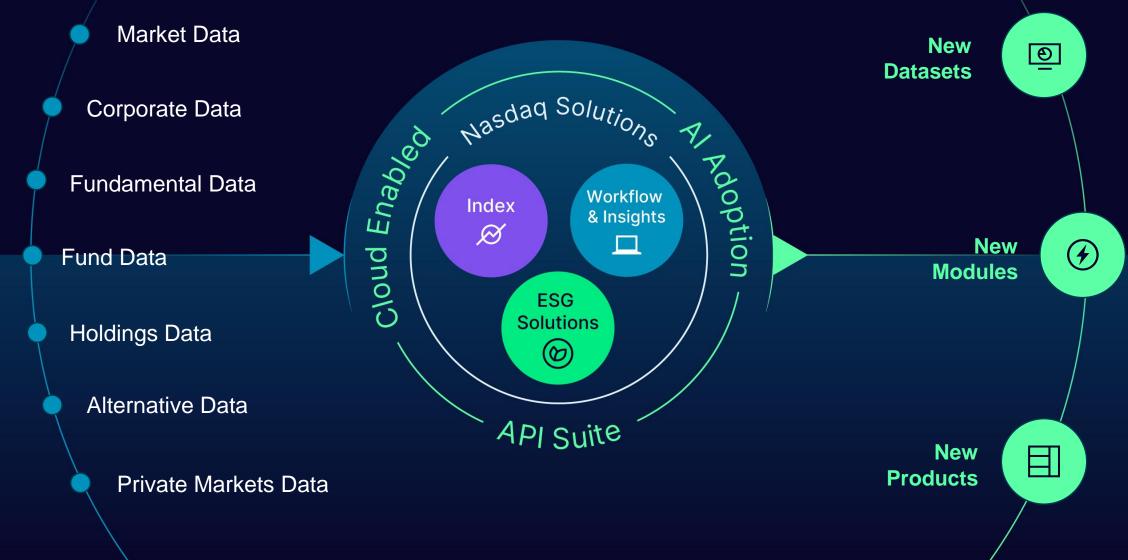
Global Expansion



¹ Represents aggregate user base across solutions including Investor Relations, Governance, ESG Services and Analytics

² Represents corporates, investor firm profiles, institutional strategies, investment vehicles, asset managers, general partners and private equity firms and funds profiled across platforms

Data Assets Drive Innovation & Accelerate Growth across Products





Power of the Division

Enhancing value through combination of our businesses

Strategic Priorities Aligned to Trends

Investing across division to capitalize on sizable market opportunities

Well-Positioned for Continued Growth

Sustaining long-term revenue growth and margin expansion



Capital Access Platforms

Strategic Initiatives Will Drive Continued Growth

1 2 3

Build on Data & Insights through execution and innovation

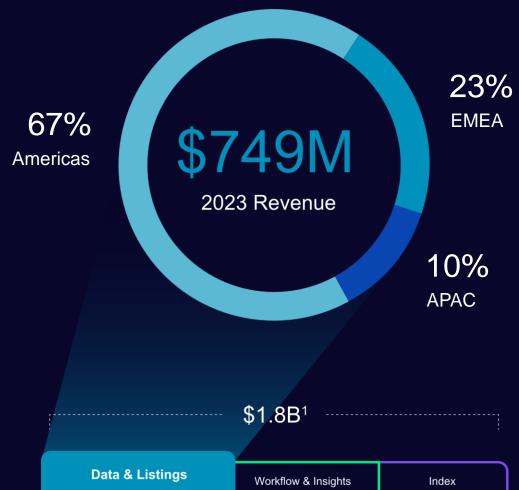
Drive Index expansion

Tracking towards \$250M in sustainability revenues by 2027



Data & Listings

At-A-Glance



Key Highlights

(2019-2023)

74% U.S. IPO win rate

\$1.3T

Market cap of switches to Nasdaq

100%

Increase in enterprise Data licenses

55%

Increase in international Data revenue²

¹²⁰²³ Capital Access Platforms Revenue

² Represents cross-border revenue for in-country market data products

Data & Listings

Building Upon Data & Listings Leadership





- Brand association
- Ecosystem relationships
- Best-in-class marketing
- Corporate Services differentiation



Data Expansion

- Frictionless data experience
- Multiple delivery capabilities
- New geographies
- New products

Low Single Digit Medium-Term Organic Revenue Growth Outlook¹



¹ Over 3-5 years. Growth outlook assumes stable market backdrop.

Workflow & Insights

At-A-Glance



Key Highlights

>85%

Revenue from SaaS products²

59

Net promoter score across solutions³

>250,000

Board members utilizing Governance Solutions

>235,000

Investor meetings captured in IR Insight yearly

>30,000

Investment strategies on Analytics platform

¹ 2023 Capital Access Platforms Revenue

² Represents SaaS % of total ARR in 2023

³ Average NPS score across solution sets as of December 2023

Workflow & Insights

Leveraging the Power of the Division to Drive Growth

Go-to-Market

- New logos
- Cross-sell
- Global expansion

Modern Infrastructure

- Cloud-first approach
- Enhanced data insights
- Al acceleration

New Modules & Products

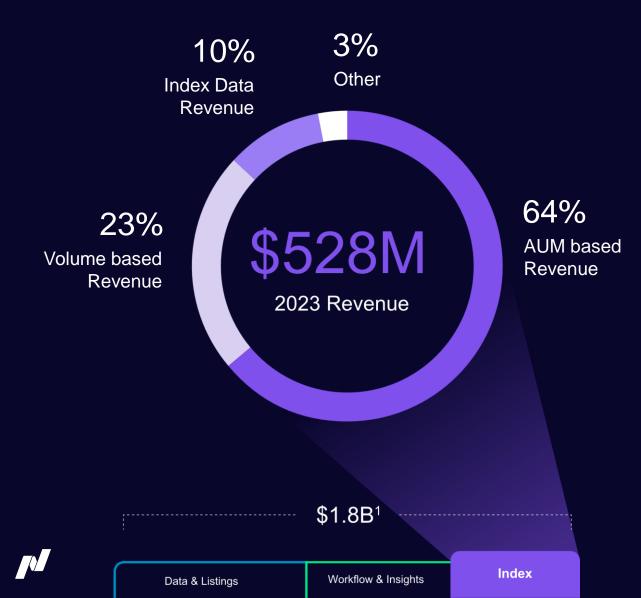
- Nasdaq Metrio
 - Al-powered Sustainable Lens
- Sustainability data within Analytics

High Single to Low Double Digit Medium-Term Organic Revenue Growth Outlook¹



Index

At-A-Glance



Key Highlights

21%5-year revenue CAGR

\$198B

Cumulative net inflows over last 5 years

>75%

Top 20 ETF sponsors are partners²

70/30

Split between Nasdaq-100 vs. non-Nasdaq-100 ETP AUM

¹ 2023 Capital Access Platforms Revenue

² Top 20 ETF Sponsors based on ETP assets under management

Index

Multiple Growth Vectors for Leading Index Franchise

Global Expansion

- Expand breadth and depth with Nasdaq-100
- Capitalize on regional trends through tailored products

New Clients

- Insurance annuities
- Retail broker partnerships
 - **Emerging ETF issuers**

New Products

- Quantitative
- Thematics
- Nasdaq-100 extensions

Mid to High Single Digit Medium-Term Organic Revenue Growth Outlook¹

Power of the Division

Enhancing value through combination of our businesses

Strategic Priorities Aligned to Trends

Investing across division to capitalize on sizable market opportunities

Well-Positioned for Continued Growth

Sustaining long-term revenue growth and margin expansion



Capital Access Platforms

Delivering Consistent Revenue Growth and Margin Expansion





Capital Access Platforms

Reaffirming Medium-Term Outlook

Unique Value of Combined Businesses Investments Capitalize on Market Trends Long-Term
Revenue Growth
& Margin
Expansion

5-8% Organic Revenue Growth¹
Continue to deliver operating leverage

Client Testimonial Video

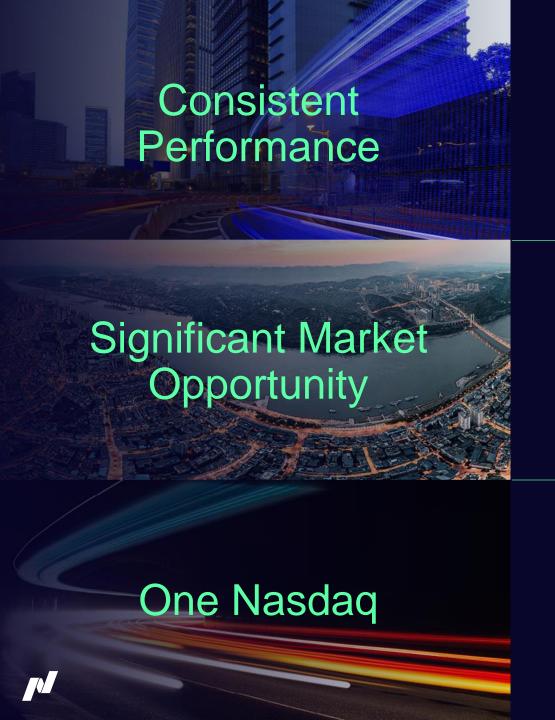
M&T



Nasdaq

Financial Technology

Tal Cohen, President



Building on a strong track record of profitable growth

Leaning into powerful trends across a large and growing addressable market

Unlocking significant growth opportunities as we Integrate, Innovate and Accelerate

At-A-Glance



2023 Key Characteristics

Ψ	1.70	/ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	

APP

11% 2022-2023 ARR Growth²

46% Pro Forma Operating Margin

\$1.1M / Average ACV³ Per Client⁴ /

\$0.1M Average ACV³ Per Financial Crime Management Technology Client

97% Gross Retention⁴

109% Net Retention⁴

2023 Pro Forma Nasdag Revenue

² Growth based on 2022 Pro Forma Financial Technology ARR (including Adenza)

³ Annual contract value – ARR for existing and new client contracts, including any contractual ramp up in recurring fees and any signed contracts yet to go live

⁴ Division retention metrics represent the weighted average of individual product retention metrics and are not calculated at a division-level. Excludes Trade Management Services.

Complementary & Differentiated Suite of Mission-Critical Platforms

Financial Crime Management Technology	Regulatory Technology		Capital Markets Technology	
Verafin	AxiomSL	Surveillance	Calypso	Marketplace Technology ¹
Industry pioneer in financial crime management	Comprehensive global regulatory reporting and risk platform	Global leader in capital markets surveillance	Front-to-back trading, clearing, collateral, margin, & treasury	Industry-leading market infrastructure technology and connectivity solutions



Trusted Partner to the Global Financial Community

3,500+ Total Clients

97%

Global Systemically Important Banks (G-SIB) ~650

Banks & Brokers¹

2,150+

Credit Unions & Community Banks

130+

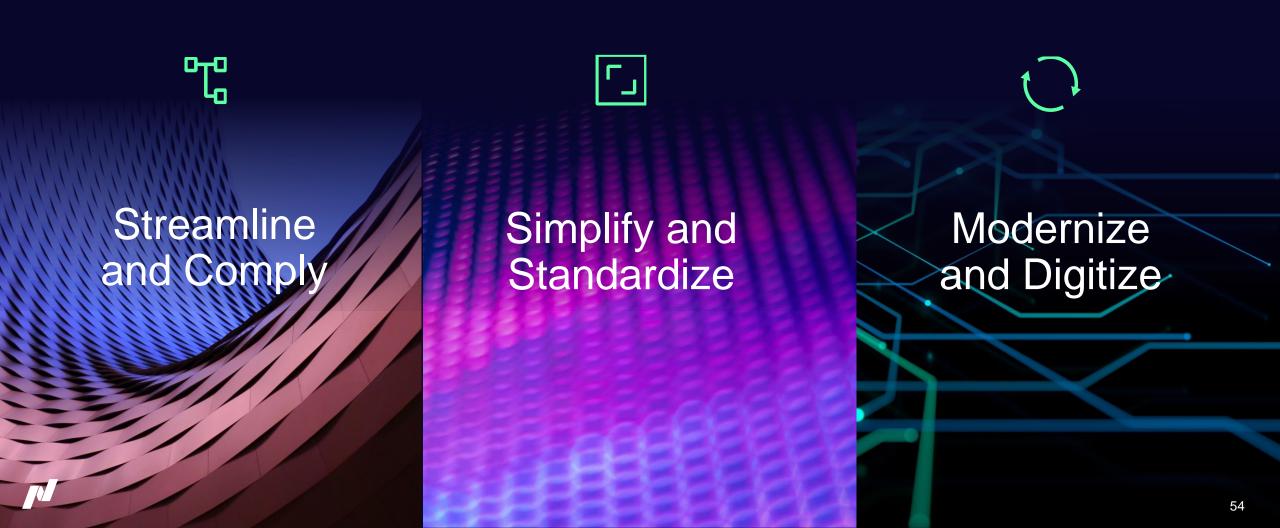
Marketplaces
Powered by Nasdaq
Technology

35

Government & Regulatory Institutions

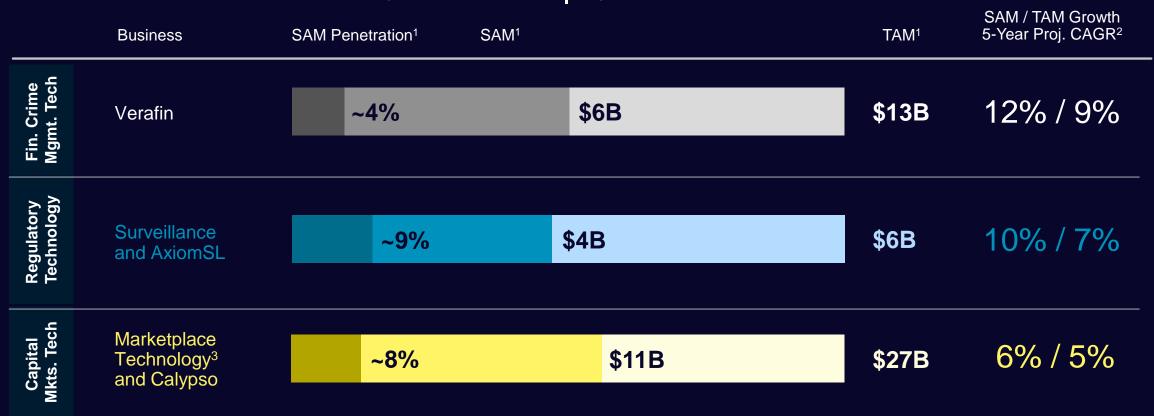


Leaning Into Client Driven Trends



Uniquely Positioned in Large & Fast-Growing Markets

\$21B SAM¹ | \$46B TAM¹



¹ Total addressable market (TAM) based on consulting reports, public filings, and Nasdaq analysis of total spend across existing areas of opportunity for each business. Serviceable addressable market (SAM) is based on internal estimates reflecting the market opportunity of external spend on existing offerings. SAM penetration is based on 2023 Pro Forma Nasdaq Financial Technology revenue, including a full year of revenue for AxiomSL and Calypso. Totals may not sum due to rounding.

² Oliver Wyman analysis, in alignment with Nasdaq's TAM / SAM methodology

³ Includes Trade Management Services + Market Technology

Our Path to Cross-Selling

Underlying drivers

- Growing SAM
- Powerful structural trends
- Trusted brand

Key enablers

- Strategic alignment
- Institutionalizing client listening
- Client data management

Cross-Sell Revenue

\$100M+

in Financial Technology cross-sell revenues achieved by year-end 2027



One Nasdaq Unlocks Growth Through Cross-Selling



Unparalleled Expertise and Global Reach

- Deep expertise
- Trusted partners
- Local and global perspective

Operating Model

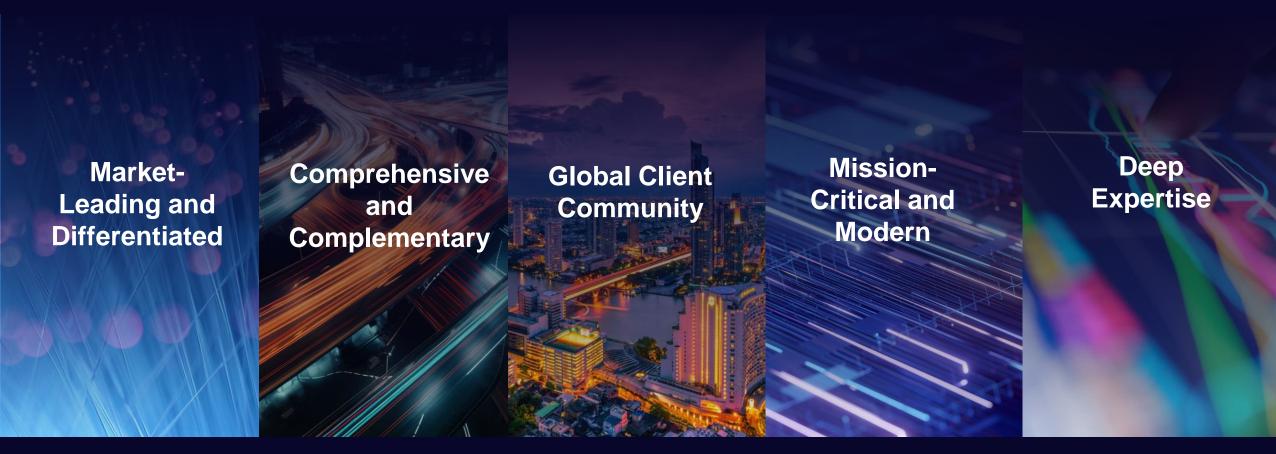
- Enterprise functions
- Deep alignment
- Client centric



Integrate, Innovate and Accelerate



Powering the Trusted Fabric



10-14% Medium-Term Organic Revenue Growth Outlook¹
With Continued Operating Leverage



Overview Of This Section

Financial Crime ManagementTechnology – Verafin

Regulatory Technology – Surveillance & AxiomSL

Capital Markets Technology – Marketplace Technology¹ & Calypso



Client Testimonial Video

Citi



Nasdaq

Financial Crime Management Technology: Verafin

Brendan Brothers, EVP & Head of Financial Crime Management Technology

Solutions Address a Massive Global Challenge

Global Scale of Financial Crime 2023

\$3.1T

in money laundering & illicit flows

\$500B

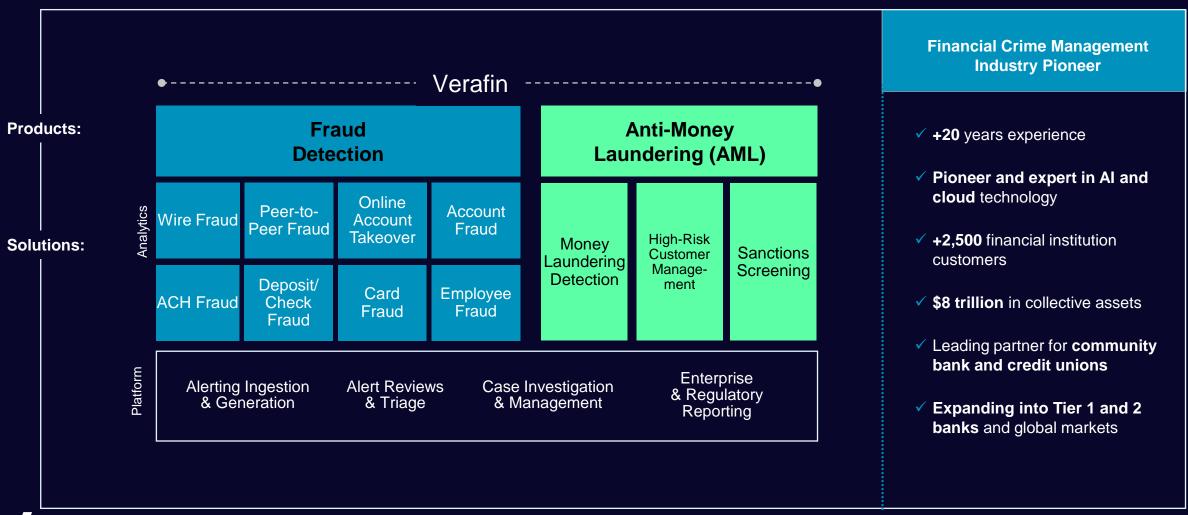
in losses from fraud and scams

70%

of financial institutions' plan to increase investment in Al / machine learning in the next 1-2 years



Comprehensive Suite of Solutions





At-A-Glance







¹ Revenues are pro forma, reflecting a full year of Verafin and include a purchase price adjustment on deferred revenue associated with the Verafin transaction of \$28 million in 2021, and \$1 million in 1Q22.

² 2023 Pro Forma Financial Technology Revenue, including a full year of Adenza.

ARR(as of Dec. 31, 2023)

\$226M

ARR Growth

(2022 - 2023)

+24%

Continued Momentum in Small and Medium Banks

Client acquisition, renewal and retention demonstrates leadership

New SMB Clients

+230

2023

Net Revenue Retention

+112%

2023

Notable Accomplishments

NEW CLIENTS EXISTING CLIENTS

New growth opportunities

Improved efficiency in sales execution

Increased share of wallet

Retention and renewals



Breakthrough Year for Upmarket

Tailored, flexible suite of solutions drives Tier 1 & 2 penetration

New Tier 1 Clients

3 2023

New Tier 2 Clients

4

2023

Notable Accomplishments

Significant pipeline growth for Proof of Concept

Acquired multiple new clients with Fraud Detection and AML solutions

Land and expand strategy



Solutions with Clear ROI Driving Momentum

Tier 2 Client:

From Successful
Proof of Concept to
Millions in Fraud Detected



in wire fraud detected in the first week in production



Driving AI Innovation

Integrated AI CoPilot

Generative AI & Robotic Process Automation



Increase efficiency and reduce costs

90% reduction
in time for Alert Reviews

Targeted Al Analytics

Focused on specific typologies



) Improve effectiveness

New analytics:

Terrorist Financing

Drug Trafficking

Machine Learning (Fraud)

Consortium Data Approach

+2,500 financial institutions | \$8 trillion in collective assets



A Look Ahead at Growth Opportunities

1

Smaller Bank Execution

- Existing business focus:
 Client adoption, retention and upsell to continue growth
- New streams of revenue:
 Identify new product and partner opportunities

2

Upmarket Expansion

- New Clients: Continue to offer differentiated, tailored fraud and AML solutions
- Land and Expand: Expand opportunities across institutions with additional products

3

New Market Exploration

- U.K & Canada: Advance go-tomarket strategies for Payments Fraud; expansion options
- International Markets: Assess EU product-market fit and other international markets

4

Cross-Sell

 One Nasdaq: Leverage leadership position across Financial Technology Solutions to support crosssell and go-to-market initiatives

Mid-20s Medium-Term Organic Revenue Growth Outlook¹



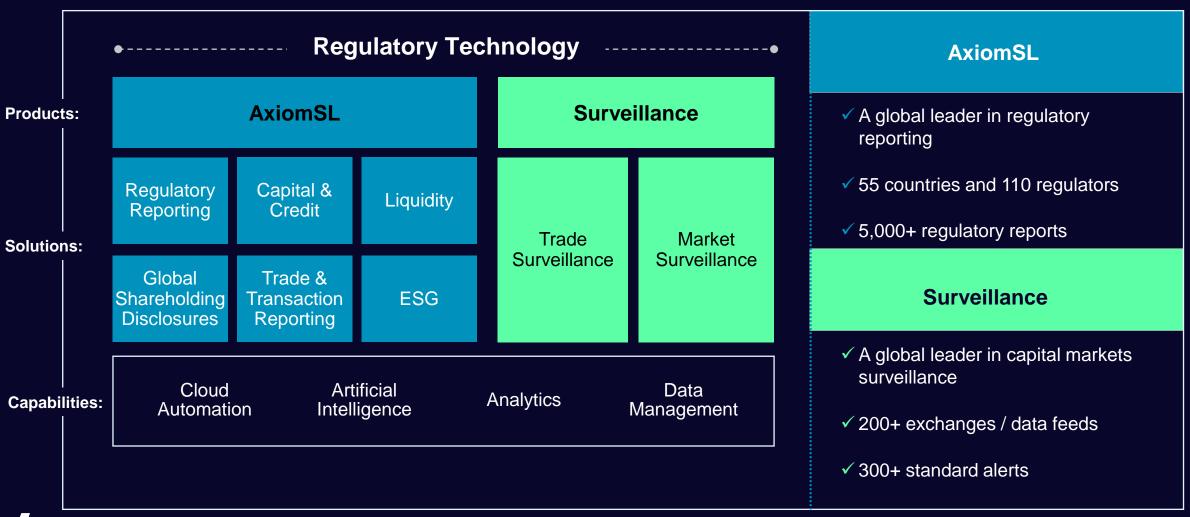
Masdaq

Regulatory Technology: AxiomSL & Surveillance

Ed Probst, SVP & Head of Regulatory Technology

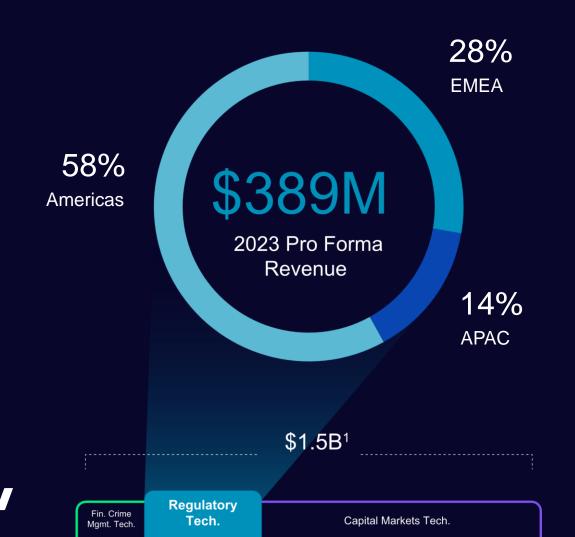
Regulatory Technology

Market-Leading Suite of Reporting & Risk Solutions





At-A-Glance



ARR(as of Dec. 31, 2023)

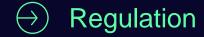
\$325M

ARR Growth²

(Pro Forma 2022 – 2023)

+11%

2023 Notable Accomplishments



Deployed thousands of updates to our regulatory reporting suite



Booked 97% of new clients in Cloud

ClientExpansion

30+ new logos across regions

126 upsells

ProductExpansion

10+ new product extensions



Building Momentum with Product and Technology

Regulatory Technology | \$6B TAM¹ | \$4B SAM¹ | 9% SAM Penetration¹

AxiomSL

Regulatory Reporting Modernization

- Capital and Liquidity Reforms
- Down-market Expansion
- New Markets

Surveillance

- Identifying fraud in complex trading patterns
- NextGen Over-the-Counter (OTC) & Fixed Income (FI) coverage
- Optimized Calibration Engine
- Modernized Surveillance Workbench

Technology & Innovation

- Optimizing Cloud Delivery & Managed Service
- Launch of Gen Al in the Product
- High Performance Compute Engine
- Integration across Financial Technology



Operationalizing Our Growth Strategy

1

Operating Model

- Accelerated AI innovation driving market modernization
- Strategy alignment increasing adoption
- Streamlined customer service boosting engagement, retention and upsell

2

Go-To-Market

- Combining best practices unlocks whitespace
- Content rich thought leadership creating community and pipeline
- Precise, event driven campaigns elevating our win rate

3

Cross-Sell

- Leveraging geographic and segment strength
- Institutionalizing client listening
- Product based accelerators

High Single to Low Double Digit Medium-Term Organic Revenue Growth Outlook¹

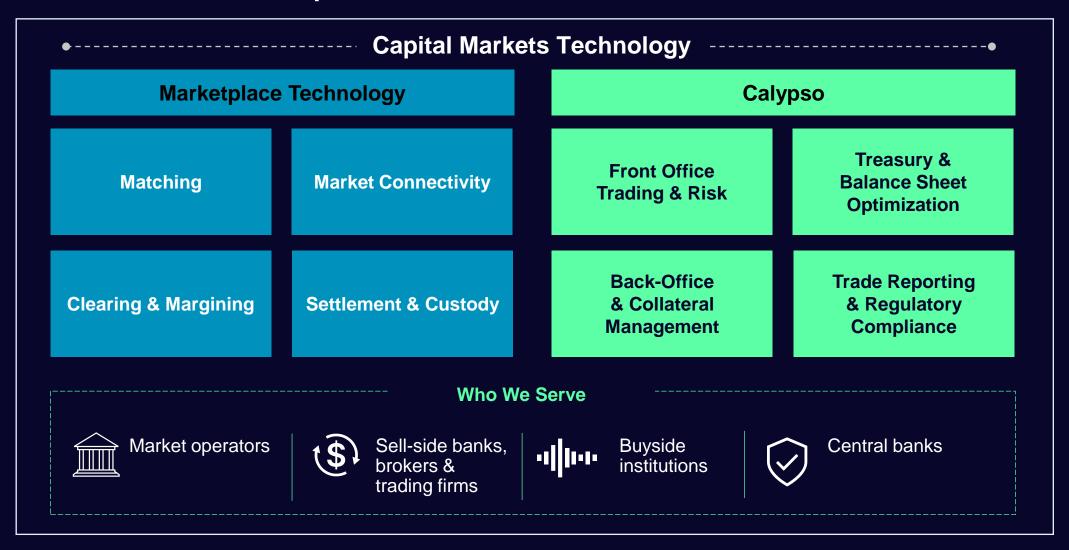


Nasdaq

Capital Markets Technology: Marketplace Technology & Calypso

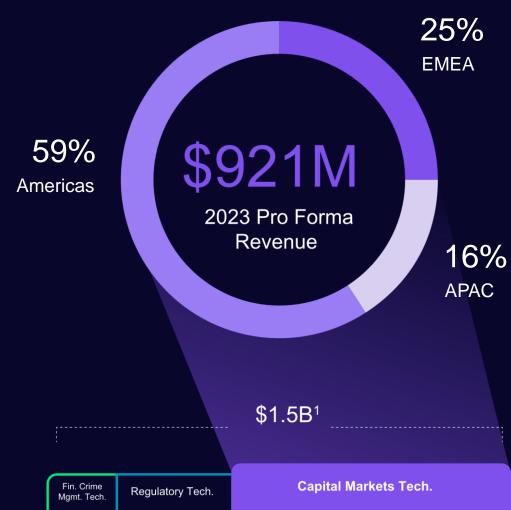
Gil Guillaumey, SVP & Head of Capital Markets Technology

Mission-Critical Capital Markets Platform & Solutions





At-A-Glance



ARR (as of Dec. 31, 2023)

\$799M

ARR Growth²

(Pro Forma 2022 – 2023)

+8%

Meaningful Client Momentum Throughout 2023

Market Technology
Client Wins

7 new clients

Key wins in Asia Pacific and Latin America

Calypso
Client Wins

15 new clients

126 upsells

Oloud Expansion

13 new cloud deals

Key wins in Europe and the Americas



Key Product Roadmap Initiatives Driving Growth

Capital Markets Technology | \$27B TAM¹ | \$11B SAM¹ | 8% SAM Penetration¹

Trade Mgmt. Services

Market Technology

Calypso

- Carteret data center expansion
- Connectivity partnerships and Colocation products
- New data insight tools to optimize Exchange client business

- Asset class expansion, including digital assets
- Product standardization
- Cloud-native, high-performance and resilient platform

- Asset class expansion, including inflation & ESG instruments
- Digital portals, UI/UX modernization
- Al-powered risk management & posttrade operations
- Treasury and balance sheet management
- Regulations / Marketplace reforms



Driving Technology Modernization and Unlocking Cross-Sell Potential Across Our Client Base

1

Sustaining Leadership

- Redefine market access & colocation capabilities
- Leverage AI and emerging technologies
- Lead Market Modernization initiatives

2

Driving Client Transformation

- Implement multi-year client journey to standardize solutions & unlock greater wallet share
- Quick adoption of new regulations
 & market trends
- Accelerate adoption through Cloud & SaaS

3

Cross-Sell

- One Nasdaq approach
- Institutionalizing client listening

High Single to Low Double Digit Medium-Term Organic Revenue Growth Outlook¹



Nasdaq

Market Services

Tal Cohen, President Roland Chai, EVP & Head of European Market Services Kevin Kennedy, EVP & Head of North American Market Services

Leading Markets Franchise

Delivering sustainable free cash flow through global operating model

Leader and Disruptor

Innovating to continuously unlock revenue potential

Attractive Growth Opportunities

Driving revenue growth with new products and services

At-A-Glance



\$4.3B

2023 Pro Forma Nasdaq Net Revenue

Market Services

2023 Key Characteristics

7%	Revenue CAGR (6-Year CAGR 2017- 2023)
59%	Operating Margin
31%	U.S. Multi-Listed Options Market Share
17%	U.S. Equity Market Share
71%	Nordic Equities Market Share

Market Leader Across North America and Europe



Single Largest U.S. Equities Exchange

U.S. Equity
Trade Reporting
Facility

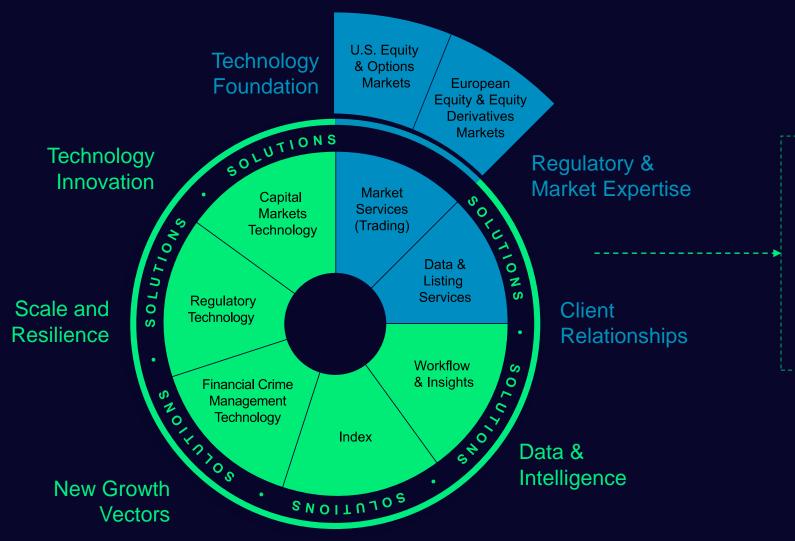
U.S. Multi-Listed
Options Market
Share

Trading &
Clearing of
Nordic Equity &
Fixed Income
Derivatives

Trading Venue in Nordic Equities



Competitive Markets Fuel Revenue Generation Across Nasdaq

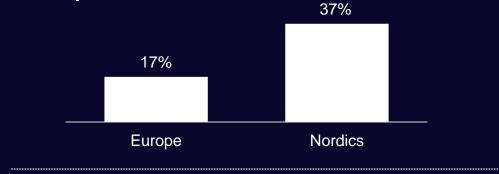


Our experience operating 25 markets and facilities in 10 countries enables us to power 130 critical marketplaces. Our listing business is key to our growth, through investor demand in Nasdaq-listed companies

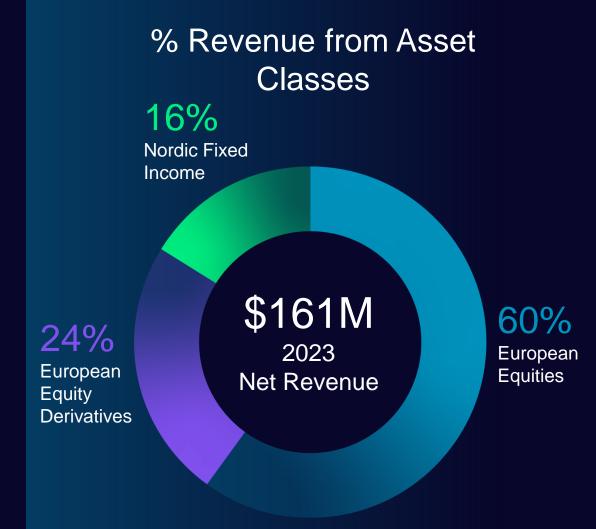


Diversified Franchise with Resilient Cash Flows

 Nordic household investments in public markets are >2x the rate of Europe¹



• 71% market share in Nordic cash equities²

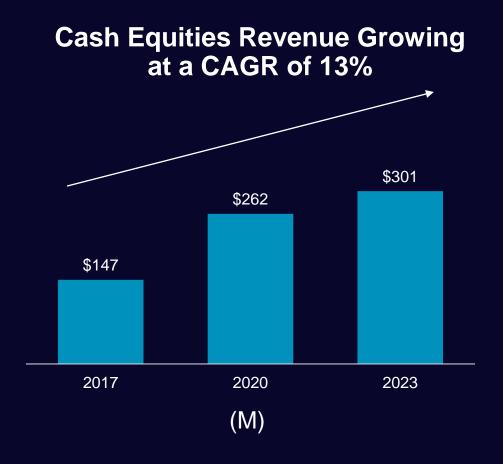




¹ CMU Indicator 20 Direct investments by Households https://finance.ec.europa.eu/system/files/2023-08/230816-capital-markets-union-indicators_en.pdf

² Reported market share includes turnover in all Nordic Shares including First North, from the auctions and continuous trading in the central limit order book (CLOB)

U.S. Equities Trading is our Foundation for Consistent Growth



- Nasdaq-listed companies constitute 46% of all U.S. equities trading
- Over 4,000 companies and exchange traded products listed on the most liquid markets in the world
- Leveraging price discovery innovations



Ideally Positioned in a Rapidly Growing Options Market



- 31% market share in U.S. multi-listed options
- Industry leadership across innovation, public policy, market share, and revenue per contract



Nasdaq Continues to Disrupt, Lead and Innovate

2007/2008 1971 2012 2021 2023 Cloud Carbon **Equities Derivatives** Al Nasdaq enters the Nasdaq begins Nasdaq acquires SEC approval for The Nasdaq Stock global derivatives moving missiona majority stake the first Al-Market began in Puro.earth markets1 critical systems operations as the powered and regulated world's first exchange order data sets to the electronic stock type market cloud



Using the Cloud to Build a Trusted Market Fabric System

Operational Efficiencies

Up to 80% reduction in cost per message since 2021

Competitive Advantages

Faster turnaround to adapt to emerging technologies

Disciplined Deployment

Modernized 4 markets on Fusion, Nasdaq's next generation derivatives platform; 2 of those options markets migrated to cloud infrastructure



Index and Al Innovations Already Supporting Growth

Growth in Index Options

Unlocking AI Revenue



 Dynamic Midpoint Extended Life Order (M-ELO): Expected to launch on The Nasdaq Stock Market in 1H2024

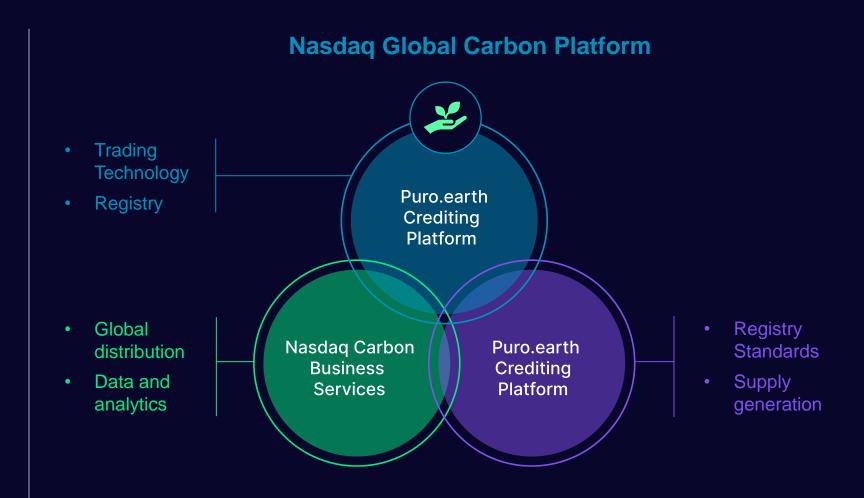
Expiration and Strike Optimization:
 Generating alpha by dynamically listing puts and calls based on market conditions



Nasdaq is Advancing the Carbon Market of the Future

Puro.earth is building trust in the market

- The Puro Standard is positioned as the pioneer in applying newest science to create new methodologies
- The Puro Registry
 manages lifecycle of credits
 and usage





Delivering Robust and Resilient Free Cash Flow

Maximize the Core Franchise

Innovation Unlocks Revenue Potential Increase Operating Leverage





Introducing our Panelists



Valerie Bannert-Thurner

EVP & Chief Revenue Officer Financial Technology



Stephanie Champion

SVP Verafin Sales



Don Marigliano

SVP Head of North American Market Services Sales



Ben Fisbein

SVP Head of Financial Technology Sales for the Americas



Jeff Thomas

EVP & Head of Corporate Platforms



"As a strategic partner of Adenza, the mentality that 'our success is linked to their success' has resonated with me throughout our relationship.

In meeting Nasdaq's executive team in November, I was pleased to see that the company is similarly client driven and feel that we can establish a strong foundation for the future."

Matsumoto-San Executive Officer and Joint Officer in charge of Global Markets business, SMTB, Sumitomo Mitsui Trust Bank, Limited



Cross-Sell Framework











Launch Cross-Sell Go-To-Market Campaigns





The Journey Ahead

Activating Financial Technology Cross-Sell to Unlock Revenue

Integrated Team & Goals 3
Active GTM
Campaigns

100
Early Stage
Opportunities

4
Deals
Signed

\$100M+

achieved by year-end 2027



Client Testimonial Video

Texas Capital Bank



Masdaq

Value Creation Through Growth and Financial Discipline

Sarah Youngwood, EVP & CFO



Building a trusted financial technology powerhouse with scale, growth, resiliency across economic backdrops and a right to win

Increased Revenue Growth and Solutions Revenue

Enhancing financial profile with higher revenue growth and greater Solutions revenue

Disciplined Financial Approach

Driving value creation through a disciplined framework for expenses and capital

Outperforming the "Rule of 40"

1 of 15

"Rule of 60"1

Scale²

Revenue Growth

56% **EBITDA Margin**

\$4.3B \$1.6B Pro Forma Net Revenue

^{1 &}quot;Rule of 60" refers to companies in the S&P 500 with a combined 2023E EBITDA margin and projected consensus 2023-2025 revenue CAGR above 60%, with the projected consensus 2023-2025 revenue CAGR above 5%. FactSet as of 28-Feb-24

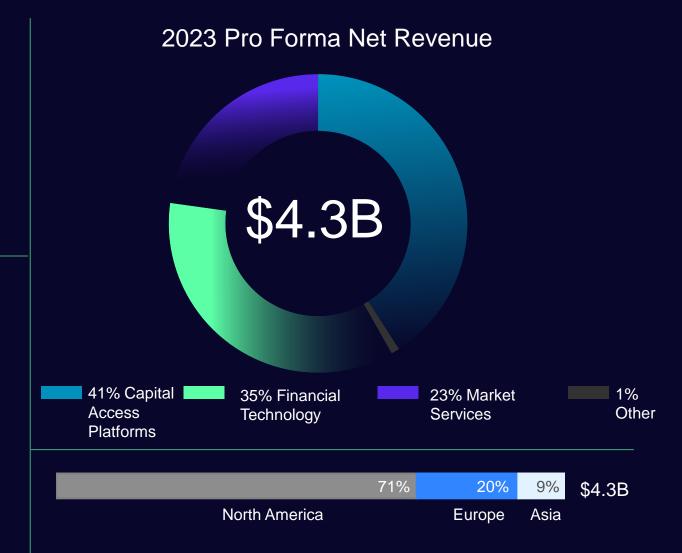
Growth & Diversification

13%

Non-GAAP Diluted EPS CAGR 2017-2023

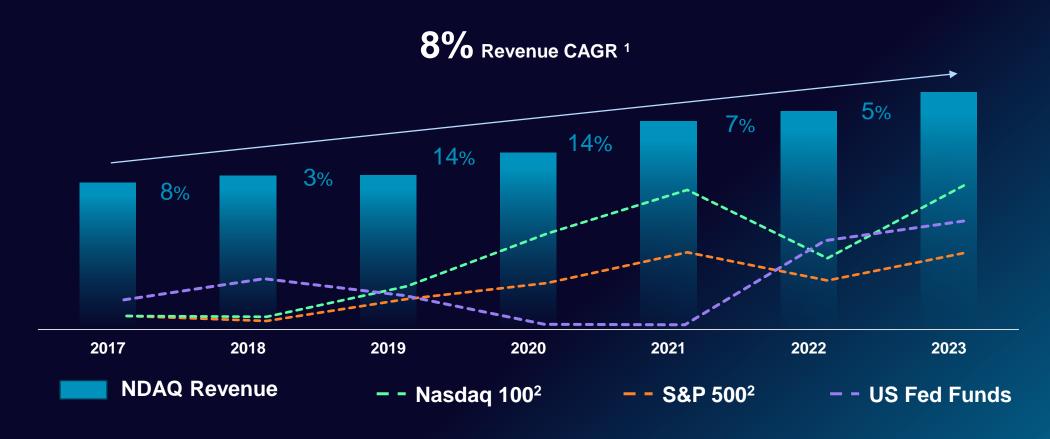
14%

Free Cash Flow CAGR 2017-2023





Consistent Revenue Growth Through Economic Cycles





Note: Blue percentages above reference annual organic growth rates

¹ Revenue CAGR for 2017 to 2023, excluding Adenza

² The figures presented in the chart assume an initial investment of \$100 in the respective index on December 31, 2017



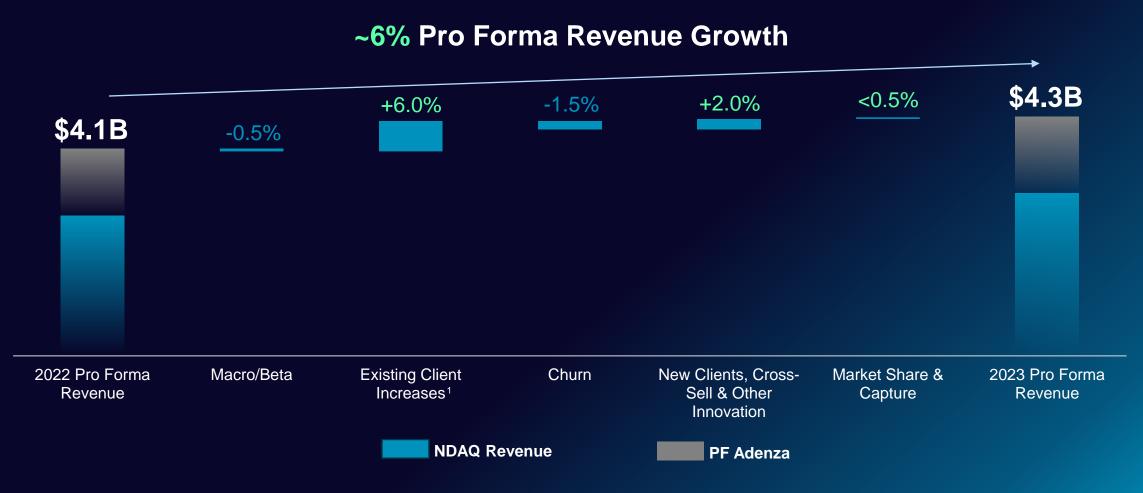
AxiomSL and Calypso Accelerate Our Growth





¹ Expansion for revenue represents pro forma growth as compared to organic growth and for margin represents the pro forma margin as compared to Nasdaq only, excluding post-acquisition Adenza revenue of \$149M and operating income of \$114M

Nasdaq's Revenue Growth Driven by Alpha





AxiomSL and Calypso Cloud Adoption Enhances Economics and the Opportunity for Upsell and Cross-Sell

Cloud % of 2023 Revenue

15%

Cloud % of 2023 ARR

23%

Cloud % of New ACV

~50%

Enhancing ARR ≥1.5x



AxiomSL and Calypso Revenue Recognition Can Have Short-Term Variations

	20)23	Q4 2	2023			
	Revenue Growth	ARR Growth	Revenue Growth	ARR Growth			
AxiomSL and Calypso	14%	14%	47%	14%			



ARR Better Reflects Economic Growth for AxiomSL and Calypso

On-premise and cloud example using hypothetical total contract value / revenue of \$12M over 3 years

(\$M)	Year 1	Year 2	Year 3
ARR & cash flow for on-premise & cloud	\$4	\$4	\$4
Cloud revenue	\$4	\$4	\$4
On-premise revenue	\$8	\$2	\$2

Note: a small portion of the Year 1 on-prem or SaaS subscription contract value is allocated to installation. For ease of illustration, this has been excluded from the above. Ramp and contractual price increases have also been excluded for simplicity.

Medium-term revenue growth outlook for Adenza is low to mid teens with ARR expected to be mid teens. 2024 revenue and ARR growth is expected to be within these ranges.



Significant Growth Opportunities Driving Solutions Outlook

\$31B SAM¹ growing at 8%²



8-11%

Medium-Term Solutions Revenue Outlook³



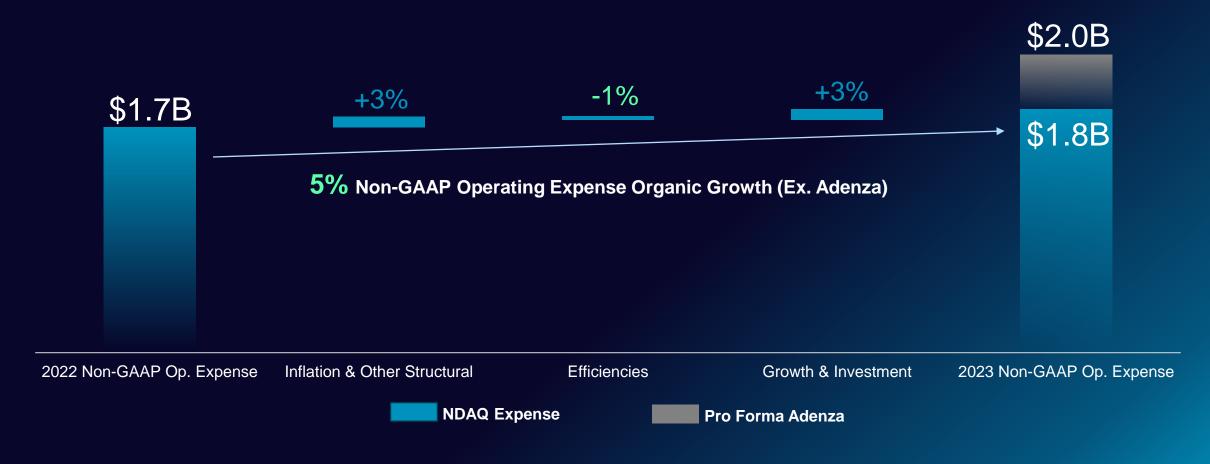
¹ Amount includes the serviceable addressable market (SAM) of our higher growth Solutions products, which is based on internal estimates reflecting the market opportunity of external spend on existing offerings as well as the 2023 revenue for our regulated Data & Listings businesses.

² Oliver Wyman analysis, in alignment with Nasdaq's TAM/SAM methodology

³ Over 3-5 years. Growth outlook assumes stable market backdrop



Investing for Growth and Maintaining Expense Rigor





Delivering Expense Efficiencies Ahead of Plan

Divisional Realignment Savings



\$15M benefit to 2023 operating expense

Adenza Net Cost Synergies



2024 expense guidance midpoint below medium-term outlook¹ reflects synergies and other efficiencies



Multiple Levers of Efficiencies Inherent in Expense Base

2023 Non-GAAP Operating Expense

Expense efficiency drivers

Medium-Term Growth Outlook¹

\$2.0B

Pro Forma
Non-GAAP Operating expense

Up 5% YoY

Structural expenses

- Divisional efficiencies
- Location strategy
- Cloud & AI

Revenue-related and investments

 Focus on unit economics and ROIC framework 5% to 8%



Free Cash Flow Conversion Outpacing That of Peers

2023 Free Cash Flow Conversion¹



Free Cash Flow CAGR 2017-2023

14%

fil

¹ For non-NDAQ conversion rates, FCF equals cash flow from operations (excluding restricted cash) less capex or FCF as defined in company filings

² Peer set reflects companies within GICS code 4020 excluding banks Source: FactSet & Company Filings. Data as of 28-Feb-24

Focus on Organic Growth and Deleveraging, Supported by Strong Free Cash Flow Conversion

Invest to Support Growth

Focus on organic growth investments leveraging our ROIC framework

Small tuck in M&A (buy vs. build)

Investment-Grade
Debt Issuer

Expect leverage to be 4.0x, 9-12 months ahead of goal¹

Expect leverage to be 3.3x, at least 6 months ahead of goal¹

Consistent
Dividend Growth

Annualized dividend payout ratio outlook of 35-38% by 2027

Progressively expand dividend as earnings and FCF grow

Share Repurchase Program

Offset dilution from employee vesting

Mitigate Adenza acquisition dilution over time



Nasdaq Uses a ROIC-Based Analytical Framework to Allocate Investment Capital

Horizon 0

Horizon 1 & 2

Horizon 3

Required investments with no specific return expectation (i.e. Regulatory, InfoSec, Client Retention)

Investment in a product or new business with a defined return expectation and minimal volatility:

H1: 2x over 3-year period¹ H2: 2x over 5-year period² Investment in a product or new business with a return expectation over a longer time horizon and/or with a high degree of volatility



Strong Balance Sheet Enables Accelerated Deleveraging

\$1.6B near-term maturities enable deleveraging

Longer-term maturities spaced over 35 years

4.1% pre-tax weighted¹ average cost of debt

94% fixed rate debt²





¹ Weighted average cost of debt as of Q423

² Euro-denominated and USD-denominated bonds are fixed rate debt

Delivering Dividend Growth and Progressing Towards Annualized Payout Ratio Outlook of 35%-38% by 2027

Dividend Per Share and Payout Ratio¹



2024 quarterly dividend increasing by 2c to \$0.24/share

¹ Annualized dividend payout ratio for 2021 and 2022 calculated as last paid quarterly dividend times 4, then divided by last 12 months non-GAAP net income. For Q4 2023 this annualized dividend payout ratio methodology yields 35%. 2023 LTM dividend payout ratio calculated using the actual dividends paid in 2023 divided by 2023 Non-GAAP Net Income

² Reflects actual dividend amounts paid in the calendar year 3 Will be reflected in the June 2024 dividend payment

Bringing it Together – Delivering Sustained Shareholder Value

Delivering on the Integration

Operating with Capital Discipline

Delivering Profitable Growth

- Increasing revenue growth and margins by 1ppt
- Actioning 70% net expense synergies in 2024
- Capturing cross-sell opportunity
- Deleveraging early

- FCF conversion ≥100%
- Organic investments with a disciplined ROIC-based, multi-horizon framework
- Deleveraging ahead of schedule, 4.0x at 9-12 months early and to 3.3x at least 6 months early
- Dividend increase by 2c to \$0.24 /share

- SAM of \$31B Growing at 8%
- \$100M+ Financial Technology Crosssell and \$250M sustainability revenue
 both by YE 2027
- Reaffirming medium-term outlook¹
 - 8-11% Solutions revenue growth
 - 5-8% expense growth, with synergies as upside in the shortterm





Question & Answer Session



Appendix



Medium-Term Outlook¹

	2023 Pro Forma Growth	2024 Commentary	Medium-Term Growth Outlook
Data and Listing Services	3%	Low single digit growth despite muted IPO environment	Low single digits
Workflow and Insights	5%		High single/low double digits
Index	9%		Mid to high single digits
Capital Access Platforms	5%		5-8%
Fin Crime Mgmt Technology	27%		Mid 20s
Regulatory Technology	11%		High single/low double digits
Capital Markets Technology	8%		High single/low double digits
Financial Technology	11%		10-14%
AxiomSL and Calypso combined		Within the medium-term outlook range	Low to mid teens with mid teens ARR growth
Total Solutions Revenues	8%		8-11%
Market Services ²	0%		No outlook given
Other Revenues ²	2%		
Total Net Revenues	6%		
Non-GAAP Operating Expenses	5%	Guidance: \$2.105B - \$2.185B Midpoint is 4.5% organic and 5% pro forma growth	5-8%
Tax Rate	5%	Guidance: 24.5% - 26.5%	No outlook given



¹ Over 3-5 years. Growth outlook assumes stable market backdrop

² Growth for Market Services and Other Revenues represents 2023 organic growth as these line items were not impacted by the Adenza acquisition

Our Focus on ESG

Corporate ESG achievements and initiatives

- Carbon neutral since 2018
- Working towards reducing our GHG emissions in line with our validated Science Based Targets
 - Reduce Scope 1 and Scope 2 GHG emissions 100% by 2030¹
 - Reduce absolute Scope 3 GHG emissions 95% by 2050¹
- Fostering a culture of inclusivity and belonging, employee rating +1.5 year-on-year
- Implementing career development, leadership development, and retention programs

Recognized by leading ESG-related organizations

Dow Jones Sustainability
North America Index

(8th consecutive year)

Seramount's 100 Best Companies

America's Greenest Companies of 2024

(Newsweek)

Bloomberg
GEI Diversity Index

(3rd consecutive year)

MSCI ESG Rating AA "Leader"

(2nd consecutive year)

CDP Climate A List

(2nd consecutive year)

Just Capital 2024 JUST 100

> EcoVadis Gold Medal

(95th percentile)



Defined terms

ACV: Annual contract value – annualized recurring revenues for existing and new client contracts, including any contractual ramp up in recurring fees and any signed contracts yet to go live

ARR: Annualized recurring revenue, or 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 onetime 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 Adenza recurring revenue contracts, the amount included in ARR is consistent with the amount that we invoice the customer during the current period. Additionally, for Adenza 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.

EBITDA: Non-GAAP Net Income adjusted for interest, taxes, depreciation and amortization of intangible assets.

FCF / FCF Conversion: Free cash flow is calculated as cash flow from operations plus capital expenditures excluding Section 31 fees, net, and for 2021 excludes certain Verafin structuring items. FCF conversion is calculated by dividing FCF by Non-GAAP net income attributable to Nasdaq.

G-SIB: Global systemically important banks.

Gross Retention: ARR in the current period over ARR in the prior year period for existing customers excluding price increases and upsells and excluding new customers.

Net Retention: ARR in the current period over ARR in the prior year period for existing customers including price increases and upsells and excluding new customers.

Net Revenues: Revenues less transaction-based expenses.

Organic revenue and expense growth, organic change and organic impact are non-GAAP measures that reflect adjustments for: (i) the impact of period-over-period changes in foreign currency exchange rates, and (ii) the revenues, expenses and operating income associated with acquisitions and divestitures for the twelve-month period following the date of the acquisition or divestiture. Reconciliations of these measures can be found in the appendix to this presentation. We will reflect Adenza in our organic growth beginning in Q1 25.

Pro Forma: Measures presented on a pro forma basis are calculated assuming Nasdag acquired Adenza effective January 1, 2023.

Solutions Revenues: Revenues from our Capital Access Platforms and Financial Technology segments.



Organic Growth

Total Revenues

(U.S. \$ M)	Current Period	Prior-year Period		Total Variance \$%		ganic Impact %	Oth \$	ner Impact ⁽¹⁾ %
2023	\$3,895	\$3,582	313	9 %	\$ 178	5 %	135	4 %
2022	3,582	3,420	162	5 %	239	7 %	(77)	(2) %
2021	3,420	2,903	517	18 %	395	14 %	122	4 %
2020	2,903	2,535	368	15 %	350	14 %	18	1 %
2019	2,535	2,526	9	— %	83	3 %	(74)	(3) %
2018	2,526	2,411	115	5 %	188	8 %	(73)	(3) %
2017	2,411	2,276	135	6 %	52	2 %	83	4 %

Operating expense

	Current	Prior-year	Total Variance		Organi	c Impact	Other	Impact (1)
(U.S. \$ M)	Period	Period	\$	%	\$	%	\$	%
2023	\$1,830	\$1,721	109	6 %	89	5 %	20	1 %

¹Other impact includes acquisitions, divestitures, and changes in FX rates.

Historical Cash Flow & Pro Forma EBITDA

Free cash flow For the Year Ended																
(U.S. \$ M)		2023		2022		2021	2021 2020)21 20		20			2019	2018	2017
Cash flow from operations	\$ 1	1,696	\$	1,706	\$	1,083	\$	1,252	\$	963	\$ 1,028	\$ 909				
Capital expenditure		<u>(158)</u>		<u>(152)</u>		<u>(163)</u>		<u>(188)</u>		<u>(127)</u>	<u>(111)</u>	<u>(144)</u>				
Cash flow from operations less capital expenditures	1	1,538		1,554		920		1,064		836	917	765				
Section 31 fees, net ¹		<u>92</u>		<u>(103)</u>		<u>106</u>		<u>(57)</u>		<u>(14)</u>	<u>9</u>	<u>(9)</u>				
Free cash flow	1	1,630		1,451		1,349		1,007		822	926	756				
Non-GAAP Net Income Attributable to Nasdaq		1,433		1,324		1,273		1,031		835	797	670				
Free cash flow conversion	1	114%		110%		106%		98%		98%	116%	113%				

Pro forma EBITDA	2023	- Nov/Dec		+ Full Year	2023
(U.S. \$ M)	Actuals	Adenza	Nasdaq ex-Adenza	Adenza	Pro Forma
Net revenue	\$ 3,895	149	3,476	583	4,329
Non-GAAP operating expenses	(1,830)	<u>(35)</u>	<u>(1,795)</u>	<u>(252)</u>	(2,047)
Non-GAAP operating income	2,065	114	1,951	331	2,282
Non-GAAP operating margin (%)	53%	77%	52%	57%	53%
Depreciation	111	1	110	11	121
EBITDA	2,176	115	2,061	342	2,403
EBITDA margin (%)	56%	77%	55%	59%	56%

¹ Net of change in Section 31 fees receivables of \$1M in 2017; \$(10)M in 2018; \$9M in 2019; \$35M in 2020; \$(56)M in 2021; \$79M in 2022 and \$(68)M in 2023

Reconciliation of U.S.GAAP Operating Expenses to Non-GAAP Operating Expenses

(U.S. \$ M)	2023	2022	2017
U.S. GAAP operating expenses	\$ 2,317 \$	2,018	\$ 1,420
Non-GAAP adjustments:			
Amortization expense of acquired intangible assets	(206)	(153)	(92)
Merger and strategic initiatives expense	(148)	(82)	(44)
Restructuring charges	(80)	(15)	
Lease asset impairments	(25)	_	_
Extinguishment of debt	_	(16)	(10)
Legal and regulatory matters	(12)	(26)	_
Pension settlement charge	(9)	_	_
Other	(7)	(5)	(3)
Total non-GAAP adjustments	(487)	(297)	(149)
Non-GAAP operating expenses	\$ 1,830 \$	1,721	\$ 1,271

Reconciliation of U.S.GAAP Operating Income to Non-GAAP Operating Income

(U.S. \$ M)	2023	2022	2017
U.S. GAAP operating income	\$ 1,578	\$ 1,564	\$ 991
Non-GAAP adjustments:			
Amortization expense of acquired intangible assets	206	153	92
Merger and strategic initiatives expense	148	82	44
Restructuring charges	80	15	
Lease asset impairments	25	_	_
Extinguishment of debt	_	16	10
Legal and regulatory matters	12	26	_
Pension settlement charge	9	_	
Other	7	5	3
Total non-GAAP adjustments	487	297	149
Non-GAAP operating income	\$ 2,065	\$ 1,861	\$ 1,140
Revenues less transaction-based expenses	\$ 3,895	\$ 3,582	\$ 2,411
U.S. GAAP operating margin (1)	41 %	44 %	41 %
Non-GAAP operating margin ⁽²⁾	53 %	52 %	47 %

¹ U.S. GAAP operating margin equals U.S. GAAP operating income divided by revenues less transaction-based expenses.

² Non-GAAP operating margin equals non-GAAP operating income divided by revenues less transaction-based expenses.

Reconciliation of U.S.GAAP Net Income to Non-GAAP Net Income

(U.S. \$ M, except per share data)	2023	2022	2021	2020	2019	2018	2017
U.S. GAAP net income attributable to Nasdaq	\$ 1,059	\$ 1,125	\$ 1,187	\$ 933	\$ 774	\$ 458	\$ 729
Non-GAAP adjustments:							
Amortization expense of acquired intangible assets	206	153	170	103	101	109	92
Merger and strategic initiatives expense	148	82	87	33	30	21	44
Restructuring charges	80	15	31	48	39		
Lease asset impairments	25		_				
Net (income) loss from unconsolidated investees	7	(29)	(52)	(70)	(82)	(16)	(13)
Extinguishment of debt		16	33	36	11	_	10
Legal and regulatory matters	12	26	44	(12)	7	6	_
Pension settlement charge	9	_	_	_	_	_	_
Other	21	2	(82)	20	10	11	3
Total non-GAAP adjustments	508	265	147	181	109	11	136
Non-GAAP adjustment to the income tax provision	(134)	(66)	(61)	(67)	(43)	6	(66)
Impact of newly enacted U.S. tax legislation		_	_	_	_	290	(89)
Excess tax benefits related to employee share-based compensation		_	_	(6)	(5)	(9)	(40)
Total non-GAAP adjustments, net of tax	374	199	86	98	61	339	(59)
Non-GAAP net income attributable to Nasdaq	\$ 1,433	\$ 1,324	\$ 1,273	\$ 1,031	\$ 835	\$ 797	\$ 670
U.S. GAAP diluted earnings per share	\$ 2.08	\$ 2.26	\$ 2.35	\$ 1.86	\$ 1.55	\$ 0.91	\$ 1.43
Total adjustments from non-GAAP net income above	0.74	0.40	0.17	0.20	0.12	0.67	(0.11)
Non-GAAP diluted earnings per share	\$ 2.82	\$ 2.66	\$ 2.52	\$ 2.06	\$ 1.67	\$ 1.58	\$ 1.32
Weighted-average diluted common shares outstanding for earnings per share:	508.4	497.9	505.1	500.7	500.9	503.1	509.0

Non-GAAP Information

The non-GAAP measures attributable to Nasdaq for the periods presented in this presentation are calculated by adjusting for certain items as described below:

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.

Merger and strategic initiatives expense: We have pursued various strategic initiatives and completed acquisitions and divestitures in recent years that have resulted in expenses which would not have otherwise been incurred. The frequency and the amount of such expenses vary significantly based on the size, timing and complexity of the transaction. These expenses primarily include integration costs, as well as legal, due diligence and other third-party transaction costs.

Restructuring charges: 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. In connection with this program, we expect to incur pre-tax charges principally related to employee-related costs, contract terminations, real estate impairments and other related costs. The 2023 and 2022 charges also relate to our divisional alignment program that was initiated in October 2022, following our September 2022 announcement to realign our segments and leadership, with a focus on realizing the full potential of this structure. In connection with the program, we expect to incur pre-tax charges principally related to employee-related costs, consulting, asset impairments and contract terminations over a two-year period. The charges in 2019, 2020 and 2021 are associated with our restructuring program initiated in September 2019 with the goal of transitioning certain technology platforms to advance Nasdaq's strategic opportunities as a technology and analytics provider and continuing our re-alignment of certain business areas. The 2019 program was completed as of June 30, 2021.

Lease asset Impairments: During 2023, we initiated a review of our real estate and facility capacity requirements due to our new and evolving work models. As a result, we recorded impairment charges related to our operating lease assets and leasehold improvements associated with vacating certain leased office space, which are recorded in occupancy expense and depreciation and amortization expense in our Consolidated Statements of Income. We fully impaired our lease assets for locations we vacated, with no intention to sublease. Substantially all the property, equipment and leasehold improvements associated with the vacated lease office space was fully impaired as there are no expected future cash flows for these items.

Net (income) loss from unconsolidated investees: We exclude our share of the earnings and losses of our equity method investments, primarily our equity interest in the Options Clearing Corporation, or OCC and Nasdaq Private Market, LLC. This provides a more meaningful analysis of Nasdaq's ongoing operating performance or comparisons in Nasdaq's performance between periods.

Extinguishment of debt: These charges relate to premiums paid for the early extinguishment of previously outstanding debt.

Legal and regulatory matters: For the year ended 2023 legal accruals were offset by insurance recoveries related to legal matters recorded in general, administrative and other expense and professional and contract services expense in our Consolidated Statements of Income. In December 2021, we recorded a \$33 million charge related to a decision made by the Swedish Administrative court rejecting an appeal by Nasdaq Clearing to dismiss an administrative fine imposed by the Swedish Financial Supervisory Authority (SFSA) associated with the default of a member of the Nasdaq Clearing commodities market that occurred in 2018. Nasdaq Clearing has appealed the court's recent decision and firmly believes in the merits of its appeal. For the year ended December 31, 2020, we recorded a \$6 million reversal of a regulatory fine issued by the SFSA. Both charges were recorded to regulatory expense in our Consolidated Statements of Income.

Non-GAAP Information - continued

Pension settlement charge: In 2023 we recognized a settlement charge of \$9M relating to the termination and partial settlement of our U.S. pension plan related to the lump sum distributions. The charge was recorded in Compensation and Benefits expense in our Consolidated Statements of Income.

Other significant items include certain other charges or gains, including certain tax items, that are the result of other non-comparable events to measure operating performance. For the year ended 2023, these items primarily included certain financing costs related to the Adenza transaction; for 2022, net gains and losses from strategic investments entered into through our corporate venture program; for 2021, gains from sales of strategic investments entered into through our corporate venture program; for 2020, charges associated with duplicative rent and impairment of leasehold assets related to our global headquarters move; for 2019, a tax reserve for certain prior year examinations and certain litigation costs; for 2018, certain litigation costs, certain charges related to a sales and use tax audit and VAT reserves.

The non-GAAP adjustment to the income tax provision primarily includes the tax impact of each non-GAAP adjustment. For the year ended 2017, we recorded a decrease to tax expense primarily related to the remeasurement of our net U.S. deferred tax liability at the lower U.S. federal corporate income tax rate which reflected the provisional impact associated with the enactment of this act. Also in 2017, we recorded excess tax benefits related to employee share-based compensation as a result of the adoption of accounting guidance on January 1, 2017.