Nasdaq to Acquire Adenza

Accelerating Nasdaq's Transformation as a Leading Technology Provider to the Global Financial System

June 12, 2023

Advancing Nasdaq’s Vision

Adenza Advances Nasdaq's Client-Centric Approach and Long-Term Strategic Framework

	Nasdaq	Nasdaq + Adenza
Core Purpose	We advance economic progress for all	Together we will continue to enhance the resilience of financial institutions in their service to investors and consumers
Long-Term Vision	We will be the trusted fabric of the world's financial system	Adenza deepens Nasdaq's ability to serve financial services clients holistically, helping them solve their most complex challenges
Value Proposition	We deliver world-leading platforms that improve the liquidity, transparency, and integrity of the global economy	Adenza expands Nasdaq's ability to provide mission critical technology to global financial institutions as they manage the risk, capital and regulatory complexities of the global financial system

Adenza: A Mission-Critical Risk Management and Regulatory Software Provider to the Financial Services Industry

- Serves a diverse global set of banks, brokers, asset managers, and financial market infrastructure companies with 60,000 users in 70 countries
- Adenza includes Calypso (founded 1997) and AxiomSL (founded 1991), combined under ownership of Thoma Bravo
- Offers advanced technology solutions that are scaled, flexible, and comprehensive enough to integrate client systems with a single trusted partner
- Dual headquartered in New York and London with 2,000+ employees in 26 countries

Technology Solutions

Front-to-Back Trade Analytics & Processing

Liquidity & Market Risk Management

Regulatory Reporting & Capital Management

Financial Highlights FY 2023E

~$590M
Revenues

~15%
Organic Revenue Growth[1]

58%
Adjusted EBITDA Margin[1]

~$300M
Unlevered, Pre-Tax Cash Flow[1]

[1] Refer to the "Supplemental Information and Non-GAAP Measures" page in the Appendix to this presentation.

A Highly Compelling Strategic Acquisition

- ✓ Represents a milestone in Nasdaq's transformational journey to becoming a software and technology platform company
- ✓ Supercharges Nasdaq's ability to modernize markets with a risk and regulatory technology platform serving banks, brokers, investment managers, and capital markets providers
- ✓ Accelerates Nasdaq's mission to drive greater liquidity and integrity across the world's financial system
- ✓ Deepens Nasdaq's suite of mission-critical capabilities to address our clients' most complex needs
- ✓ Unlocks opportunities across emerging client groups, including investment managers and sophisticated corporates, to provide treasury risk management and across a broader bank clientele to support their growing regulatory obligations

Attractive Financial Benefits Drive Shareholder Value

High Growth

Increases **Solutions Businesses**[1] organic revenue growth outlook

+100bps

to 8-11% over the medium-term

- Increases Solutions Businesses[1] to 77% of 2023E total revenue, up from 71% today
- Expect Adenza revenue growth in low-to-mid-teens over the medium-term

High Quality

Adds high-margin, durable revenue stream

80%

Recurring revenue

- Boosts Nasdaq ARR[2] as a percentage of total revenue to 60% in 2023E, up from 56% today
- 115% net revenue retention[3]
- High degree of revenue visibility: 3-to-5-year client contracts with gross retention of 98%[3]

Better Together

Expense synergies by end of year 2

$80M

Revenue synergies in long-term

$100M

Significant synergy opportunity

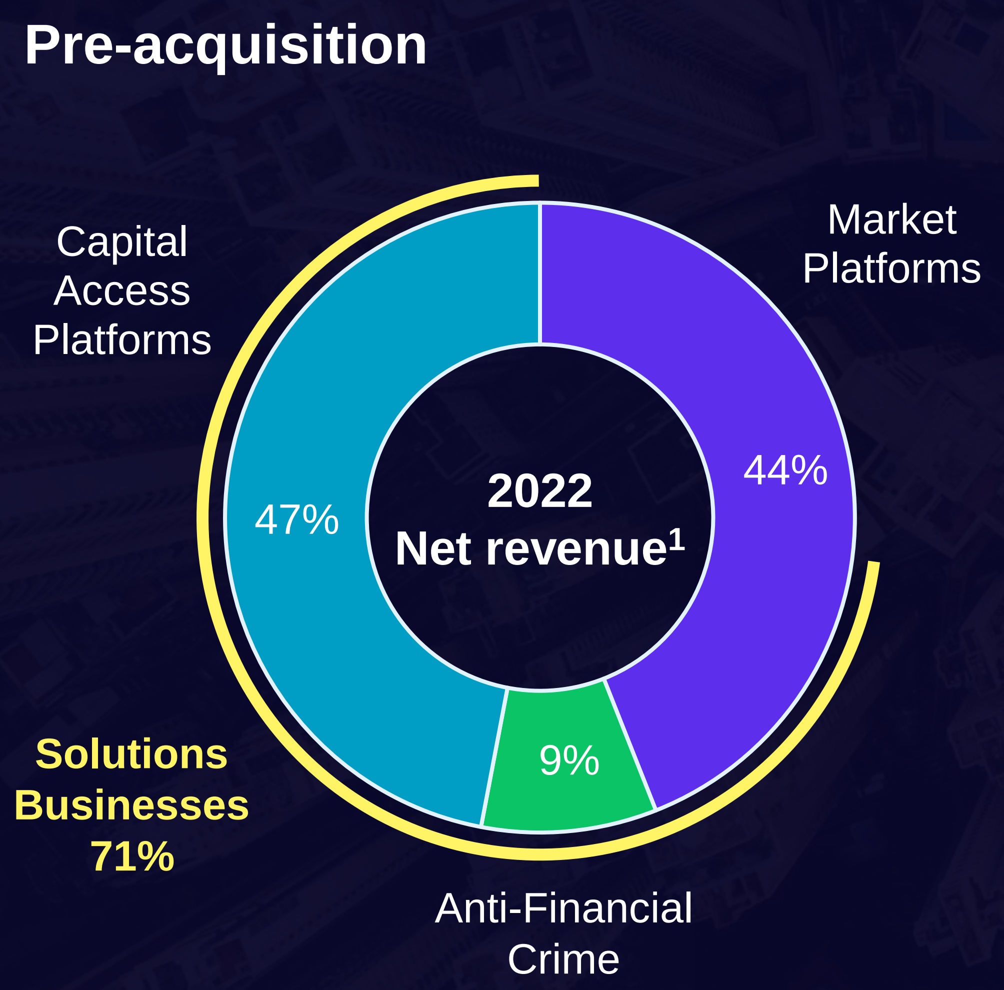
- Delivers $80M of run-rate net expense synergies by end of year 2
- Unlocks up to $50M of revenue synergies medium-term and up to $100M long-term
- Accretive to non-GAAP diluted EPS by the end of year 2

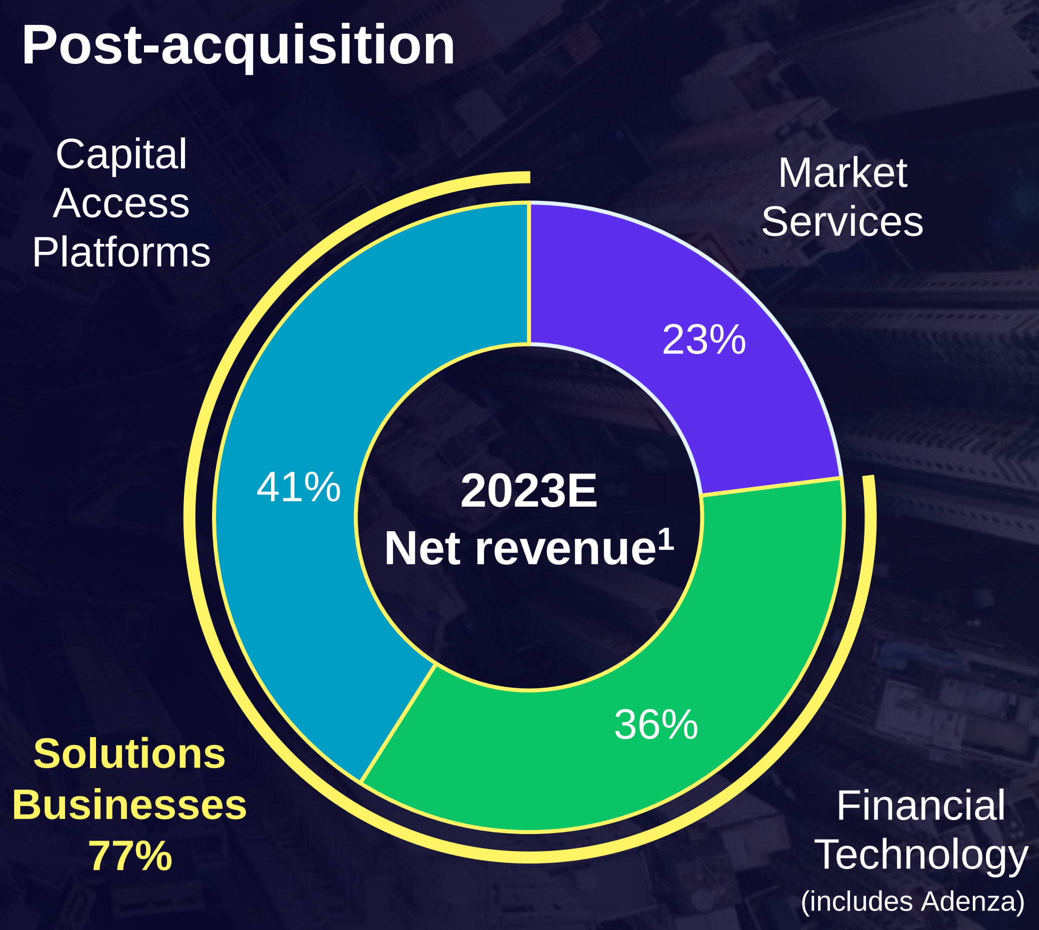
[1] Revenues from Nasdaq's pre-acquisition Capital Access Platforms and Anti-Financial Crime segments and Marketplace Technology business within Market Platforms segment. Adenza will be included in our Solutions Businesses post acquisition.
[2] Refer to the "Supplemental Information and Non-GAAP Measures" page in the Appendix to this presentation.
[3] Retention figures reflect 2023E data.

Optimal Organizational Structure to Deliver for Nasdaq's Clients and Shareholders

Pre-Acquisition		Post-Acquisition	
Anti-Financial Crime	Surveillance Fraud & AML	**Financial Technology**	Adenza Surveillance Fraud & AML Marketplace Technology
Market Platforms	Marketplace Technology Trading Services	**Market Services**	Trading Services
Capital Access Platforms	Data & Listings Index Workflow & Insights	**Capital Access Platforms**	Data & Listings Index Workflow & Insights

Nasdaq's Segments Reflect Diversified Business Model





[1] Revenue less transaction-based expenses.

Introducing Adenza

Adds Diverse Suite of Mission-Critical Software and Technology Across Risk and Reg-Tech

← Consolidated **Front-to-Back** Risk Management →

CALYPSO™

Capital Markets

Front Office	Treasury Cash Management	Risk Management
Middle Office & Risk	Collateral Management	Post Trade Processing
Regulatory Reporting	Capital Management	Liquidity Risk Management
Global Shareholder Disclosures	Trade & Transaction Reporting	ESG Reporting

AXIOMSL™

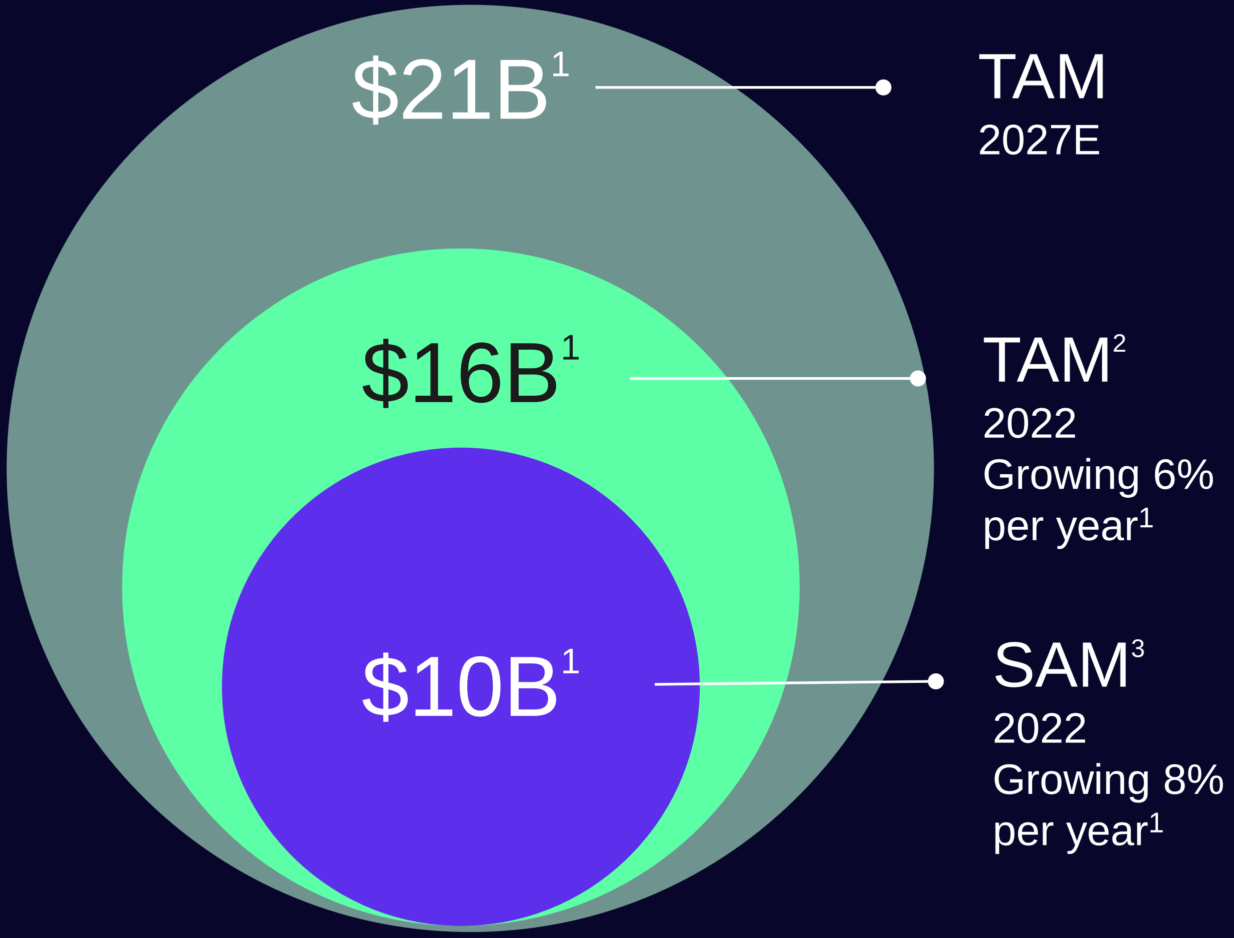
Regulatory Solutions

Integrated, Scalable, Modular and Multi-Asset Class Capabilities

Streamlined Risk & Regulatory Reporting

Uniquely Positioned in Large and Fast-Growing Markets

Adenza's Large & Expanding Serviceable & Total Addressable Markets ($US)



~40%

Increase in Nasdaq's SAM to $34B

[1] Source: Oliver Wyman outside-in analysis.
[2] TAM comprises internal spend and vendor spend related to services that Adenza addresses with current capabilities.
[3] Vendor spend only related to services that Adenza addresses with current capabilities.

Powerful Secular Trends Drive Growth

Regulation

- New major versions of past frameworks (e.g., Basel IV, EMIR)
- Regulatory push to strengthen bank liquidity management after recent crisis (IRRBB[1], liquidity ratios)
- New regulation to address emerging industry trends (ESG)

Digitization and Modernization

- Move to Cloud & SaaS
- Advancements in artificial intelligence
- Tech innovation as a competitive differentiator
- Improved Time-to-Market, reduced operational risk

Simplification

- Large sell-side clients consolidate platforms for efficiency to lower their total cost of ownership
- Mid-size sell-side clients upgrade their platforms for evolving client needs
- Buy-side clients need to be equipped to modernize & respond to new regulation

Market Reforms

- Multi-year adoption programs (LIBOR, UMR, ISO20022)
- Trading electronification, T+1, convergence of exchange-traded and OTC instruments
- Demand for more nimble and adaptable platforms

[1] Interest Rate Risk in the Banking Book.

Proven Ability to Deepen Our Trusted Client Relationships

	Regulatory Reporting Solution US-based G-SIB	**Risk Management Solution** Global Tier 1 Bank
Why Adenza?	Desire for scalable platform with no business disruption Comprehensive coverage and ability to support large volumes	Cross-asset platform; Open API Scalable and configurable modern tech stack
Relationship and Solutions	**Initial:** Capital risk and regulatory reporting **Expanded:** Global; FinReg; Credit Risk; CCAR; Operations reporting	**Initial:** FX, money market and interest rate derivatives **Expanded:** Functionality across asset classes; Productivity tools
Potential Relationship Expansion	Additional countries, US liquidity Cloud migration	Clearing module; Additional users Market Reform

Annualized Contract Value Evolution

Example: Basel IV Reform will Require Broad Program Deployment by Banks Globally

What is Happening?

- Regulators are preparing to propose Basel IV revisions, which will cause ramifications for bank risk-based capital ratios
- Revisions will standardize rules across the international banking system, resulting in change in requirements for banks globally
- Banks remain in focus and will need to effectively adjust their models and processes within decided timeframes

How are Banks Preparing?

- Extensive testing of systems and processes to ensure that wide-scale change can be implemented
- Formulating internal view on potential business impacts
- Impending, major regulatory framework change prompts discussions about existing expenses and efficiency

How Adenza provides the critical solution

- Provide proven, compliant platform with rapid deployment for capital and liquidity calculations and reporting
- Agile software product with low total cost of ownership that prevents large internal one-time expenses associated with large changes
- Provide thought leadership and forward-looking product roadmap
- Product development roadmap and thought leadership drive pipeline growth

Estimated $200M+ Annual Opportunity for Adenza across regulatory solutions

Unlocks High-Value Cross-Sell and Growth Opportunities

$50M of run-rate revenue synergies over the medium term **$100M** over the long term

Expand Capabilities For Our Existing Client Segments

- Deliver full suite of capabilities to banks, brokers and Financial Market Infrastructure Providers (FMIs)
- Expand collateral and treasury solutions to FMIs

Accelerate Global Expansion

- Pull forward Anti-Financial Crime expansion into Europe
- Expand Adenza's Capital Markets Risk Solutions in Europe to Nasdaq Tier 1 Surveillance clients

Drive Two-Way Cross-Sell

- Accelerate client opportunities across Anti-Financial Crime, Marketplace Technology, Surveillance, Risk and Regulatory Reporting

Accelerate Cloud Conversion

- Increase Adenza's cloud conversion revenues via Nasdaq’s advanced cloud expertise and capabilities

Enhancing our Financial Profile

Transforming Nasdaq into a Leading Technology Provider to the Global Financial System

Deal Terms & Timing

- Purchase price of $10.5B, comprised of $5.75B in cash and fixed 85.6M shares[1] of Nasdaq common stock
- Valuation represents ~31x 2023E EBITDA and ~26x 2023E EBITDA, including fully phased net expense synergies
- Thoma Bravo, a leading software investment firm, will become a shareholder in Nasdaq and nominate Holden Spaht to the Board
    - Lock-up: 50% in 6-months post-close and the remainder in 18-months post-close
- Transaction is subject to regulatory approvals and other customary closing conditions
- Estimated closing within 6-9 months

Financing & Leverage

- ~$5.9B debt issuance, with ~4.7x leverage at close
- We expect investment grade ratings of BBB / Baa2 Stable upon transaction close
- Committed to reduce leverage to 4.0x in 18 months and to ~3.3x in 36 months post-close
- Pro forma combined robust unlevered, pre-tax free cash flow generation of $2B in 2023E

Synergies & One-time Costs

- Estimated run-rate net expense synergies of $80M by the end of year 2
- Estimated revenue synergies of $100M in the long-term
- Estimated one-time cash costs to achieve synergies of ~$80M

Capital Allocation

- Remain on track to steadily increase dividend per share and achieve a dividend payout ratio[2] of 35-38% in 3 to 4 years
- Expect to partially offset deal dilution with additional buybacks
- Continue to repurchase shares to offset employee stock compensation
- No change in capital allocation strategy

[1] Based on the volume-weighted average price per share over 15 consecutive trading days prior to signing.
[2] Refer to the "Supplemental Information and Non-GAAP Measures" page in the Appendix to this presentation.

Highly Aligned with Nasdaq's Disciplined Acquisition Criteria

Delivers Tight Strategic and Cultural Alignment

- Accelerates Nasdaq's strategy as a leading technology provider to the global financial system
- Joins two client-centric, results-oriented, and innovative cultures

Enhances Performance and Valuation Potential

- Increases Solutions Businesses to 77% of 2023E total revenue
- Boosts Solutions Businesses organic revenue growth outlook to 8-11%
- Grows ARR as a percentage of total revenue to 60%
- Expands pro forma EBITDA margin to 57%, including fully-phased expense synergies

Meets Clear and Consistent Financial Requirements

- Large and attractive expense and revenue synergies
- Accretive to non-GAAP diluted EPS by the end of year 2
- Enterprise-wide ROIC returns to greater than 10% by year 5

Note: Refer to the "Supplemental Information and Non-GAAP Measures" page in the Appendix to this presentation.

Fundamentally Enhancing Nasdaq's Strong Growth Profile

	Nasdaq	Pro forma	Change in basis points
Solutions Businesses as % of Total Revenue	**71%** LTM[1]	**77%** 2023E	**+600**
ARR as % of Total Revenue	**56%** LTM[1]	**60%** 2023E	**+400**
Solutions Businesses Organic Revenue Growth Outlook	**7-10%**	**8-11%**	**+100**
Adjusted EBITDA Margin	**55%** LTM[1]	**57%** 2023E	**+200**

Note: Refer to the "Supplemental Information and Non-GAAP Measures" page in the Appendix to this presentation.
[1] LTM reflects Q1 2023 LTM

Clear Path to Substantial Expense Savings

$80M of run-rate net expense synergies by year 2

Functional Alignment

Centralize key sales, client service, and engineering teams

Product Rationalization

Align products to focus on client-centric value proposition

Location Optimization

Provide high value services through centers of excellence in lower cost locations

Vendor & Real Estate

Consolidate vendor services and optimize office footprint

Successful Track Record of Acquisitions Since 2014

Acquisition	Transaction Objectives	Achieved / Exceeded
VERAFIN	▪ Establish Nasdaq as the global leader in the fight against financial crime ▪ Accelerate Nasdaq's ongoing evolution into a SaaS technology provider ▪ Enhance performance by adding to Nasdaq's recurring, rapidly growing solutions revenue ▪ Leverage relationships to expand Verafin's reach into Tier 1 and 2 banks	✓
EVESTMENT	▪ Expand content and analytics solutions and services offering ▪ Broaden Nasdaq's reach into buy-side clients ▪ Addition of recurring, predictable revenue	✓
ISE INTERNATIONAL SECURITIES EXCHANGE	▪ Broaden technology offering and trading execution capabilities ▪ Expand core equities options franchise ▪ Deliver enhanced trading experience for clients while realizing synergies ▪ Achieved over $60M of expense synergies, more than 1.5x our original target of $40M	✓

400%+ Total Shareholder Return Since 2014[1]

Source: FactSet.
[1] Total Shareholder Return since 1/1/2014, as of 6/9/2023; Assumes dividend reinvestment.

Capital Allocation Strategy Supports Sustainable Value Creation

Rapid Leverage Reduction

Committed to reduce leverage to 4.0x in 18 months and to ~3.3x in 36 months post-close

Dividend Growth Plan Intact

Remain on track to steadily increase dividend per share and achieve a dividend payout ratio of 35-38% in 3 to 4 years

Consistent Share Repurchases

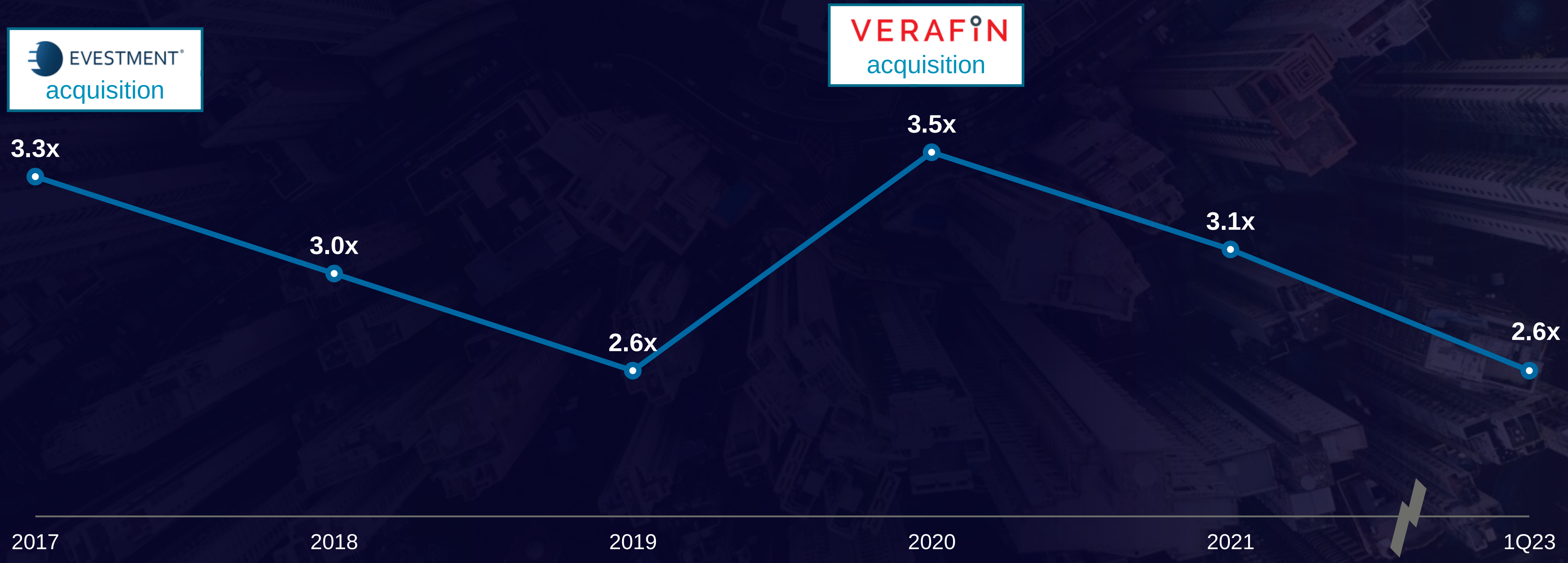
Expect to partially offset deal dilution with additional buybacks

Continue to repurchase shares to offset employee stock compensation

Proven Ability to Deleverage Following Acquisitions

Following eVestment and Verafin acquisitions leverage[1] increased to ~3.5x

Within two years, deleveraged to 2.6x

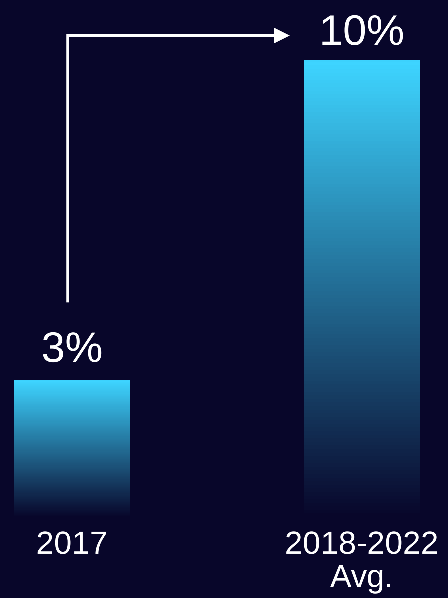


[1] Refer to the "Supplemental Information and Non-GAAP Measures" page in the Appendix to this presentation.

Building From a Position of Strength

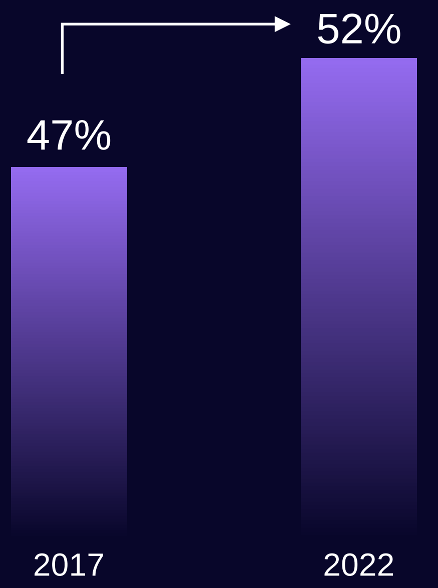
Solutions Businesses Organic Revenue Growth

>3x
Acceleration



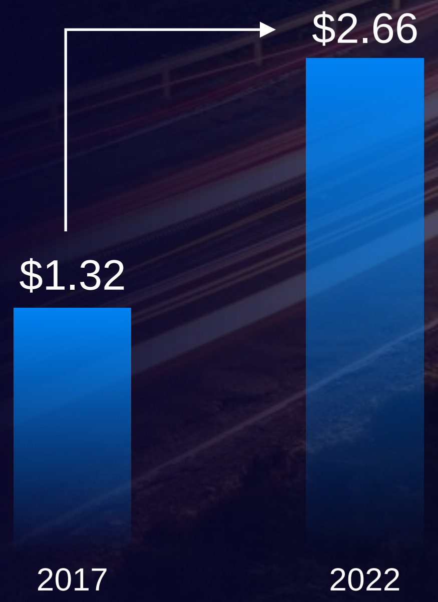
Non-GAAP Operating Margin[1]

+500
Basis points increase



Non-GAAP Diluted EPS[1]

+15%
CAGR



Total Leverage

>20%
Reduction

[1] Non-GAAP reconciliations can be found in the appendix to this presentation and at: ir.nasdaq.com/Income-Statement-Trend-Summary-and-GAAP-to-Non-GAAP-Reconciliation.

Accelerating Nasdaq's Transformation as a Leading Technology Provider to the Global Financial System

1. Accelerates Nasdaq's strategy to be the trusted fabric of the world's financial system

2. Increases Nasdaq's serviceable addressable market by approximately 40% to $34 billion, supported by strong secular growth trends

3. Creates a comprehensive suite of mission-critical software and technology solutions to global financial institutions

4. Supercharges Nasdaq's ability to solve clients' most pressing and complex risk management and regulatory challenges

5. Enhances Nasdaq's strong financial profile, adding high-growth, high-margin recurring revenue while also improving our EBITDA margin

Nasdaq

+

Adenza

Appendix:
Additional Adenza Information

Capital Markets Overview: Consolidated Front-to-Back Trading, Operations & Treasury

Front Office

- Sales Tools
- Cross-asset Pricing
- Pre-trade Checks
- Real-time Analytics
- Portfolio Mgmt.
- Performance Mgmt.

Middle Office and Risk

- Credit & Market Risk
- PFE & XVA
- Limits & Compliance
- P&L Control

Post Trade Processing

- Confirmations
- Settlements
- Payments
- Corporate Actions
- Nostro Management
- Accounting
- Reconciliation

Treasury

- Funding & Liquidity
- Hedging
- Fund Transfer Pricing
- IR & FX Risk
- Hedge Accounting
- Liquidity Ratios
- Stress Testing

Collateral, Margin, Sec Fin

- ETD & OTC Margining
- Collateral Management
- Inventory Optimization
- Repo & Securities Lending

Clearing

- Clearing Operations
- Affirmation Platforms
- Exchange/CCP Connect
- What-if Simulations

All cash and derivative instruments

Rates

Credit

FX

Commodities

Securities

All market participants

Sell-side

Buy-side

CCPs / Exchanges

Central Banks, Corporates and Other

Simplification at the core

Single Technology Stack

Open API for Full Connectivity

Always Up-To-Date With Monthly Upgrades

Modular Solutions for Purchase Flexibility

Regulatory Solutions Overview: Most Comprehensive Functional and Geographic Coverage of Any Vendor

Reg. Reporting

Local and Regional Financial and Statistical Regulatory Reporting

Capital and Credit

Capital Calculations Compliant with Basel Accords and Local Adaptations (e.g SEC)

Liquidity

Regulatory Liquidity Calculations Compliant with Basel Accords and Local Adaptations

Global Shareholding Disclosure

Shareholding Monitoring & Reporting. Incl Short Sell, Takeover, Sensitive Industries, Significant Holdings

Trade & Transaction Reporting

Regime Agnostic Data Driven Trade & Transaction Reporting E.G., Mifid, Dodd Frank, EMIR, CFTC

ESG

ESG Regulatory Reporting E.G., EBA Pillar 3, EU Taxonomy, SFDR etc.

Compliance Platform Capabilities

- Embedded controls that meet or exceed highest regulatory standards
- Scalable technology capable of managing high volumes and user activity
- Regulatory platform with low/no code configurability out of the box
- Integration with existing infrastructure and control processes

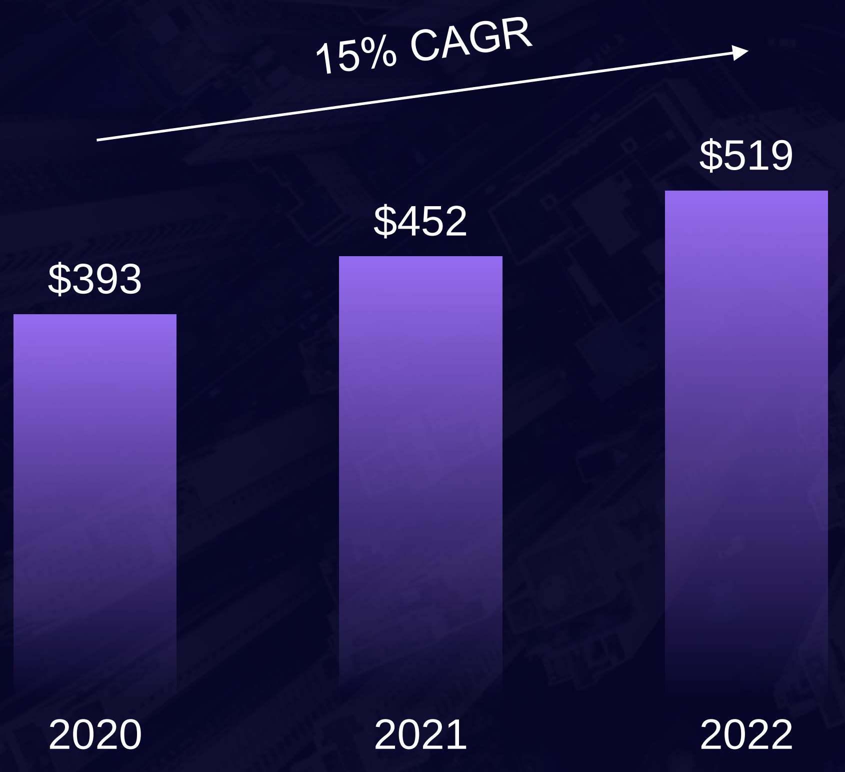
Product Ecosystem

- Network effect of aligned financial institutions, regulators, and partner collaboration
- Extensible regulatory and data tools that configure to regulatory change
- RegCloud SaaS enabling scale, speed, and automation
- Repeatable customer delivery framework and partners ecosystem

Adenza Historical Financials at a Glance

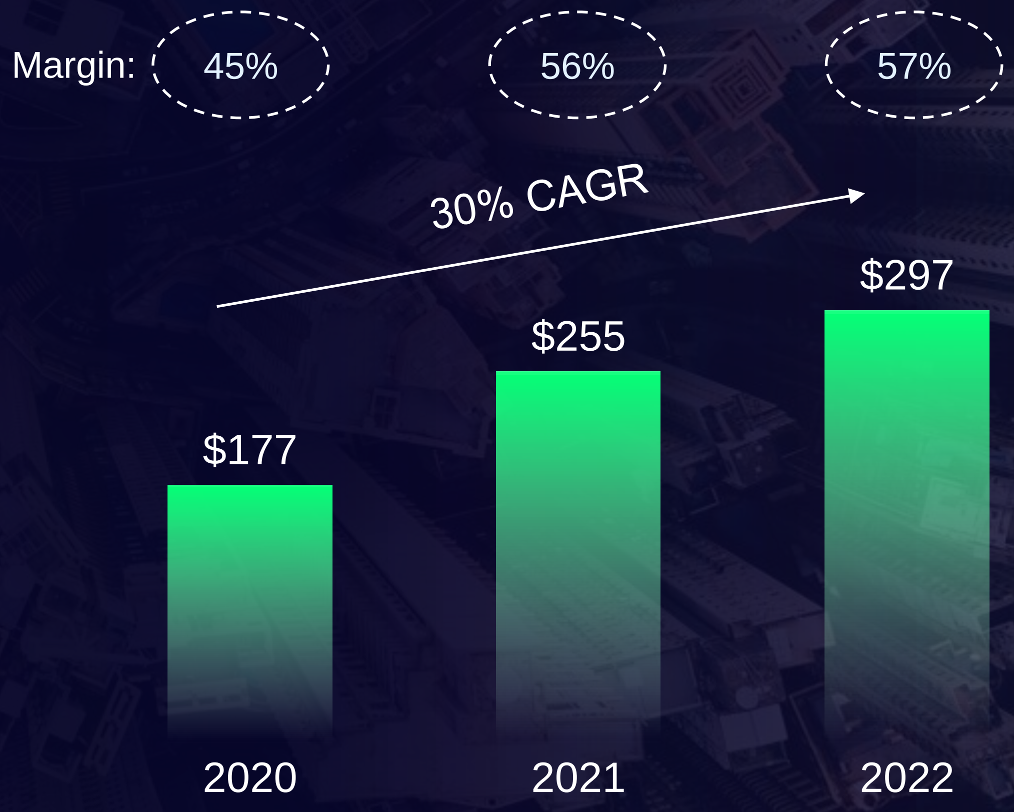
Adjusted Revenue[1]

$M



Adjusted EBITDA[1]

$M



[1] Refer to the "Supplemental Information and Non-GAAP Measures" page in the Appendix to this presentation.

Appendix:
Non-GAAP Reconciliations

Appendix

Summary of Historical Financial Results

Non-GAAP Results [1] (US$ Millions, except EPS)	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**
Solutions Businesses Revenues	$1,429	$1,598	$1,737	$1,928	$2,344	$2,552
Trading Services Net Revenues	684	772	740	932	1,037	1,019
Other Revenues	298	156	58	43	39	11
Net Revenues	**2,411**	**2,526**	**2,535**	**2,903**	**3,420**	**3,582**
Operating Expenses	1,271	1,320	1,295	1,414	1,616	1,721
Operating Income	**1,140**	**1,206**	**1,240**	**1,489**	**1,804**	**1,861**
Operating Margin [2]	47%	48%	49%	51%	53%	52%
EBITDA [1]	**1,236**	**1,306**	**1,328**	**1,585**	**1,912**	**1,965**
EBITDA Margin [3]	51%	52%	52%	55%	56%	55%
Net Income	**670**	**797**	**835**	**1,031**	**1,273**	**1,324**
Diluted Earnings Per Share	**$1.32**	**$1.58**	**$1.67**	**$2.06**	**$2.52**	**$2.66**
Dividend Per share	$0.49	$0.57	$0.62	$0.65	$0.70	$0.78

[1] Reconciliations of U.S. GAAP to non-GAAP measures are available at ir.nasdaq.com/Income-Statement-Trend-Summary-and-GAAP-to-Non-GAAP-Reconciliation.
[2] Operating margin equals operating income divided by net revenues.
[3] EBITDA margin equals EBITDA divided by net revenues.

Appendix

Organic Revenue Growth

All figures in US$ Millions	Current Period	Prior-year Period	Total Variance $	Total Variance %	Organic Impact $	Organic Impact %	Other Impact [1] $	Other Impact [1] %
Solutions Businesses								
2022	2,552	2,344	208	9%	227	10%	(19)	(1)%
2021 [2]	2,356	1,940	416	21%	295	15%	121	6%
2020 [3]	1,962	1,770	192	11%	168	9%	24	1%
2019 [3]	1,770	1,635	135	8%	108	7%	27	2%
2018 [3, 4]	1,675	1,506	169	11%	107	7%	62	4%
2017 [3, 4]	1,700	1,613	87	5%	49	3%	38	2%
Trading Services								
2022	1,019	1,037	(18)	(2)%	12	1%	(30)	(3)%
2021	1,037	932	105	11%	91	10%	14	2%
2020 [5]	941	755	186	25%	182	24%	4	1%
2019 [5]	755	794	(39)	(5)%	(25)	(3)%	(14)	(2)%
2018 [5]	794	711	83	12%	81	11%	2	—%
2017 [5]	711	663	48	7%	3	-%	45	7%
Total Company								
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%

Note: The sum of the percentage changes may not tie to the percent change in total variance due to rounding.

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

[2] Revenues are not recast for the Broker Services wind down that occurred in 2022.

[3] Solutions businesses revenues are not recast for the NPM contribution, the sale of Nasdaq's U.S. fixed income business that occurred in 2021, and the Broker Services wind down that occurred in 2022.

[4] Revenues from the BWise enterprise governance, risk and compliance software platform, which was sold in March 2019, and the Public Relations Solutions and Digital Media Services businesses, which were sold in mid-April 2018, are included in Other Revenues for these periods and therefore not reflected above.

[5] Revenues are not recast for the sale of Nasdaq's U.S. fixed income business that occurred in 2021.

Appendix

Adenza Historical Non-GAAP reconciliation

(US$ Millions)	**2020**	**2021**	**2022**
Adenza Revenues[1]	$413	$463	$514
Purchase accounting adjustments[2]	1	19	-
Russian contracts[3]	(9)	(14)	6
Impact of foreign currency [4]	(12)	(16)	(1)
Adjusted Adenza Revenues	**393**	**452**	**519**
Adenza Net Loss [1]	***(5)***	***(73)***	***(44)***
Interest	73	91	172
Taxes	(7)	(32)	(25)
Depreciation and amortization	58	97	163
Adenza EBITDA[1]	***119***	**83**	**266**
Proforma adjustments[5]	**-**	117	6
Restructuring[6]	2	5	14
Share-based compensation – transaction-related[7]	26	18	-
Purchase accounting adjustments[2]	1	19	-
Facility costs[8]	-	-	5
Transaction costs[9]	28	13	-
Impact of foreign currency[10]	10	*14*	-
Russian contracts[3]	(9)	(14)	6
Adjusted EBITDA	***177***	**255**	***297***

Refer to footnotes on the following slide.

Appendix

Adenza Historical Non-GAAP reconciliation footnotes

Background: In December 2020 Thoma Bravo acquired AxiomSL. In July 2021, Calypso merged with AxiomSL to form Adenza.

[1] Adenza Results – Results prior to the merger of AxiomSL and Calypso show the combined results of the two companies for the twelve months ended December 31, 2020 and for the seven months ended July 2021.

[2] Purchase accounting adjustments – Relates to the impact of a fair value adjustment on deferred revenue and deferred commission recorded as part of purchase accounting entries recorded in 2020 related to the acquisition of AxiomSL by Thoma Bravo and in 2021 related to the merger of AxiomSL and Calypso.

[3] Russian contracts – Adjustments to remove the impact of revenues from Russian contracts which have been subsequently cancelled and the reversal of accrued income associated with those contracts.

[4] Impacts of foreign currency on revenue – removes the impact of year-over-year foreign currency fluctuations to better compare the period over period revenue fluctuations.

[5] Proforma adjustments – These adjustments were made to reflect the combined activities of AxiomSL and Calypso and also include restructuring cost savings achieved during the twelve months ended December 31, 2021 and 2022 in order to present those periods on a comparable basis.

[6] Restructuring – Relates to a restructuring program which was initiated upon the merger of AxiomSL and Calypso in order to achieve synergies.

[7] Share-based compensation – transaction-related – Relates to stock compensation awards vesting upon the respective acquisitions of AxiomSL and Calypso by Thoma Bravo.

[8] Facility costs – Primarily relates to termination of lease facilities.

[9] Transaction costs – Costs related to both the acquisition of AxiomSL by Thoma Bravo in 2020 and the merger of AxiomSL and Calypso in 2021.

[10] Impact of foreign currency – Relates to FX related gains and losses.

Appendix

Cautionary Note Regarding Forward-Looking Statements

This communication contains forward-looking information related to Nasdaq, Adenza and the proposed acquisition of Adenza by Nasdaq that involves substantial risks, uncertainties and assumptions that could cause actual results to differ materially from those expressed or implied by such statements. When used in this communication, words such as “expects,” “enables,” “will,” “plans,” “pro forma,” “estimates,” and similar expressions and any other statements that are not historical facts are intended to identify forward-looking statements. Forward-looking statements in this communication include, among other things, statements about the potential benefits of the proposed transaction; Nasdaq’s plans, objectives, expectations and intentions regarding Adenza; the financial condition, results of operations and business of Nasdaq or Adenza; and the anticipated timing of closing of the proposed transaction. Risks and uncertainties include, among other things, risks related to the ability of Nasdaq to consummate the proposed transaction on a timely basis or at all; Nasdaq’s ability to secure regulatory approvals on the terms expected, in a timely manner or at all; Nasdaq’s ability to successfully integrate Adenza's operations; Nasdaq’s ability to implement its plans, forecasts and other expectations with respect to Adenza's business after the completion of the transaction and realize expected synergies; the ability to realize the anticipated benefits of the proposed transaction, including the possibility that the expected benefits from the proposed transaction will not be realized or will not be realized within the expected time period; the impact of Adenza's business model on Nasdaq’s ability to forecast revenue results; disruption from the transaction making it more difficult to maintain business and operational relationships; risks related to diverting management's attention from Nasdaq’s ongoing business operations; the negative effects of the announcement or the consummation of the proposed transaction on the market price of Nasdaq’s common stock or on Nasdaq’s operating results; significant transaction costs; unknown liabilities; the risk of litigation or regulatory actions related to the proposed transaction; future levels of Nasdaq’s indebtedness, including additional indebtedness that will be incurred in connection with the proposed transaction; and the effect of the announcement or pendency of the transaction on Adenza's business relationships, operating results, and business generally.

Further information on these and other risk and uncertainties relating to Nasdaq, including, but not limited to, Nasdaq’s ability to implement its strategic initiatives, economic, political and market conditions and fluctuations, geopolitical instability, government and industry regulation, interest rate risk, U.S. and global competition, and other factors detailed in Nasdaq’s filings with the U.S. Securities and Exchange Commission, can be found in its reports filed on Forms 10-K, 10-Q and 8-K and in other filings Nasdaq makes with the SEC from time to time and available at www.sec.gov. These documents are also available under the Investor Relations section of Nasdaq's website at ir.nasdaq.com. The forward-looking statements included in this communication are made only as of the date hereof. Nasdaq and Adenza disclaim any obligation to update these forward-looking statements, except as required by law.

Appendix

Supplemental Information and Non-GAAP Measures

Annualized Recurring Revenue (ARR) for a given period is the annualized revenue derived from subscription contracts with a defined contract value. This excludes contracts that are not recurring, are one-time in nature or where the contract value fluctuates based on defined metrics. ARR is currently one of our key performance metrics to assess the health and trajectory of our recurring business. ARR does not have any standardized definition and is therefore unlikely to be comparable to similarly titled measures presented by other companies. ARR should be viewed independently of revenue and deferred revenue and is not intended to be combined with or to replace either of those items. For certain term-based subscription license agreements, related to the Adenza business, ARR is calculated based upon annualized contract value, which deviates from U.S. GAAP revenue recognition whereby a portion of the total contract value is recognized upfront as license revenue, with the remainder allocated to the maintenance and support performance obligation and recognized ratably over the contract term. 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.

Gross retention is calculated as 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 is calculated as ARR In the current period over ARR in the prior year period for existing customers including price increases and upsells and excluding new customers.

References to Return on Invested Capital, or ROIC, are equal to non-GAAP net operating profit less amortization of acquired intangibles, adjusted for tax, divided by invested capital. The income tax adjustment reflects the effective non-GAAP tax rate during the period. Invested capital is defined as the aggregate of the average of debt and equity, less average of cash & equivalents and investments. ROIC is not a measure of financial performance under U.S. GAAP and should not be considered a substitute for return on assets, net earnings or total assets as determined in accordance with GAAP and may not be comparable to similarly titled measures reported by other companies.

References to 2023E are based on first quarter actual results and estimated results for the remaining nine months pro-forma to represent the combined results of Adenza and Nasdaq. and reflect expected fully phased in run rate synergies.

References to Nasdaq leverage is equal to: Gross Debt / Non-GAAP EBITDA.

References to 2023 for Adenza or Nasdaq on a standalone basis reflect first quarter actual results and estimated results for the remaining nine months excluding expected run rate synergies.

References to Adenza financial information were provided by Adenza.

Dividend payout ratio calculated annualizing the last paid quarterly dividend divided by last 12 months non-GAAP net income.

References to unlevered pre-tax free cash flow equal cash flow from operations plus cash interest paid and cash taxes paid less capital expenditures.

Appendix

Non-GAAP Measures

This communication includes certain Nasdaq historic non-GAAP financial measures, including organic revenue growth, non-GAAP operating margin, non-GAAP diluted EPS, and non-GAAP EBITDA margin. Adenza historic non-GAAP measures include adjusted revenue and adjusted EBITDA and certain forward looking non-GAAP metrics including organic revenue growth, adjusted EBITDA margin and unlevered, pre-tax cash flow. Organic revenue 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. Adjusted EBITDA Margin reflects non-GAAP net income plus interest, taxes, depreciation and amortization.

Nasdaq and Adenza believe that these non-GAAP measures provide useful information to management and investors regarding certain financial and business trends relating to Nasdaq and Adenza's financial condition and results of operations. Nasdaq's and Adenza's managements use certain of these non-GAAP measures to compare Nasdaq's and Adenza's performance to that of prior periods for trend analyses and for budgeting and planning purposes. Nasdaq and Adenza believe presentation of these measures provides investors with greater transparency and supplemental data relating to financial condition and results of operations.

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 its usefulness as a comparative measure. Investors should not rely on any single financial measure when evaluating these businesses. This information should be considered as supplemental in nature and is not meant as a substitute for operating results in accordance with U.S. GAAP.

For Nasdaq historic non-GAAP measurements throughout this communication, the U.S. GAAP to non-GAAP reconciliations may be found at ir.nasdaq.com/Income-Statement-Trend-Summary-and-GAAP-to-Non-GAAP-Reconciliation as well as in the appendix to this communication. For Adenza historic U.S. GAAP to non-GAAP reconciliations may be found in the appendix to this communication.

A reconciliation of non-GAAP forward looking information to their corresponding GAAP measures cannot be provided without unreasonable efforts due to the inherent difficulty in quantifying certain amounts due to a variety of factors, including the unpredictability in the movement in foreign currency rates, Nasdaq's effective tax rate as well as future charges or reversals outside of the normal course of business.