



March 8, 2023

## Nasdaq

# Bracket Busters: The Growth of the Nasdaq-100 Ecosystem

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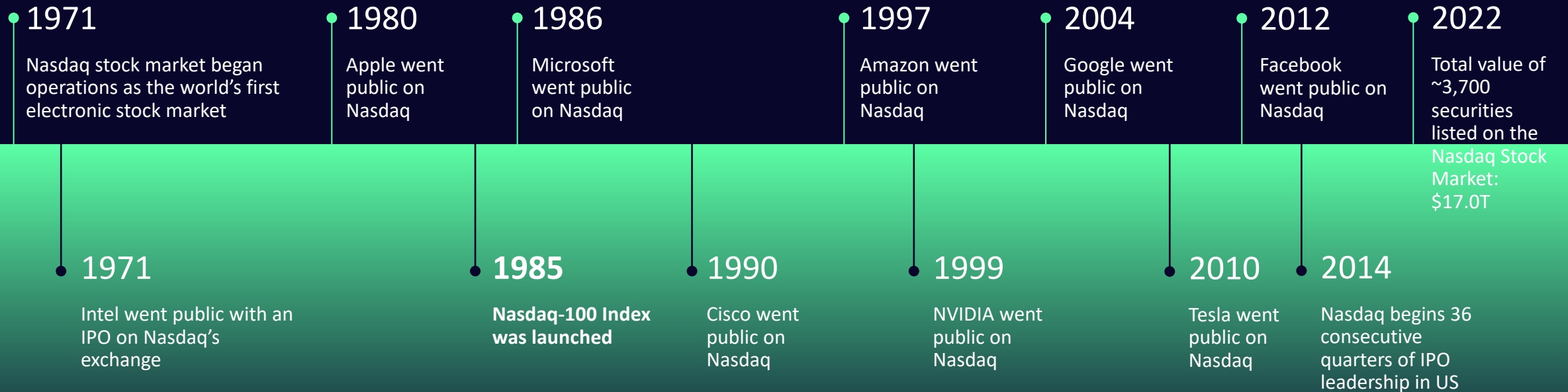


# Nasdaq-100<sup>®</sup> Index:

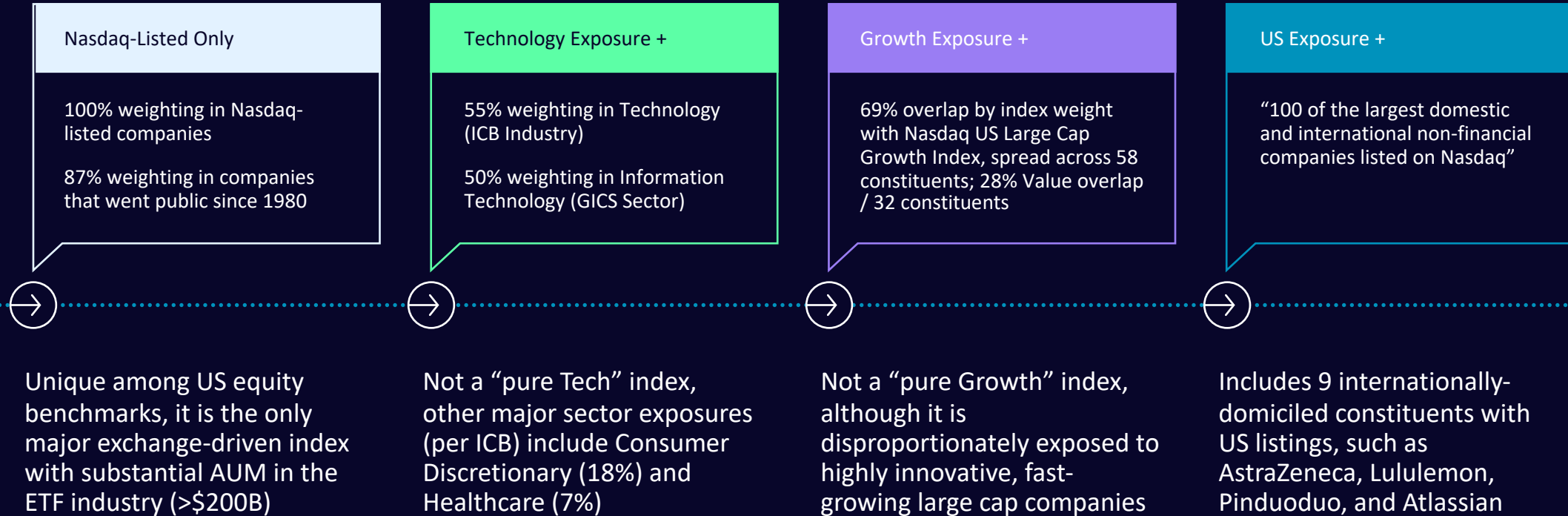
The Benchmark of the 21st Century

December 2022

# Nasdaq: A Leading US and Global Exchange Operator with World-Class Indexing Capabilities



# What is the Nasdaq-100<sup>®</sup>?



# Nasdaq-100 Fundamentals Drive Outperformance



+21.0%

Earnings CAGR  
since 2003

vs. 10.1%: for S&P 500



+12.5%

Revenue CAGR since  
2003

vs. 4.7% for S&P 500



+24.3%

Dividend CAGR since  
2003

vs. 7.5% for S&P 500



+12.1%

Annualized Total Returns  
since EOY 2003

vs. 8.9% for S&P 500



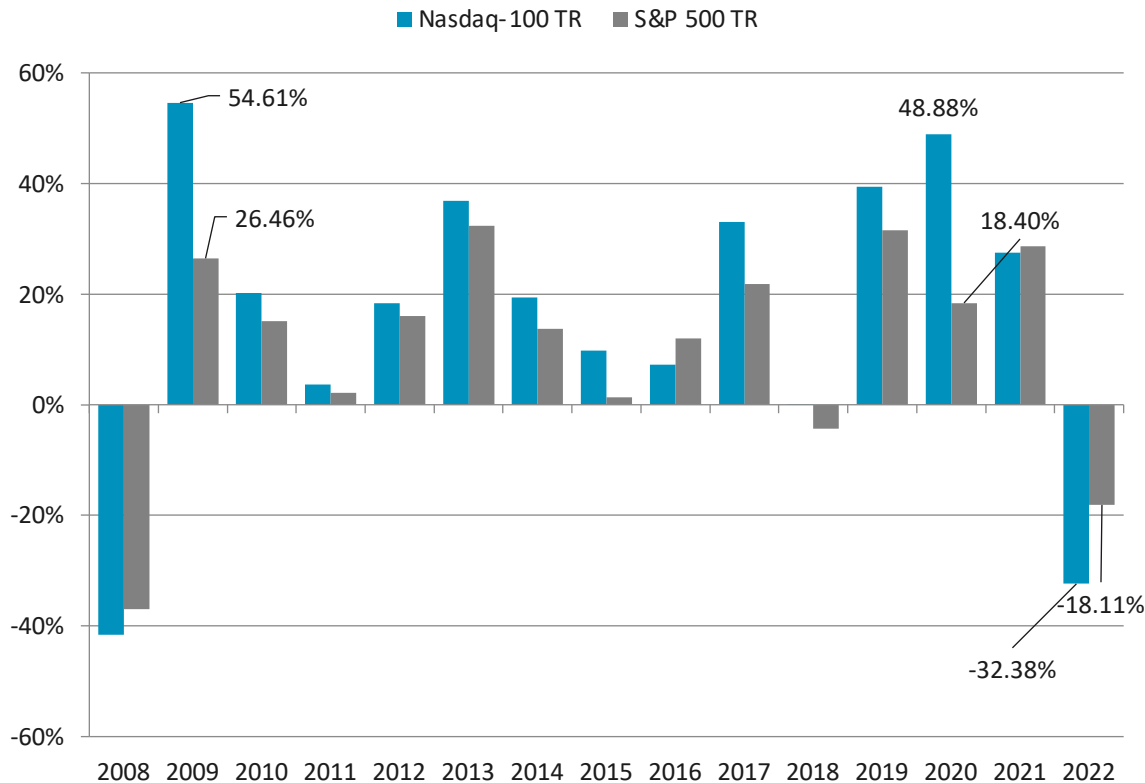
# Nasdaq-100's Long-Run Performance is Unrivalled



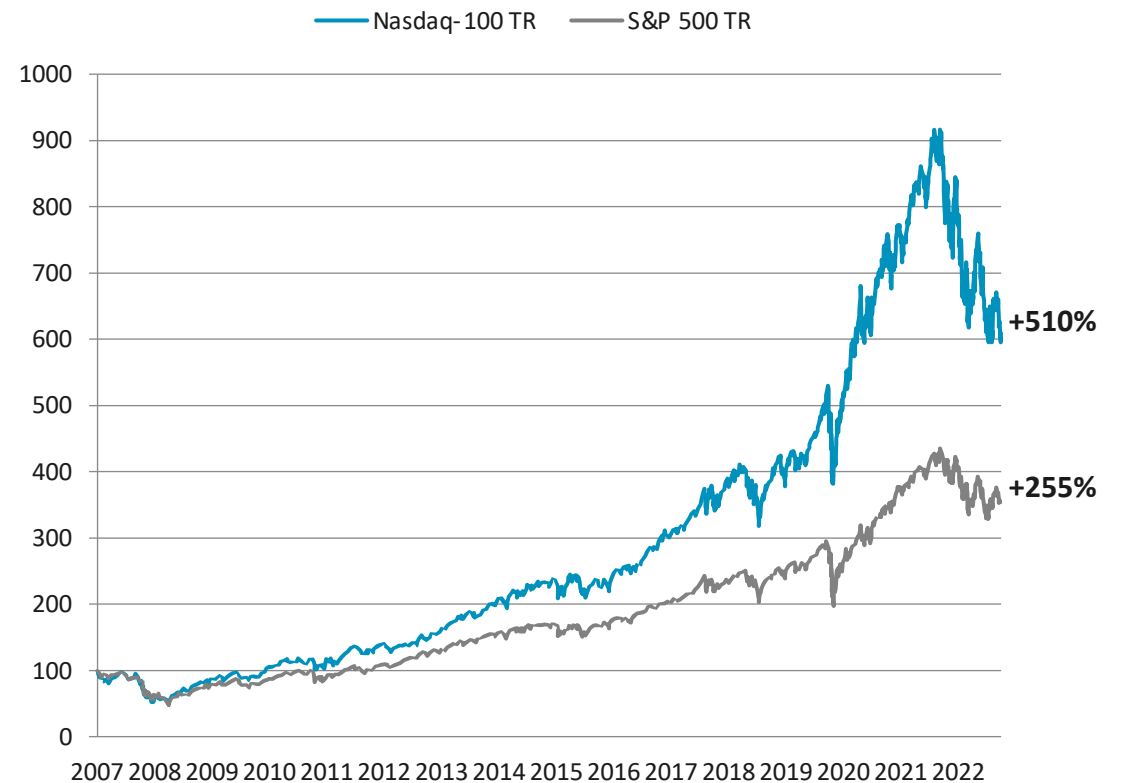
Source: Nasdaq, FactSet, Bloomberg. Data as of 12/30/2022.

# Nasdaq-100 Index: Performance vs. S&P 500

## INDEX ANNUAL TOTAL RETURNS



## INDEX PERFORMANCE SINCE DECEMBER 31, 2007



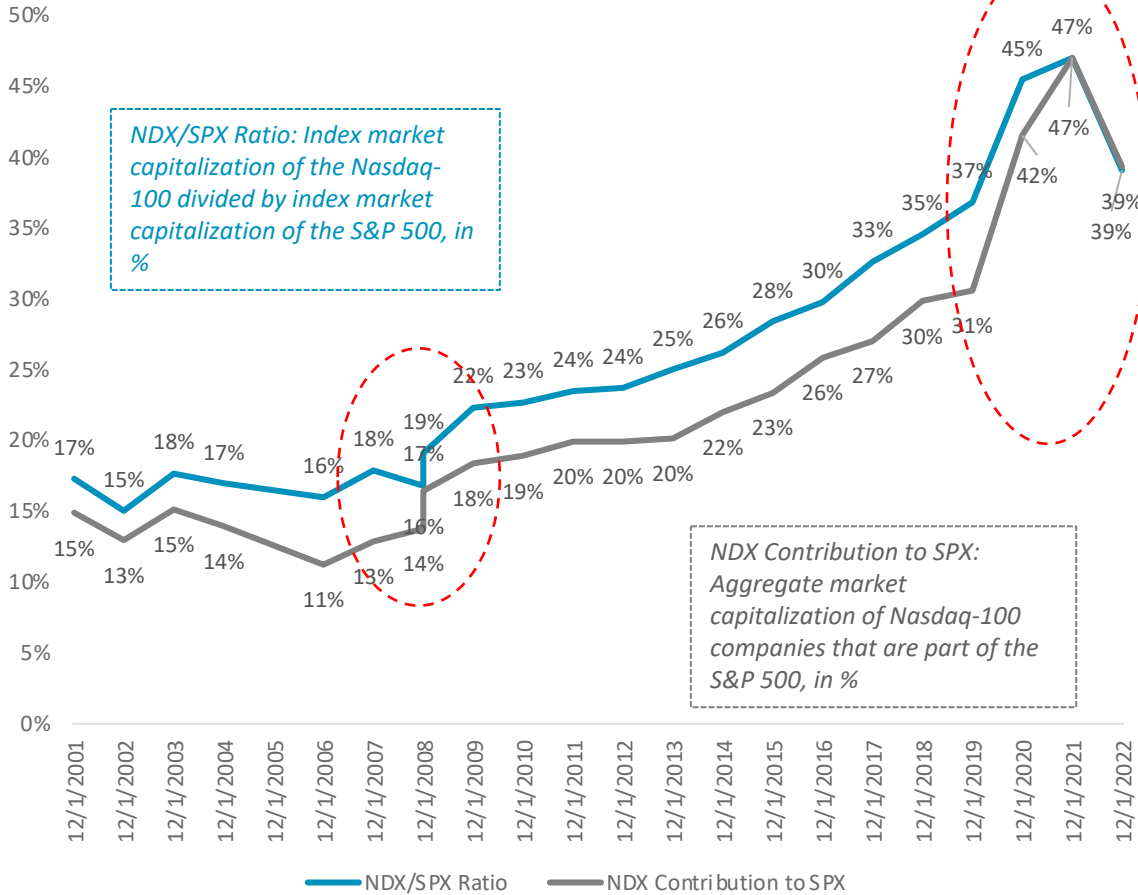
- NDX® has outperformed SPX in 11 of the past 15 calendar years, including by more than 30% in 2020; underperformance in 2022 was ~13%

- Cumulative total returns through December 30, 2022 were 510% for NDX – doubling the returns of 255% for SPX.

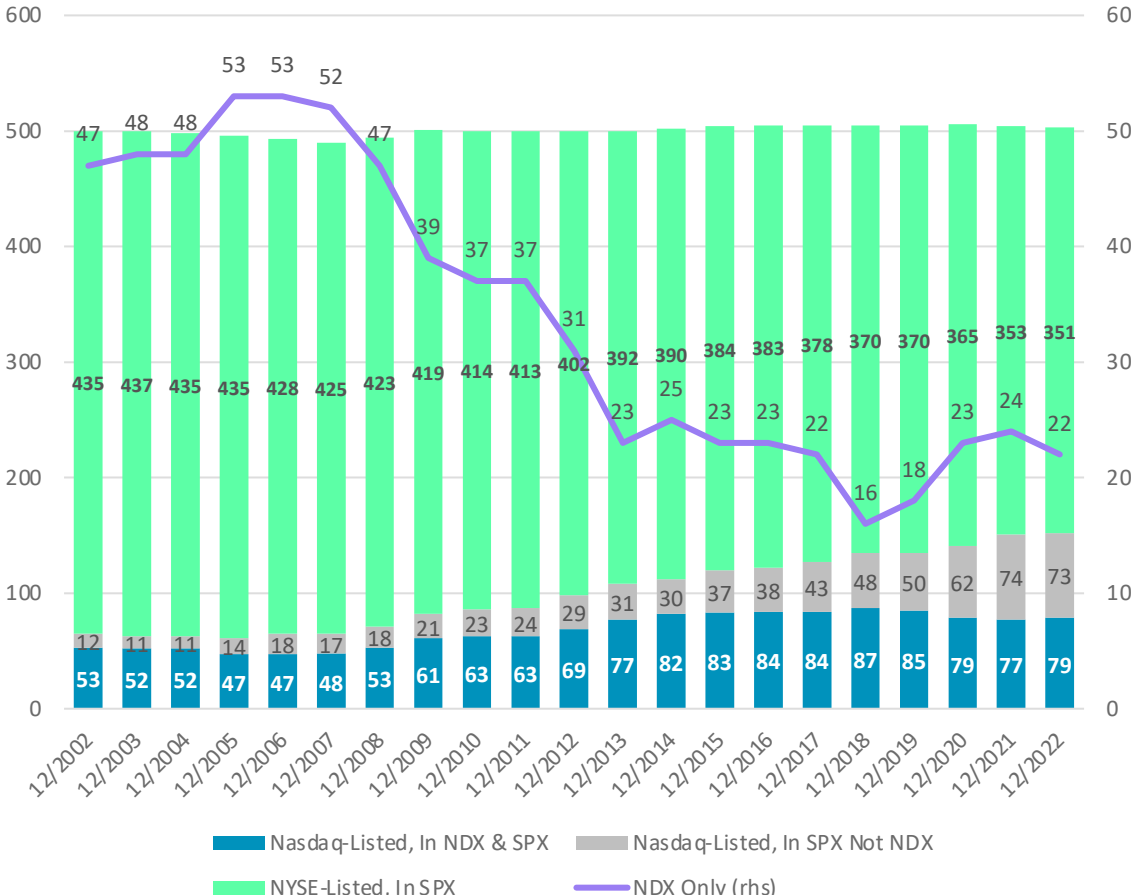


# Nasdaq-100 vs. S&P 500: Composition Over Time

NDX vs. SPX Market Capitalization

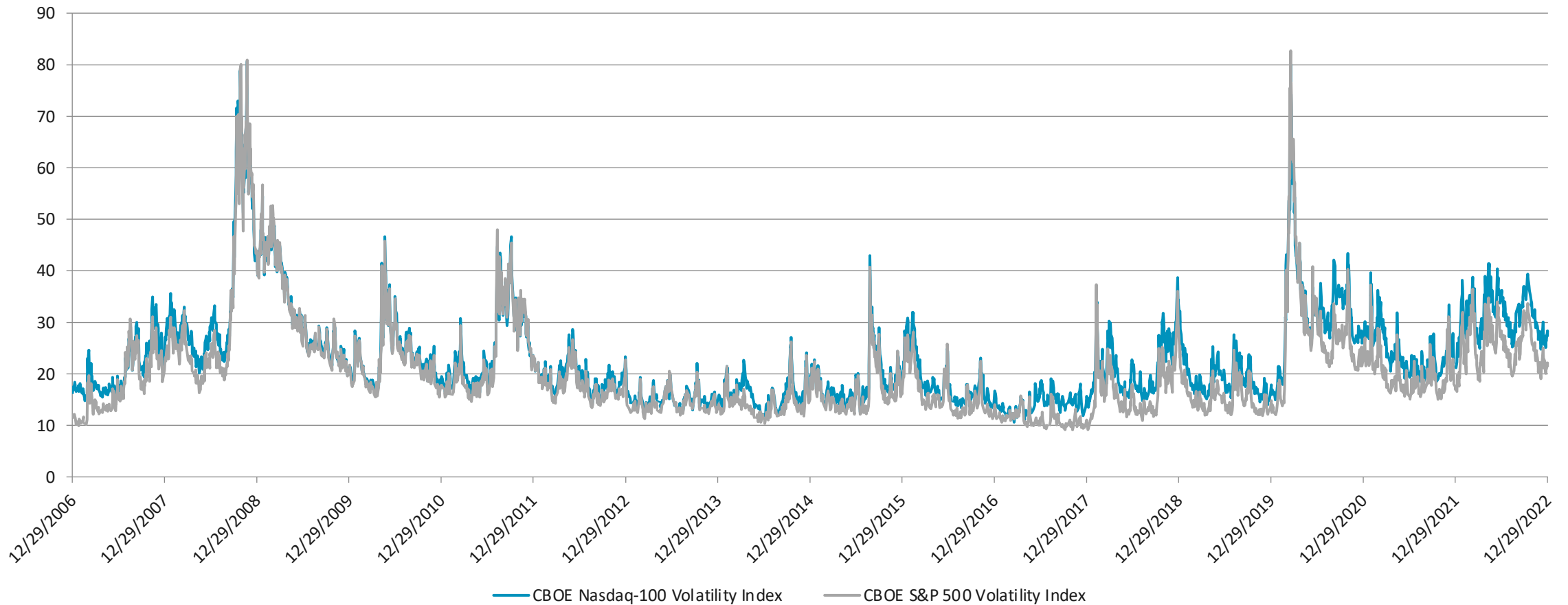


Number of Components in NDX and SPX by Exchange



# Historical Volatility

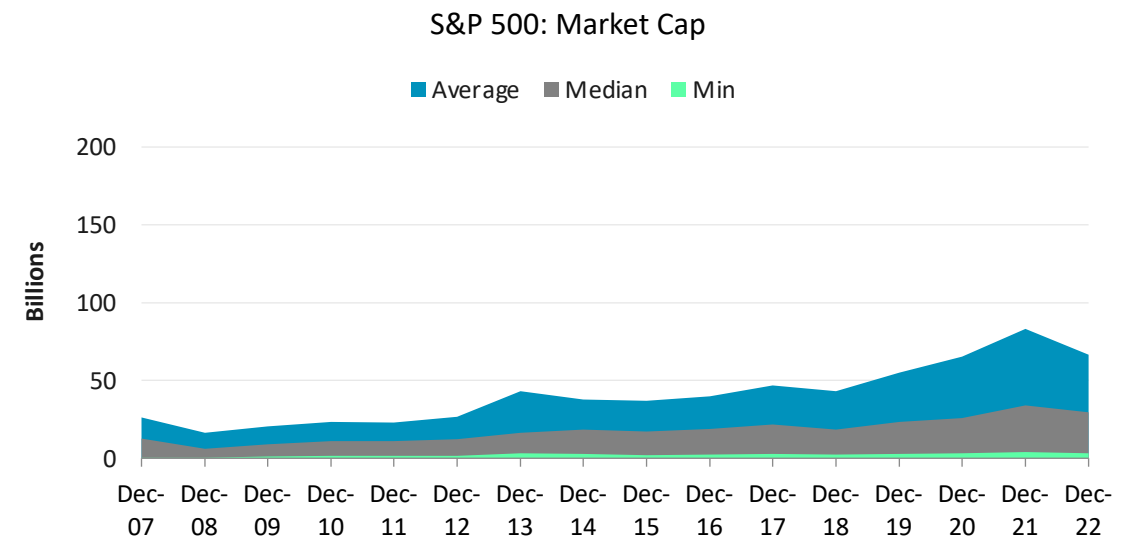
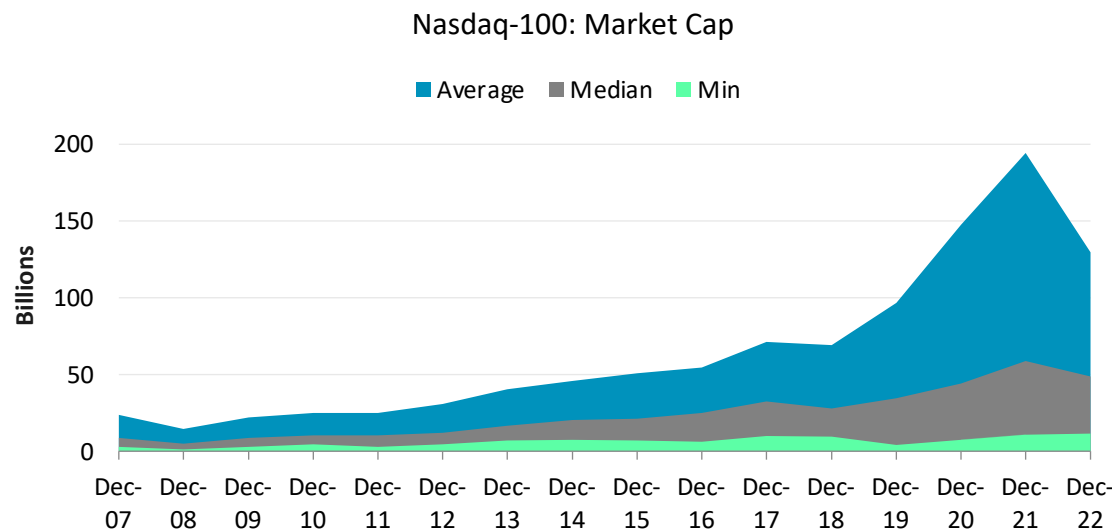
- Both the Nasdaq-100 and the S&P 500 have had very similar volatility over last 15+ years



# Nasdaq-100 Index: Constituent Size vs. S&P 500

## Average, median and minimum market caps of the NASDAQ-100 and the S&P 500

- All figures dropped during the financial crisis and had been steadily rebounding until year-end 2021. In 2022, a highly unfavorable macroeconomic environment of elevated inflation, rising interest rates, and geopolitical uncertainty led to the first broad-based annual losses in markets since 2008.
- Thirteen of the last fourteen years the average market cap has been higher in NDX than SPX. As of year-end 2022, NDX: \$130B, SPX: \$66B.
- The median market cap has been higher for NDX than SPX in each of the last ten years — as of year-end 2022 the medians were \$48.8B for NDX and \$29.4B for SPX. Despite any large companies, the market cap of NDX tends to be truer to large cap than SPX.
- The smallest company in NDX (\$11.5B) has been larger than the smallest company in SPX (\$3.1B) for the last fourteen years.



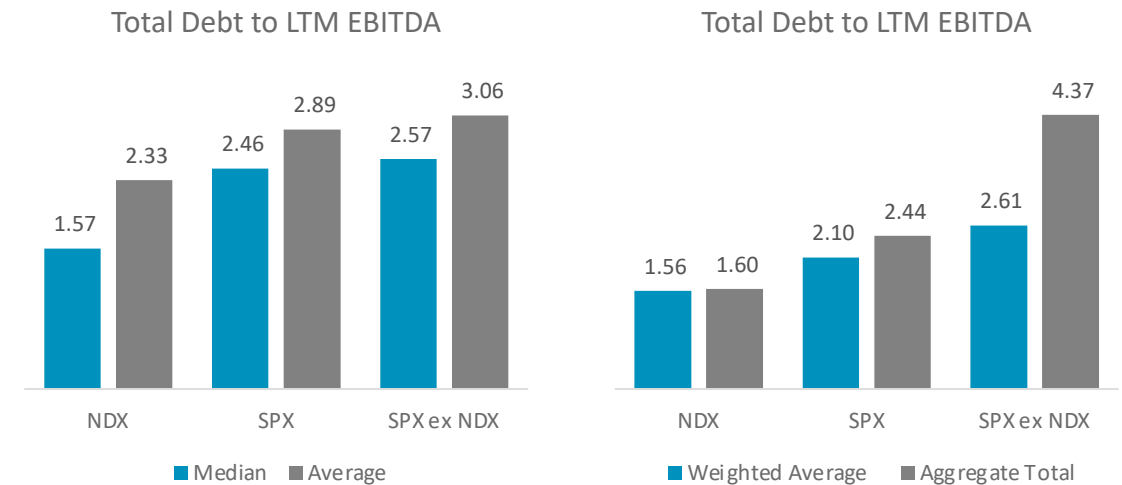
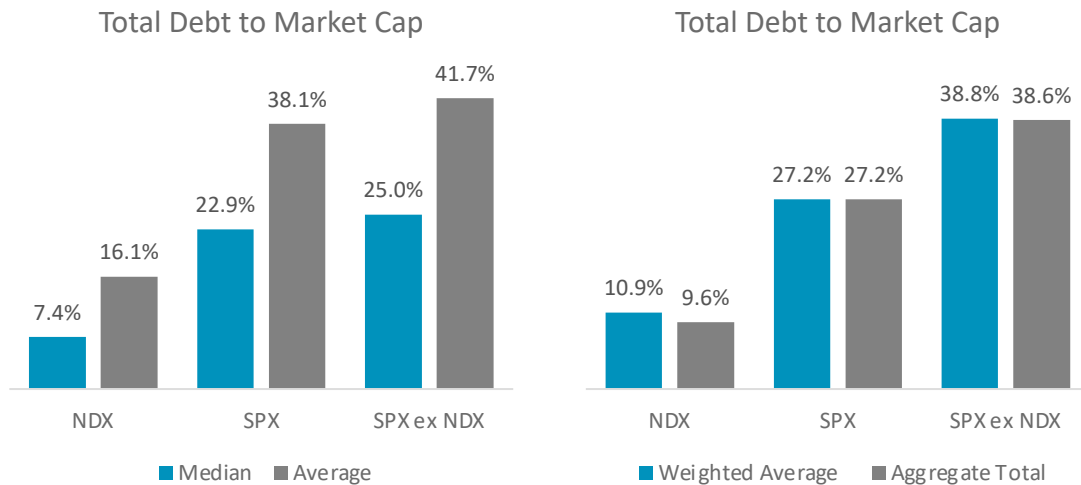
# Nasdaq-100 Additions in 2022

Effective Date	Ticker	Company Name	ICB Industry	ICB sector	Market Cap, \$Bn	YTD'22 Return, %
12/19/2022	BKR	Baker Hughes	Energy	Oil, Gas and Coal	29.1	20.7
12/19/2022	CSGP	CoStar Group	Real Estate	Real Estate Investment and Services	31.7	-1.5
12/19/2022	FANG	Diamondback Energy	Energy	Oil, Gas and Coal	24.2	27.4
12/19/2022	GFS	GlobalFoundries	Technology	Technology Hardware and Equipment	33.4	-4.8
12/19/2022	RIVN	Rivian Automotive	Consumer Discretionary	Automobiles and Parts	21.9	-76.9
12/19/2022	WBD	Discovery, Inc.	Consumer Discretionary	Media	24.3	-57.5
11/21/2022	ENPH	Enphase Energy	Energy	Alternative Energy	42.7	71.7
1/24/2022	ODFL	Old Dominion Freight Line, Inc.	Industrials	Industrial Transportation	33.0	-16.5
2/22/2022	AZN	AstraZeneca PLC	Health Care	Pharmaceuticals and Biotechnology	215.1	19.7



Source: Nasdaq Global Indexes, Factset as of December 15, 2022

# Nasdaq-100 vs. S&P 500: Debt Ratios



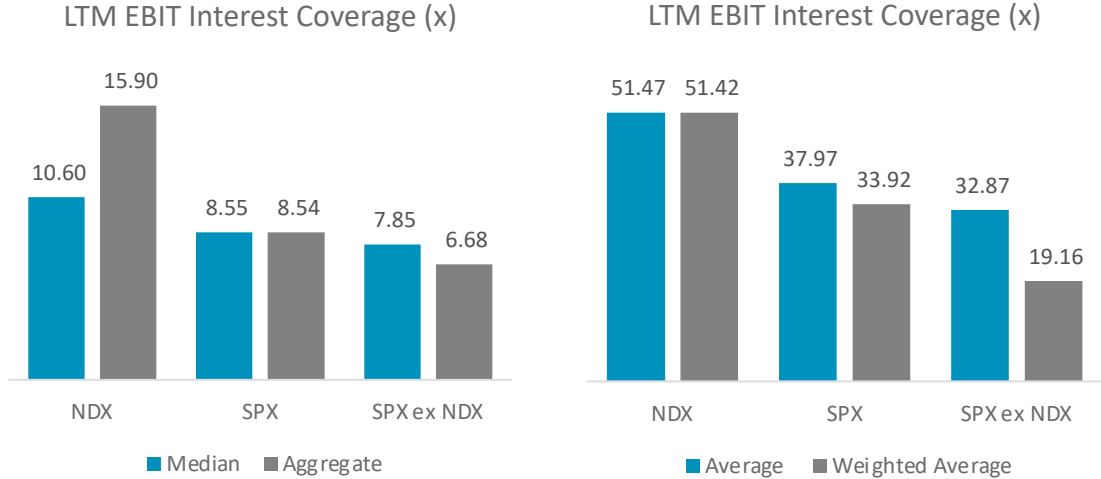
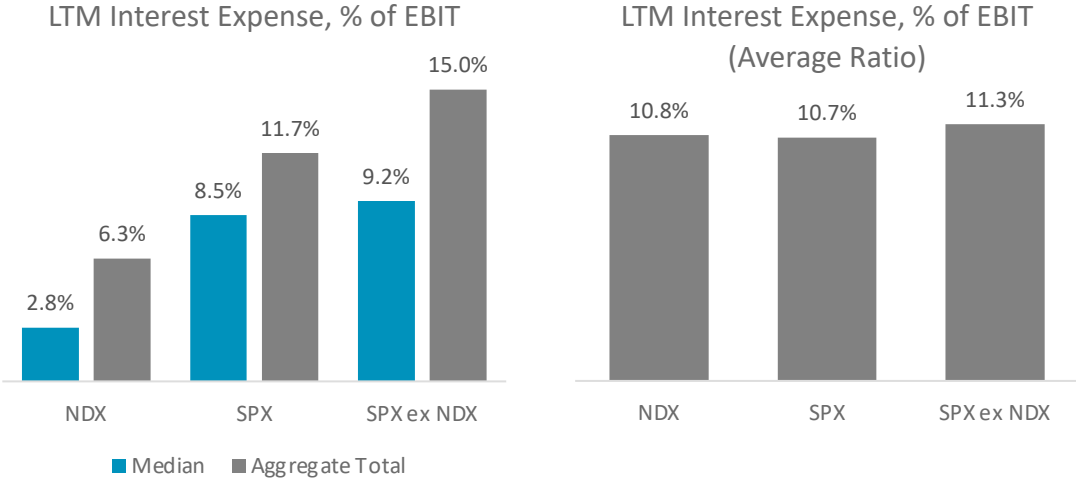
The median company in the Nasdaq-100 Index has a debt-to-market-cap ratio that is **68% lower** than the median for the S&P 500 Index. The average ratio is **58% lower** for NDX

The weighted average ratio of debt-to-market cap in the Nasdaq-100 is **60% lower** than the S&P 500 Index; on an aggregate basis, NDX debt-to-market-cap is **65% lower**

The median company in the Nasdaq-100 has a debt-to-EBITDA ratio that is **36% lower** than the median for the S&P 500 Index (ex-Financials). The average ratio is **19% lower**

The weighted average ratio of debt-to-EBITDA in the Nasdaq-100 is **25% lower** than the S&P 500 Index (**40% lower** vs. SPX ex NDX); on an aggregate basis, NDX debt-to-EBITDA is **34% lower** (**60% lower** vs. SPX ex NDX)

# Nasdaq-100 vs. S&P 500: Debt Service Ratios



The median company in the Nasdaq-100 Index has an interest expense burden (as a % of EBIT) that is **68% lower** than the median for the S&P 500 Index. The aggregate ratio for the index is **46% lower** for NDX

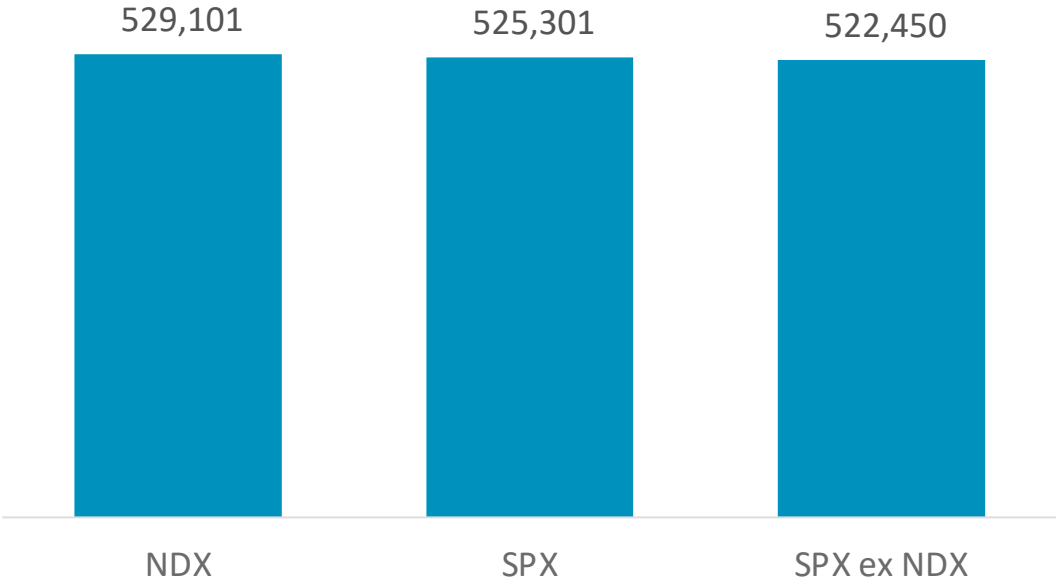
The average company in the Nasdaq-100 Index with nonzero interest expense and positive EBIT had a ratio of 10.8%, in-line with the averages for both SPX and SPX ex NDX

The median company in the Nasdaq-100 has a EBIT Interest Coverage ratio that is **24% higher (better)** than the median for the S&P 500 Index (ex-Financials). The aggregate index ratio is **86% higher**

The average EBIT Interest Coverage ratio of the Nasdaq-100 is **36% higher** than the S&P 500 Index, and **52% higher** on a weighted average basis (**168% higher** vs. SPX ex NDX)

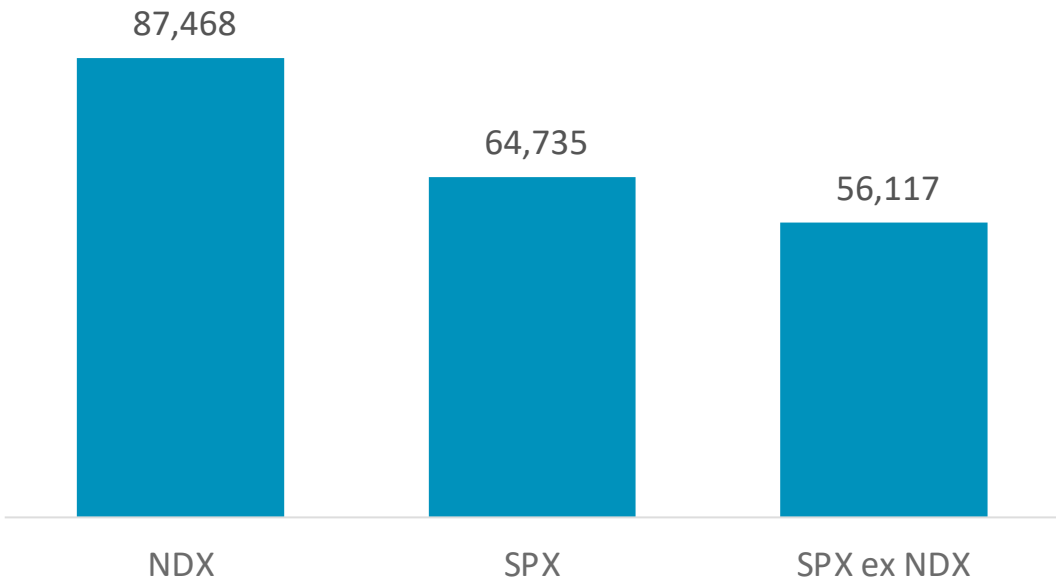
# Nasdaq-100 vs. S&P 500: Employee Efficiency

LTM Revenue per Employee



In aggregate, Nasdaq-100 companies generated similar revenue per employee vs. other S&P 500 companies

LTM Profit per Employee



In aggregate, Nasdaq-100 companies generated **35% higher** profit per employee than S&P 500 companies and **56% higher** than SPX ex NDX

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# Investing in Innovation

Invesco Innovation Suite

March 2023

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May Lose Value | Not Insured by any Federal Government Agency**

**Invesco Distributors, Inc.**

# Accessing Large-Cap Innovation

## Nasdaq-100 Index

# Nasdaq-100 Index (NDX): Methodology

Designed to measure the performance of the largest 100 non-financial companies that trade on the Nasdaq stock market.

- Rebalanced quarterly (March, June, September, December)
- Reconstituted annually (early December)
- Global companies listed on NASDAQ
- Modified market-cap weighting

## Access to Innovation:

- A legacy of innovation and growth fueled by robust research and development
- Access to companies with exposure to disruptive technologies

## Robust Fundamentals:

- Access to profitable growing companies with strong fundamentals
- Sales, Earnings, & Dividend growth rates that significantly surpass that of the S&P 500 and Russell 1000 Growth Indices<sup>1</sup>

## Strong Performance:

- The NASDAQ-100 Index has outperformed both S&P 500® and the Russell 1000 Growth indexes by providing access to leading large-cap growth companies at the forefront of innovation.<sup>2</sup>

1. Bloomberg L.P. and Nasdaq as of 3/31/22.

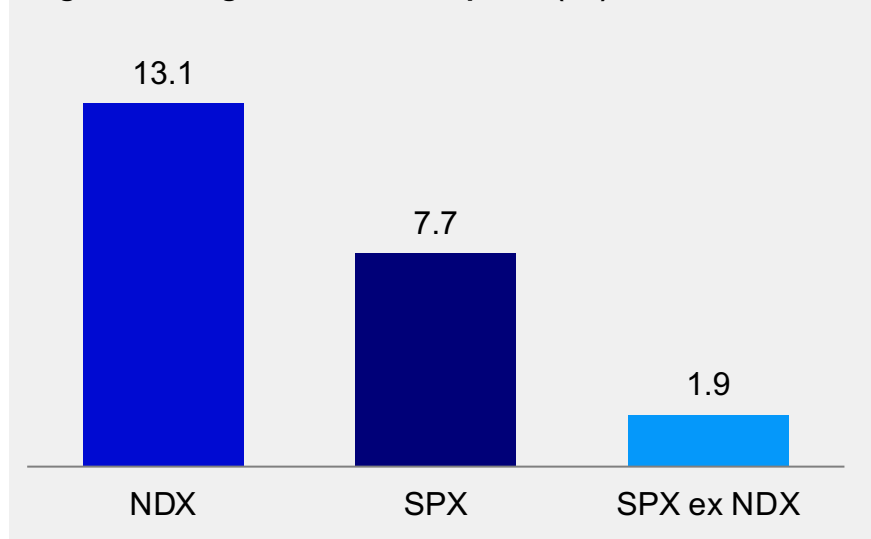
2. Bloomberg L.P.: Total Cumulative Return (3/10/1999 – 12/31/2022). Nasdaq 100 537.44%, S&P 500 366.58% and Russell 1000 Growth 336.48%.

**Source:** NASDAQ, Bloomberg L.P. For illustrative purposes only. Past performance is not a guarantee of future results. An investment cannot be made into an index. The Russell 1000® Growth Index is an unmanaged index considered representative of large-cap growth stocks.

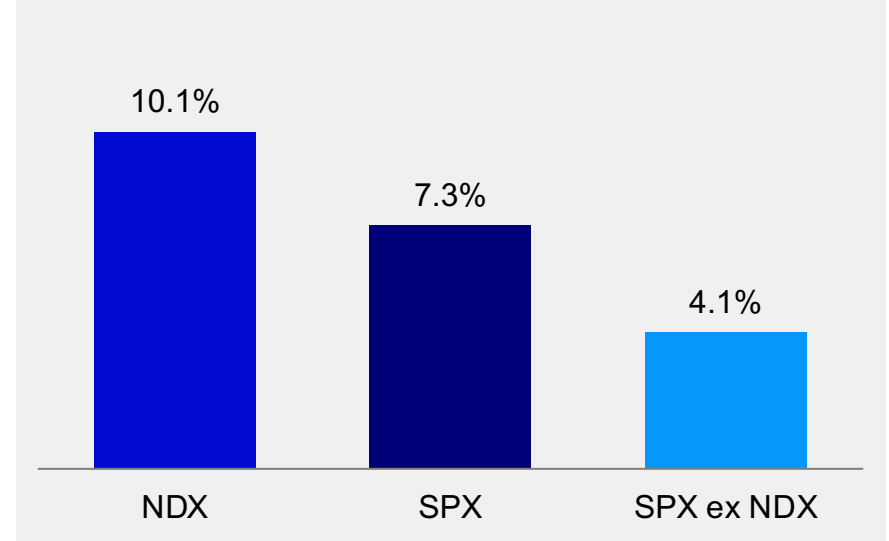
# Nasdaq-100 Index: Research & Development (R&D)

- + R&D is a key driver of innovation and economic growth
- + Companies in the Nasdaq-100 spend nearly twice as much in R&D, on average, compared to those in the S&P 500; 77 of the Nasdaq-100 are currently part of the S&P 500
- + Calculating R&D as a percent of sales in the last 12 months, Nasdaq-100 companies averaged 38% higher than S&P 500

**Weighted Average Annual R&D Expense (\$B)**



**Weighted Average R&D as % Sales**

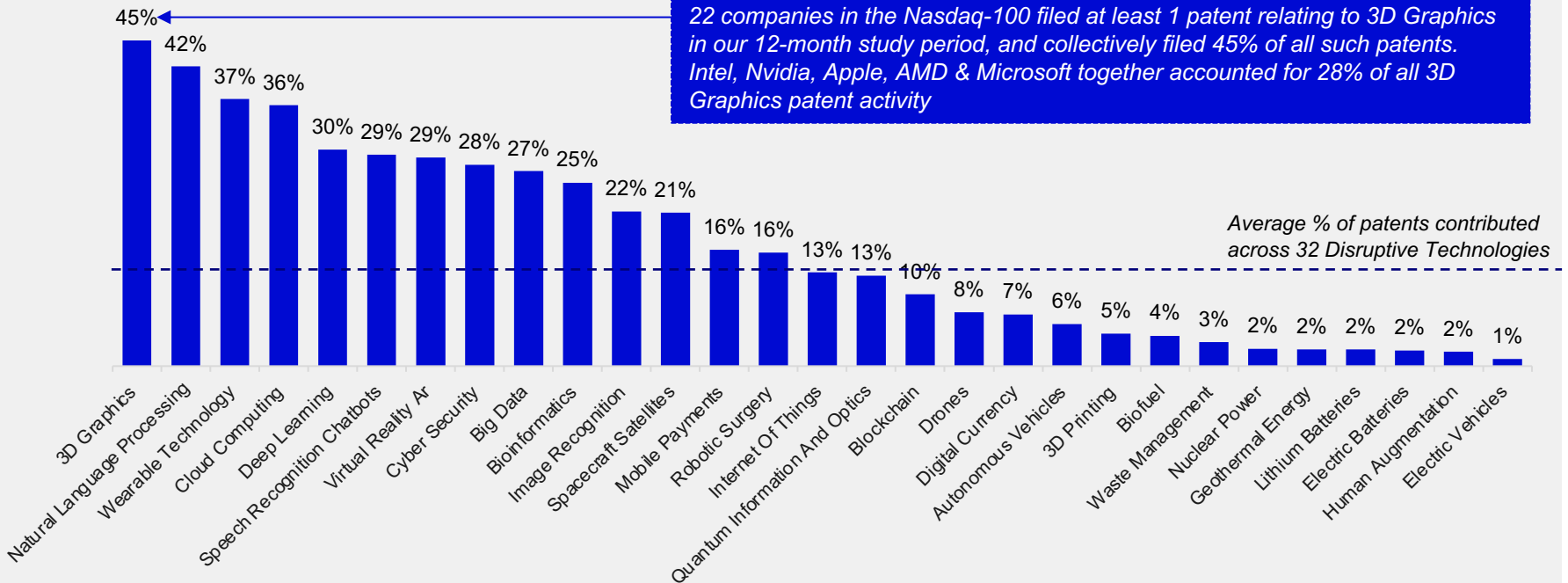


Source: Nasdaq, Factset. Data as of 3/31/2022.

# Nasdaq-100 Index: Innovation and Patent Filings

+ 56 companies in the Nasdaq-100 (representing 80.4% of index weight) recently filed patents across one or more of 35 key areas of Disruptive Technology such as Artificial Intelligence, Clean Energy, or Blockchain

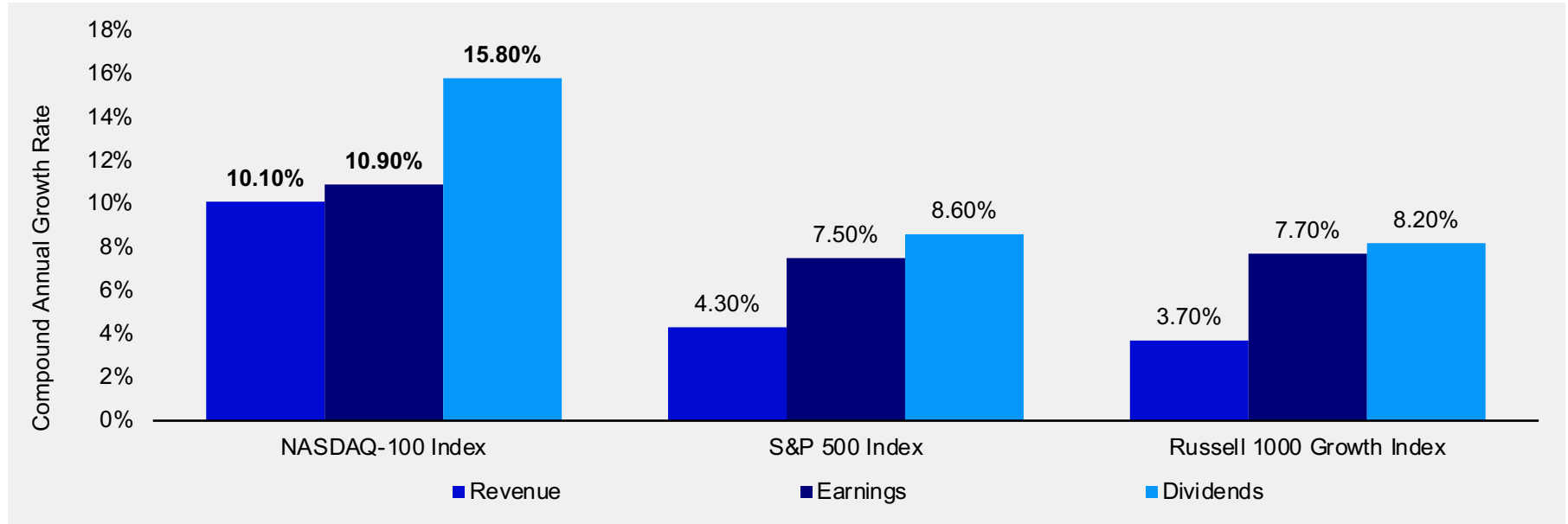
## Patent Contribution of Nasdaq-100 Companies to Selected Disruptive Technologies (trailing 1-year as of 11/30/2022)



Source: Nasdaq, as of 12/31/2022; Yewno Data as of 11/30/2022. Constituents as of 12/31/2022. Most current available data available. "Holdings are subject to change and are not buy/sell recommendations."

# Nasdaq-100 Index: Robust Fundamental Growth

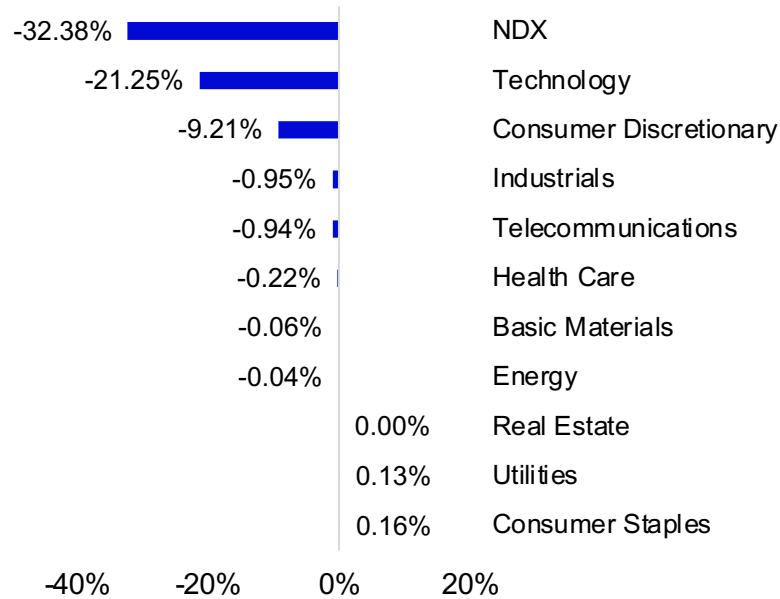
- + Since 2011, NASDAQ-100 constituents have generated higher growth rates across revenue, earnings and dividends than those of the S&P 500 and Russell 1000 Growth Indices
- + NASDAQ-100 companies have strong brand equity, valuable patents and economies of scale that may drive product demand and pricing power



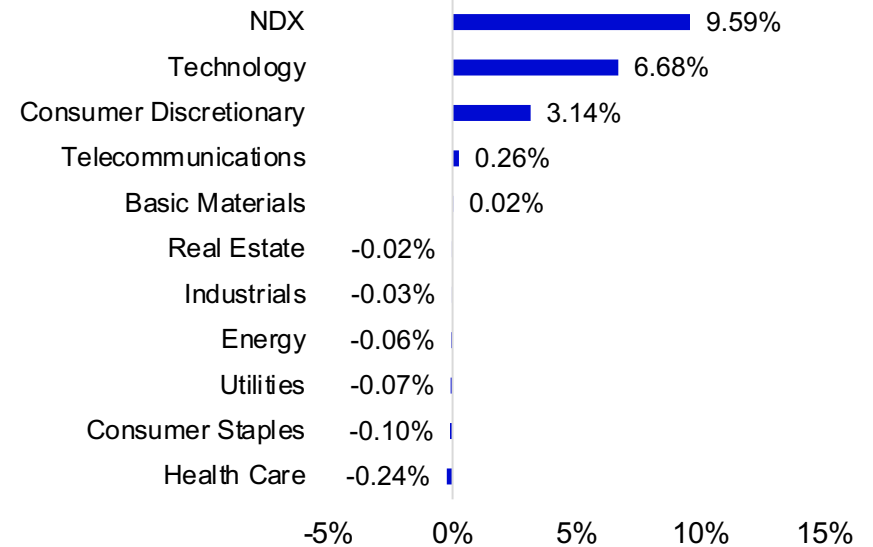
Source: Bloomberg L.P., December 31, 2011 through December 31, 2021. Most current available data. For illustration purposes only, An Investor cannot invest directly in an index

# Recent Attribution Drivers

## 2022 Attribution and Sector Contribution



## YTD Attribution and Sector Contribution

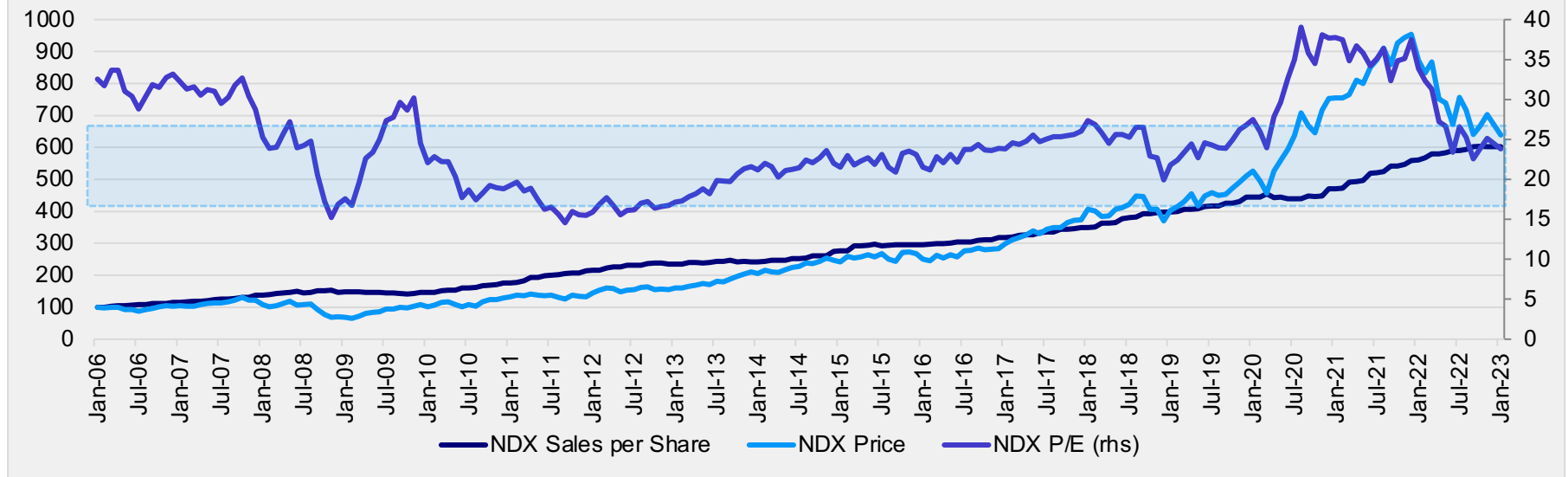


Source: Bloomberg L.P. as of 2/24/2023.

# Nasdaq-100 Index: Valuation

- + From 2014-2019, NDX trailing twelve-month Price-to-Earnings\* ratio (P/E) had stabilized in the low-to-mid 20s, below where it was in the mid-2000s
- + The trend broke during 2020, with P/E climbing to a range in the mid-to-upper 30s
- + Fundamental story has contributed to the growth of NDX companies
- + Sales: +503%, Price: +539%, Valuation: -27%

**NASDAQ-100 Index, Sales Growth vs. Price Growth vs. P/E Ratio as of 12/31/2022**



\* P/E is a ratio for valuing a company that measures its current share price relative to its per-share earnings.

Source: Nasdaq, FactSet, Bloomberg L.P., as of 12/31/2022.



# Flows into Growth-Focused ETFs

## YTD ETF Flows (\$MM) by Size and Style\*

	Value	Blend	Growth	Total
Large	-3,562	-7,642	-8,186	<b>-19,390</b>
Mid	5,379	-321	-1,568	<b>3,490</b>
Small	3,462	516	-1,620	<b>2,358</b>
Multi-Cap	-172	139	-277	<b>-311</b>
Total	<b>5,105</b>	<b>-7,308</b>	<b>-11,651</b>	<b>-13,853</b>

\*Size and Style are defined by market capitalization and the main characteristics of a stock or mutual fund such as growth or value.

Source: Bloomberg L.P. as of 2/24/2023.

# Thank you

# Appendix

# About Risk

**Before investing, investors should carefully read the prospectus/summary prospectus and carefully consider the investment objectives, risks, charges and expenses. For this and more complete information about the Fund call 800 983 0903 or visit [invesco.com](https://www.invesco.com) for the prospectus/summary prospectus.**

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