



Nasdaq-100[®] Index:

The Benchmark of the 21st Century

September 2022

Nasdaq-100 vs. FATMANG, YTD 2022 Performance



Source: Nasdaq Global Indexes, Bloomberg. Data as of 9/15/2022.

FATMANG 2Q'22 Earnings Highlights

CONSUMER TECH

Big Tech Earnings: Microsoft And Alphabet Signal Q2 Could Be A Bottom

Beth Kindig Contributor

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Big Tech earnings were off to a solid start on Tuesday when Microsoft and Google reported stable revenue growth and margins that are unchanged from recent macro conditions. The strong margins were especially welcomed as many companies have been missing on operating margins and cash flow. Meanwhile, Microsoft delivered free cash flow of \$17.8 billion and net profits of \$16.7 billion along with upbeat guidance for the year. Similarly, Google reported strong free cash flow of \$12.6 billion and net profits of \$16 billion in the recent quarter.

Amazon stock surges toward biggest monthly gain in 15 years

Published: July 29, 2022 at 11:01 a.m. ET

By Tomi Kilgore



Referenced Symbols

AMZN +11.10% ▲ SPX +0.95% ▲

Sponsored By

Shares of Amazon.com Inc. **AMZN**, +11.10% shot up 11.8% in morning trading Friday, in the wake of second-quarter results, to put them on for the best one-month gain in more than 15 years. The stock has run up 28.8% in July, to snap a three-month losing streak in which it tumbled 34.8%, amid growing concerns over the effect historically high inflation and a slowing economy would have on the ecommerce giant's customers. But Amazon assuaged some of those fears, after it reported late Thursday a surprise loss for the quarter but revenue that rose above expectations, with Chief Financial Officer Brian Olsavsky saying there was a "step up in consumer demand," according to a FactSet transcript of the post-earnings conference call with clients. The stock was headed for the biggest one-month gain since it rocketed 54.1% in April 2007. Meanwhile, the S&P 500 **SPX**, +0.95% has gained 8.5% in July, on track for the biggest monthly gain since it climbed 10.8% in November 2020.

TECH

Apple beats on revenue and profit, expects growth to accelerate despite 'pockets of softness'

PUBLISHED THU, JUL 28 2022 3:30 PM EDT | UPDATED THU, JUL 28 2022 8:19 PM EDT

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KEY POINTS

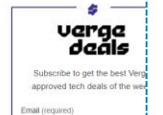
- Apple reported fiscal third-quarter earnings on Thursday that beat Wall Street expectations for sales and profit but showed slowing growth for the iPhone maker.

Facebook reports drop in revenue for the first time

Meta's money-making machine is in trouble

By Alex Heath | @alexheath | Jul 27, 2022, 9:00pm EDT | 34 comments

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AUTOS EARNINGS REPORT

Tesla Earnings Were Strong, But the Real Story Is Margins.

By AI Root | Follow | Updated July 21, 2022 / Original July 20, 2022

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5 minutes



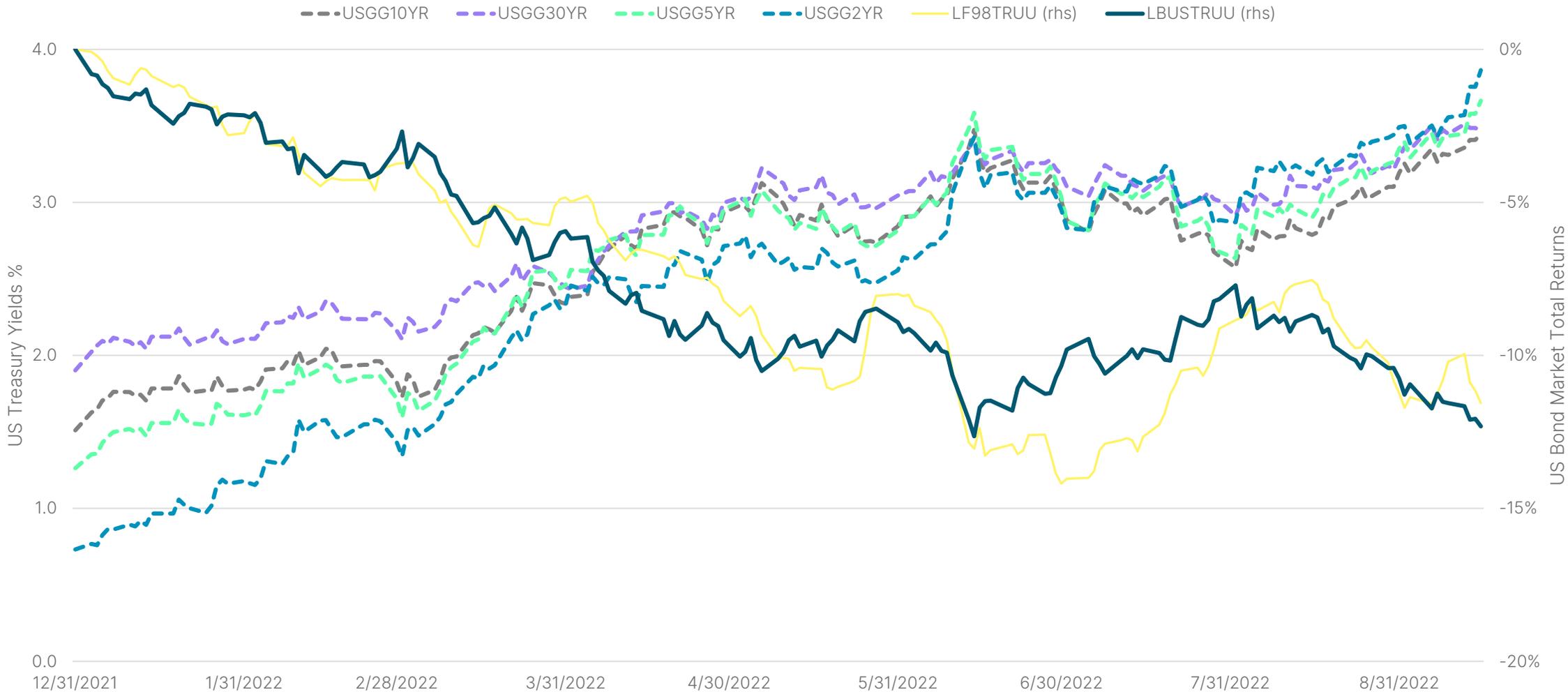
Shares of Tesla are down about 26% this year.
Justin Sullivan/Getty Images

Tesla stock was on the rise after reporting solid earnings, considering the difficult operating environment in the quarter.

Tesla (ticker: TSLA) shares rose almost 10% Thursday, closing above \$800 for the first time since May. It was the best post-earnings reaction since the fourth quarter 2019 results were reported in early 2020.

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Rates & Fixed Income, YTD 2022 Performance



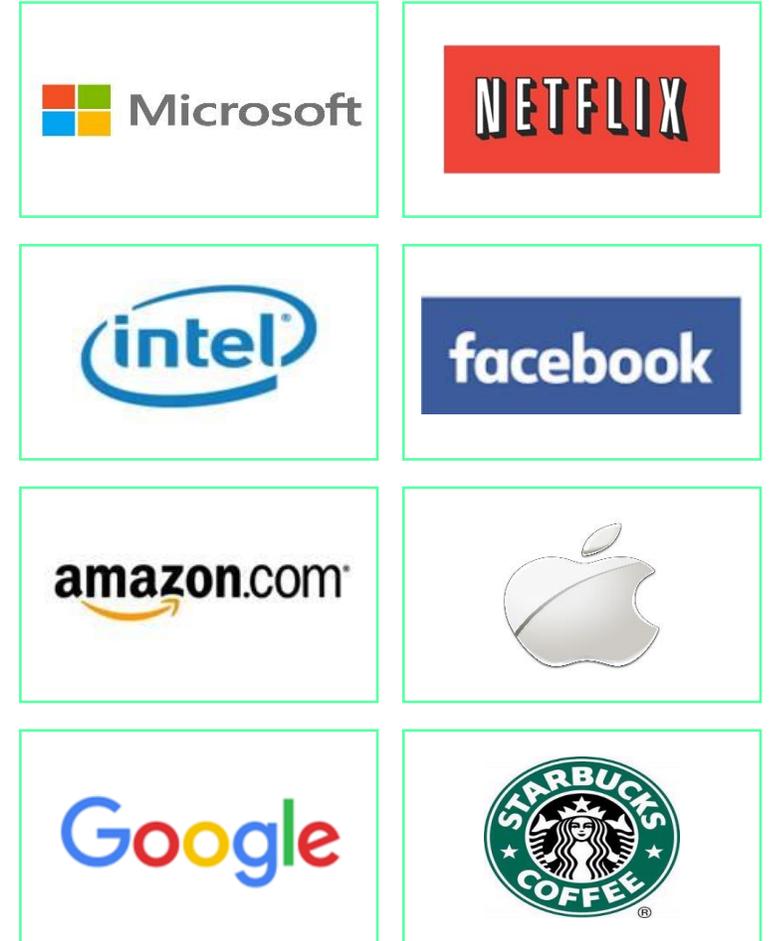
Source: Nasdaq Global Indexes, Bloomberg. Data as of 9/15/2022.

Nasdaq-100 Index: Overview

The disruptors; the game-changers; the forward-thinkers.

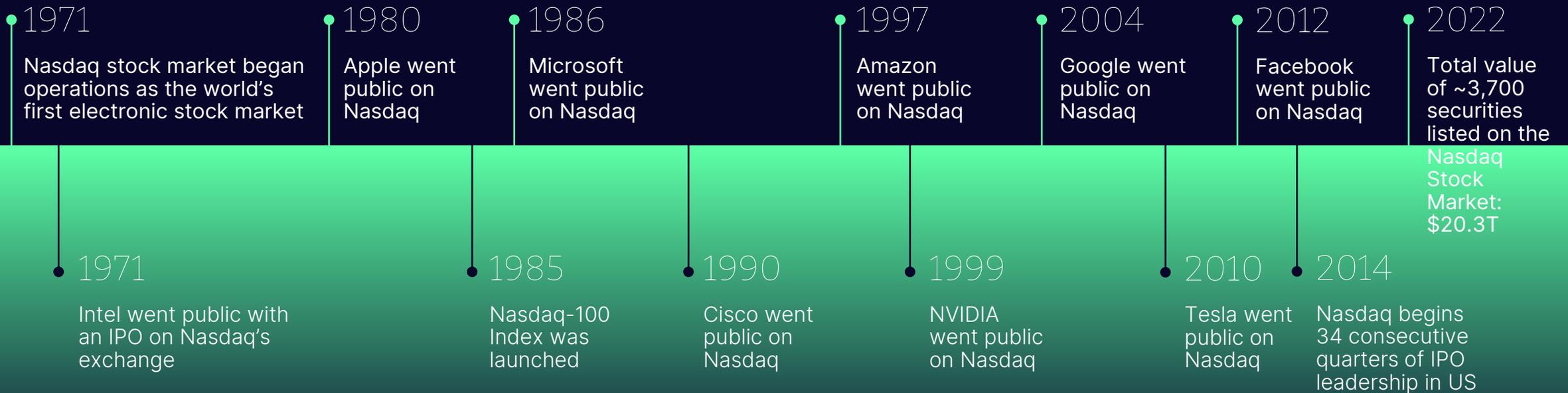
Companies that influence our lives daily, in multiple areas.

- GE, Chicago Gas Company, American Sugar Company, and the other original Dow Industrials accelerated the growth of the US economy at the turn of the 20th century, and helped spur its transformation from agricultural to industrial.
- By mid-century, GE was still one of the nation's 10 largest companies by market cap, joined by the automakers (GM/Ford/Chrysler), Big Oil (Exxon Mobil, Texaco, Gulf Oil), and other large, diversified industrial companies like DuPont.
- At the turn of the 21st century, the Internet/Tech Bubble heralded the transformation of the economy from industrial to technological; from analog to digital; from hardware to software.
- Today, Apple, Amazon, Google, Facebook and Microsoft have become global leaders in the technology sector by creating products and services that are essential to both individual consumers and enterprise customers. From software, computing, and communications, to entertainment, advertising, and e-commerce, their platforms represent the new "diversified industrials" of the 21st century.
- Beyond the biggest names, companies like Intel and Netflix specialize in narrower applications of technology, while the rest of the Nasdaq-100 encompasses innovation-driven companies in other sectors, like Starbucks.

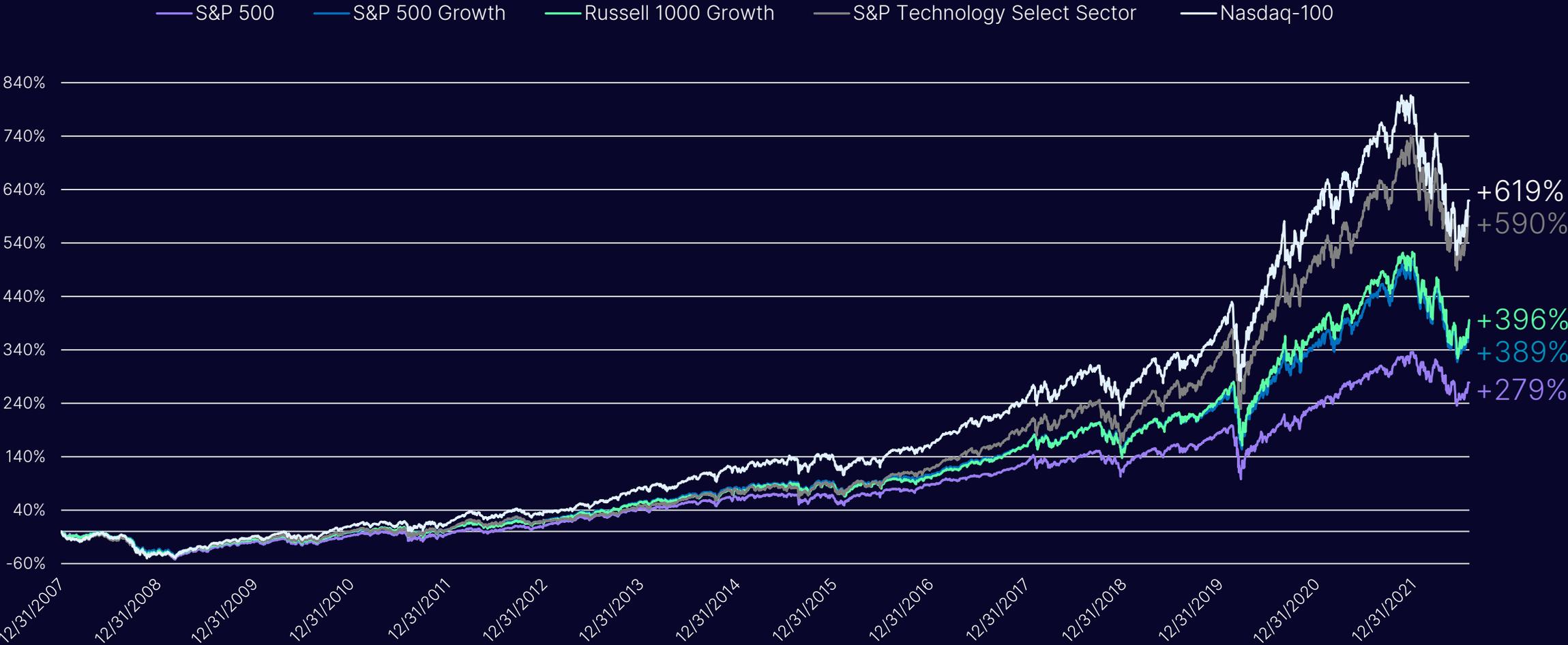


Section

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



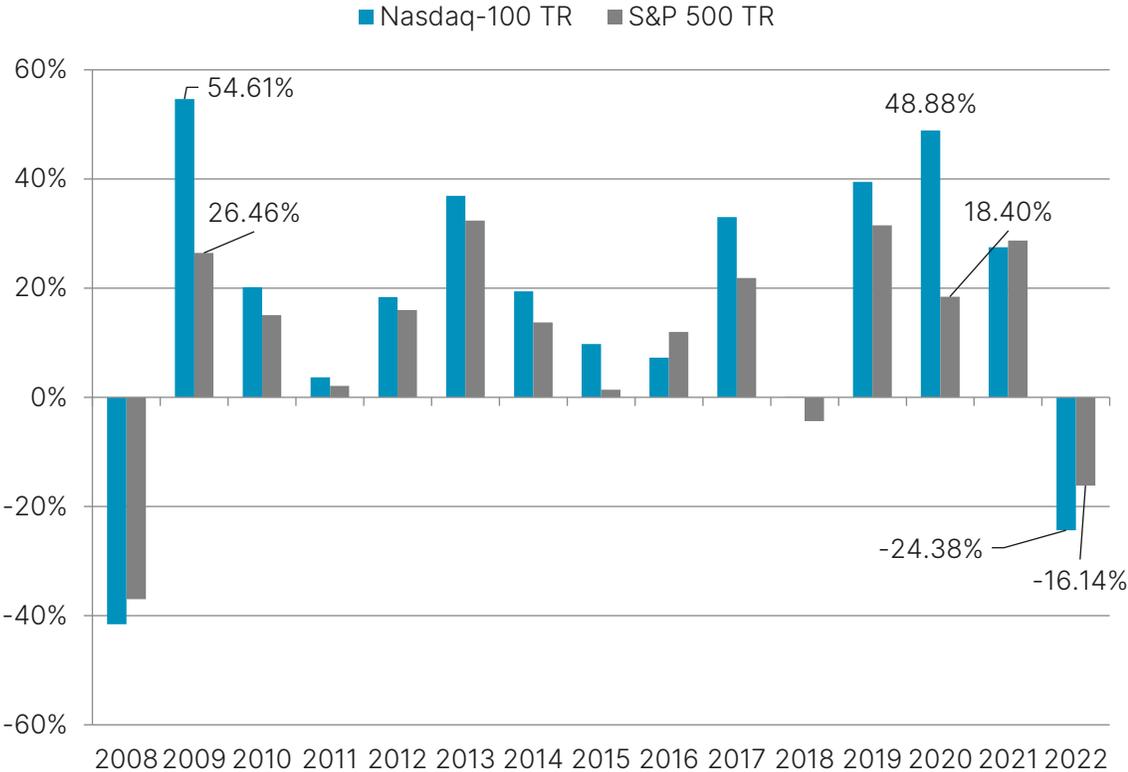
Nasdaq-100's Long-Run Performance is Unrivalled



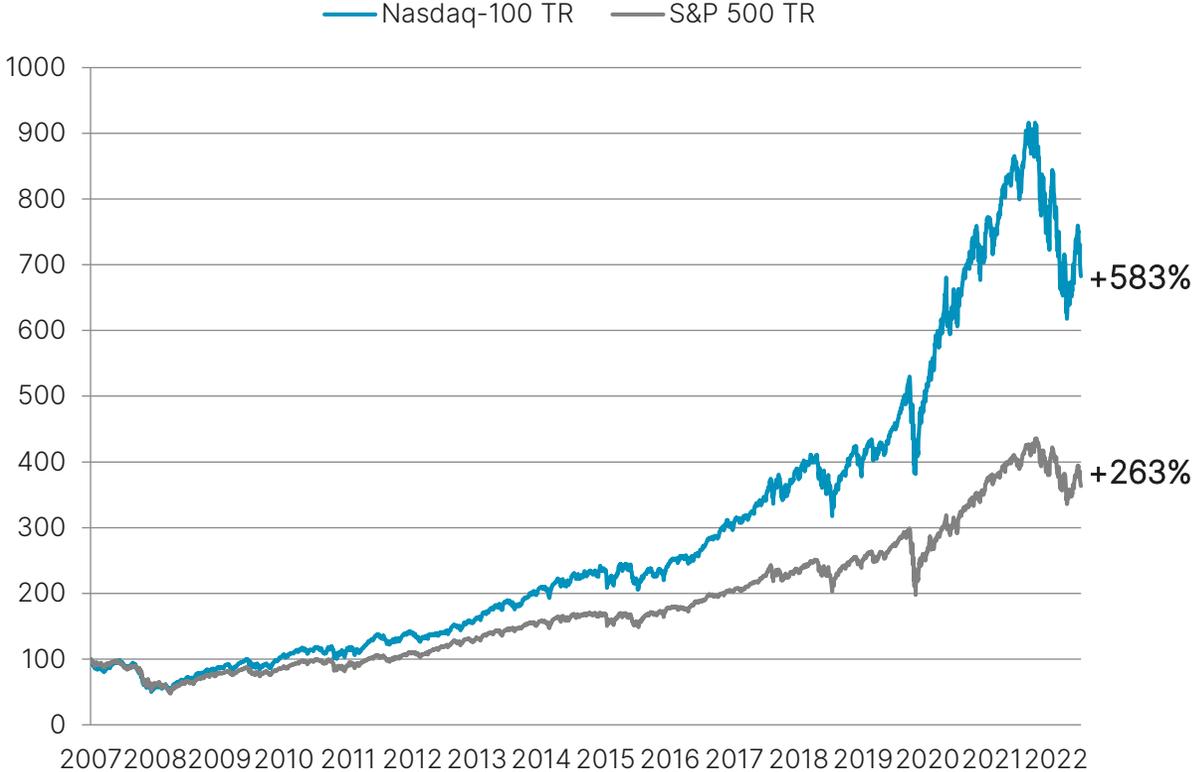
Source: Nasdaq, FactSet, Bloomberg. Data as of 7/29/2022.

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 14 calendar years, including by more than 30% in 2020; price underperformance in 2021 was 0.26%

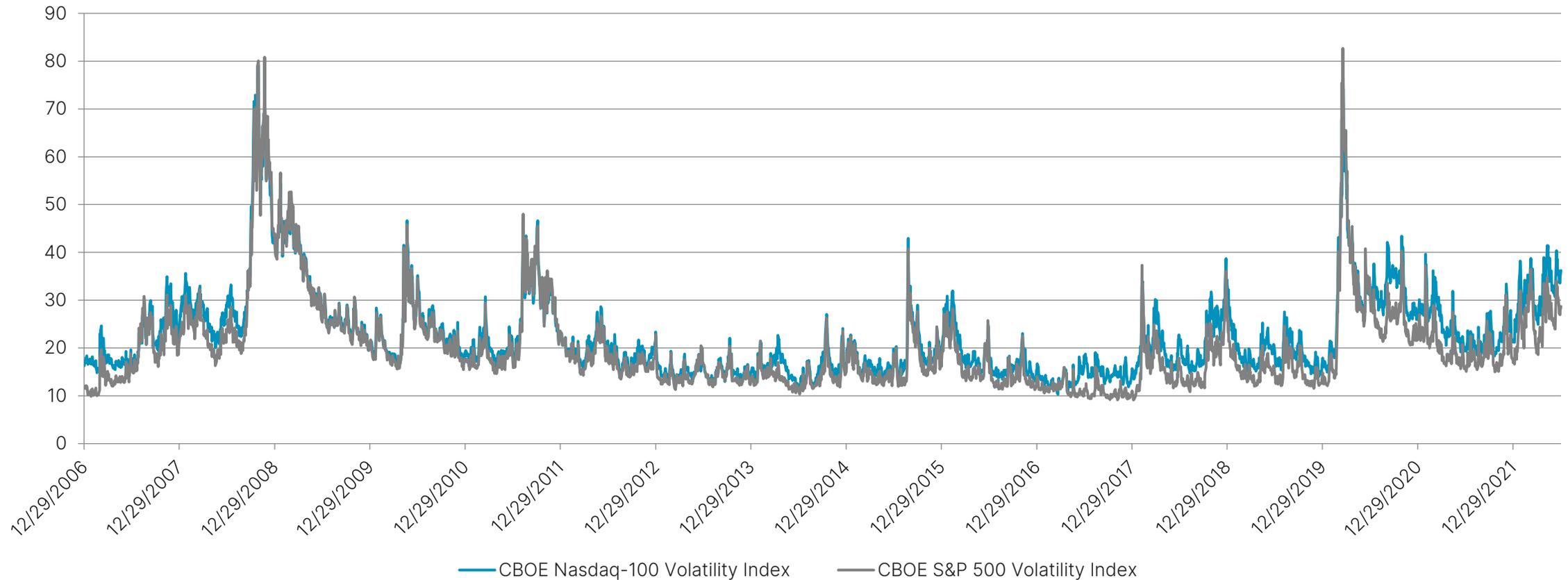
- Cumulative total returns through August 31, 2022 were 583% for NDX – more than doubling the returns of 263% for SPX.

Performance Data (Total Return)

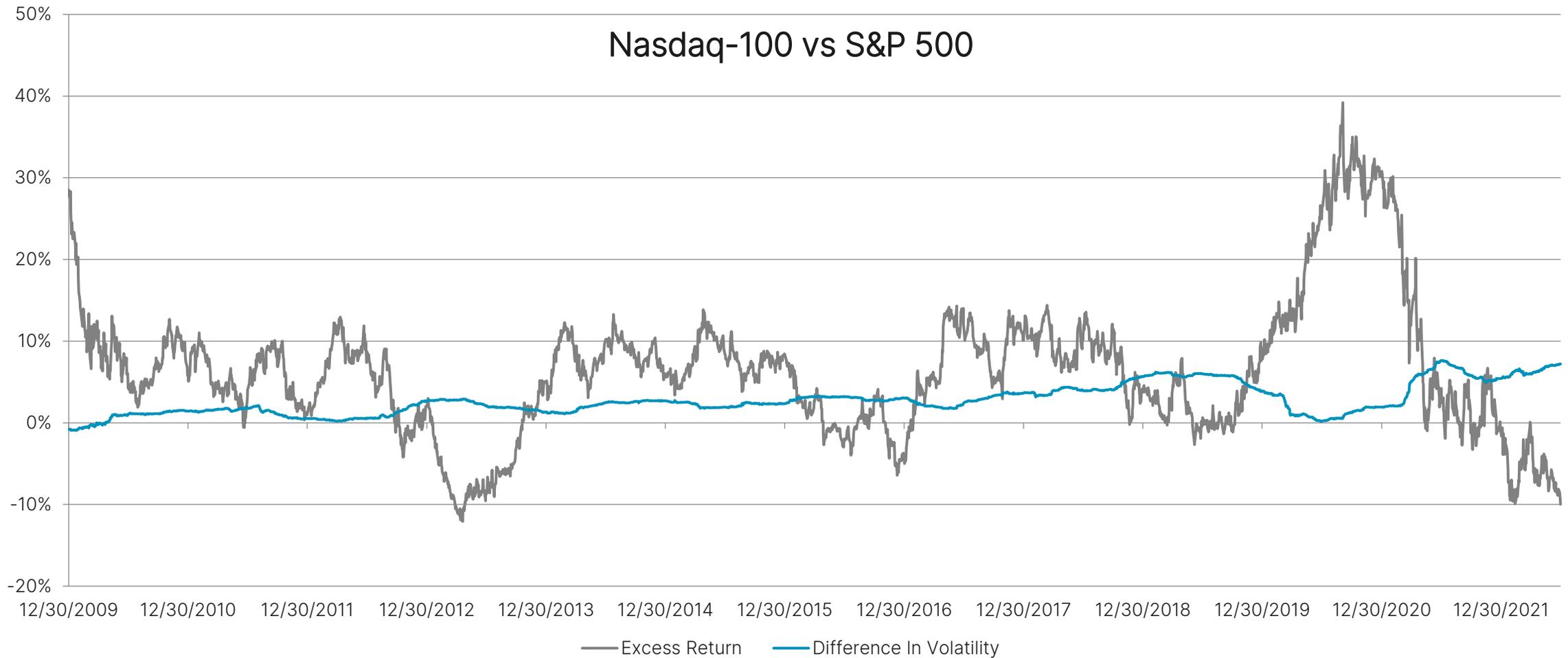
Year	Calendar Year Return		Correlation	Calendar Year Volatility	
	Nasdaq-100	S&P 500	NDX + SPX	Nasdaq-100	S&P 500
2007	19.24%	5.49%	0.890	18.68%	15.99%
2008	-41.57%	-37.00%	0.945	42.22%	40.89%
2009	54.61%	26.46%	0.935	26.47%	27.25%
2010	20.14%	15.06%	0.949	19.48%	18.06%
2011	3.66%	2.11%	0.948	23.75%	23.24%
2012	18.35%	16.00%	0.920	15.44%	12.74%
2013	36.92%	32.39%	0.901	12.49%	11.16%
2014	19.40%	13.69%	0.924	14.06%	11.36%
2015	9.75%	1.38%	0.947	17.85%	15.50%
2016	7.27%	11.96%	0.916	16.17%	13.11%
2017	32.99%	21.83%	0.801	10.32%	6.69%
2018	0.04%	-4.38%	0.949	22.70%	17.04%
2019	39.46%	31.49%	0.950	16.31%	12.46%
2020	48.88%	18.40%	0.937	36.29%	34.37%
2021	27.51%	28.71%	0.877	18.52%	13.08%
2022	-24.38%	-16.14%	0.965	32.93%	23.77%

Historical Volatility

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

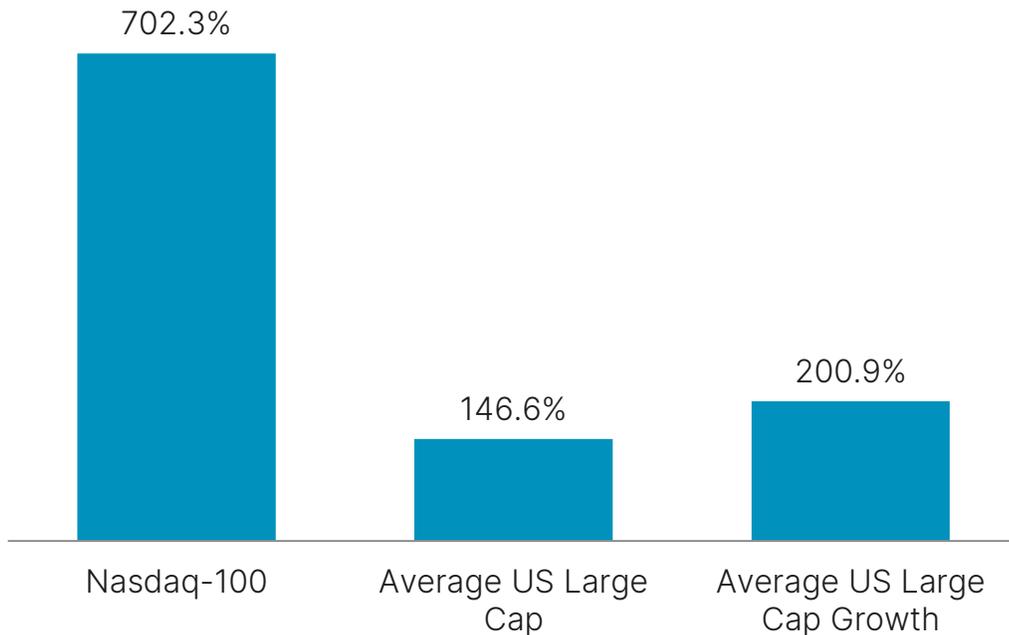


1-Year Excess Return vs. Volatility

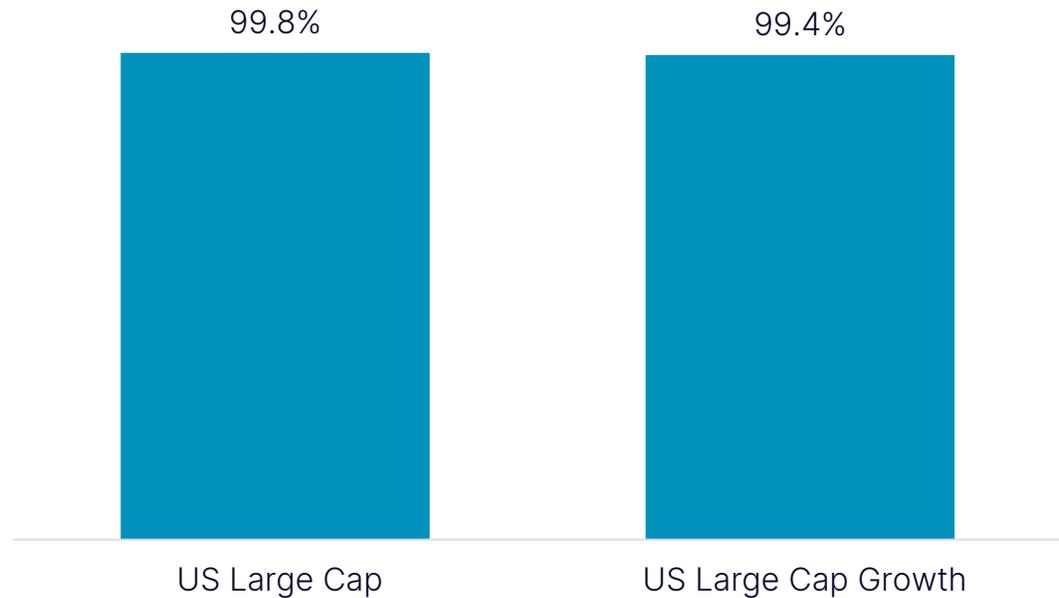


Nasdaq-100 vs. US Large Cap Fund Universe

10-Year Total Returns



% of Funds Outperforming



of Funds:

643

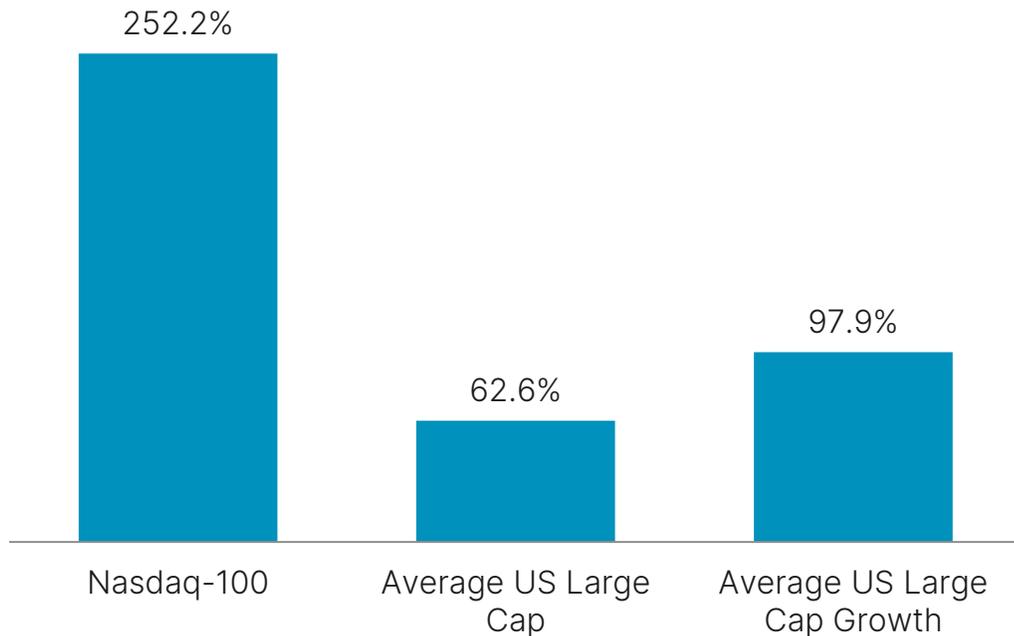
169

Source: Nasdaq Global Indexes, Bloomberg, Morningstar. Data as of 12/31/2021.
Includes all US ETFs and Mutual Funds that were active for the entire period.

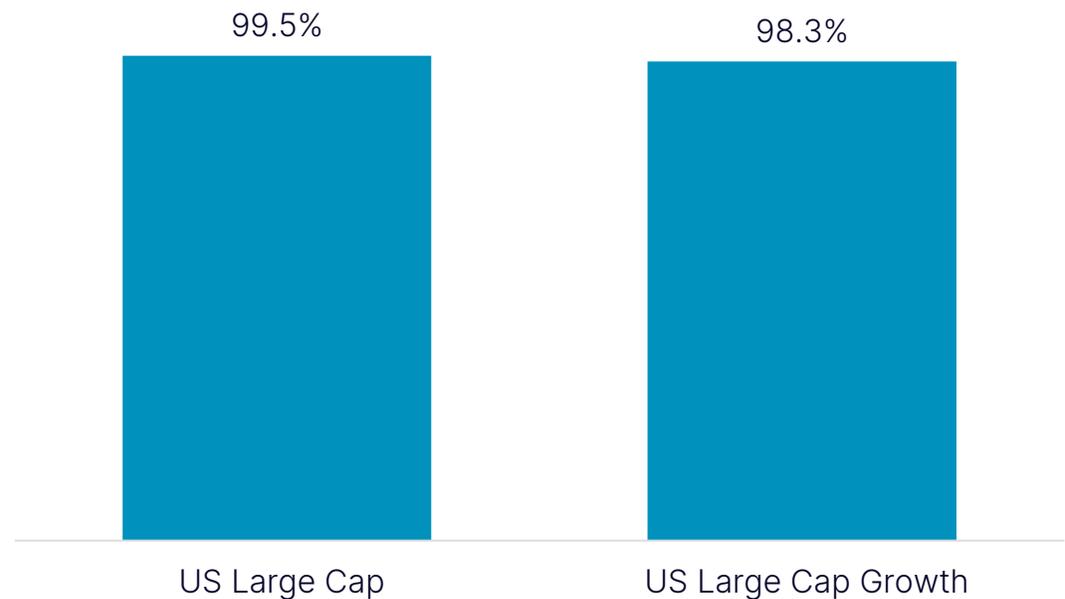


Nasdaq-100 vs. US Large Cap Fund Universe

5-Year Total Returns



% of Funds Outperforming



of Funds:

1,006

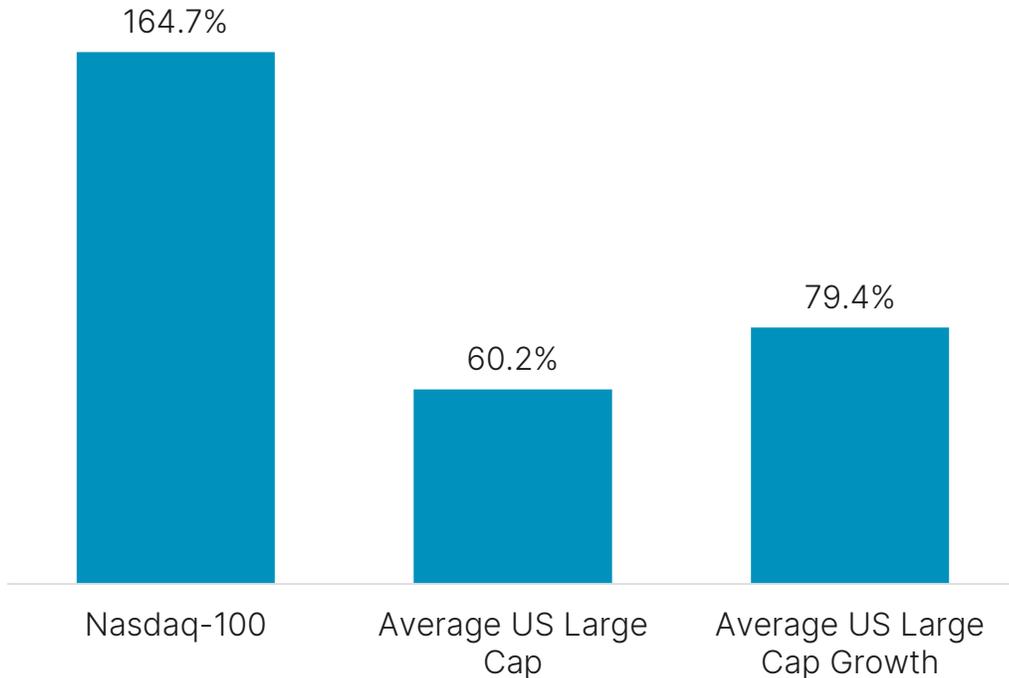
295

Source: Nasdaq Global Indexes, Bloomberg, Morningstar. Data as of 12/31/2021.
Includes all US ETFs and Mutual Funds that were active for the entire period.

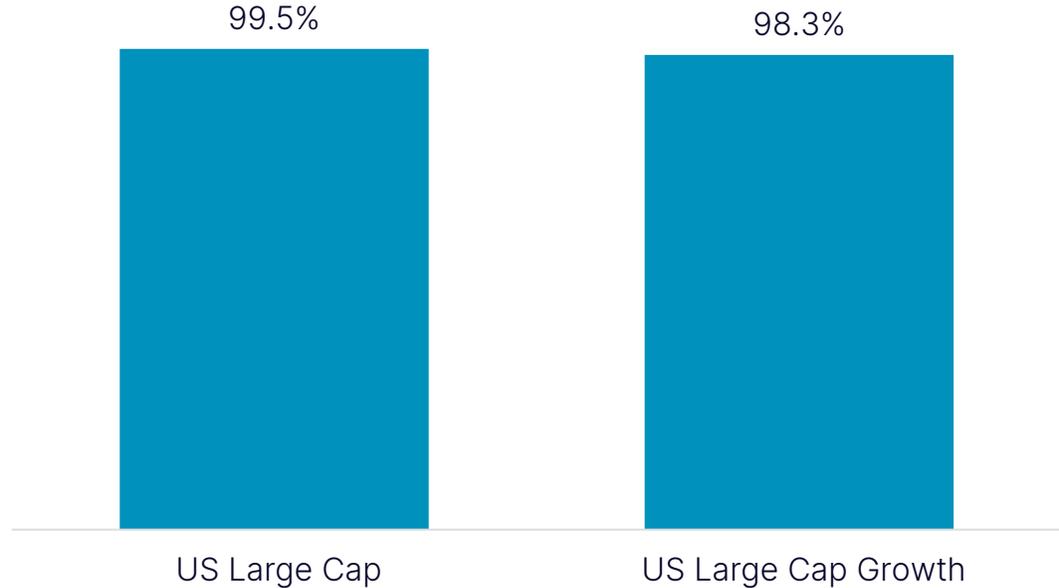


Nasdaq-100 vs. US Large Cap Fund Universe

3-Year Total Returns



% of Funds Outperforming



of Funds:

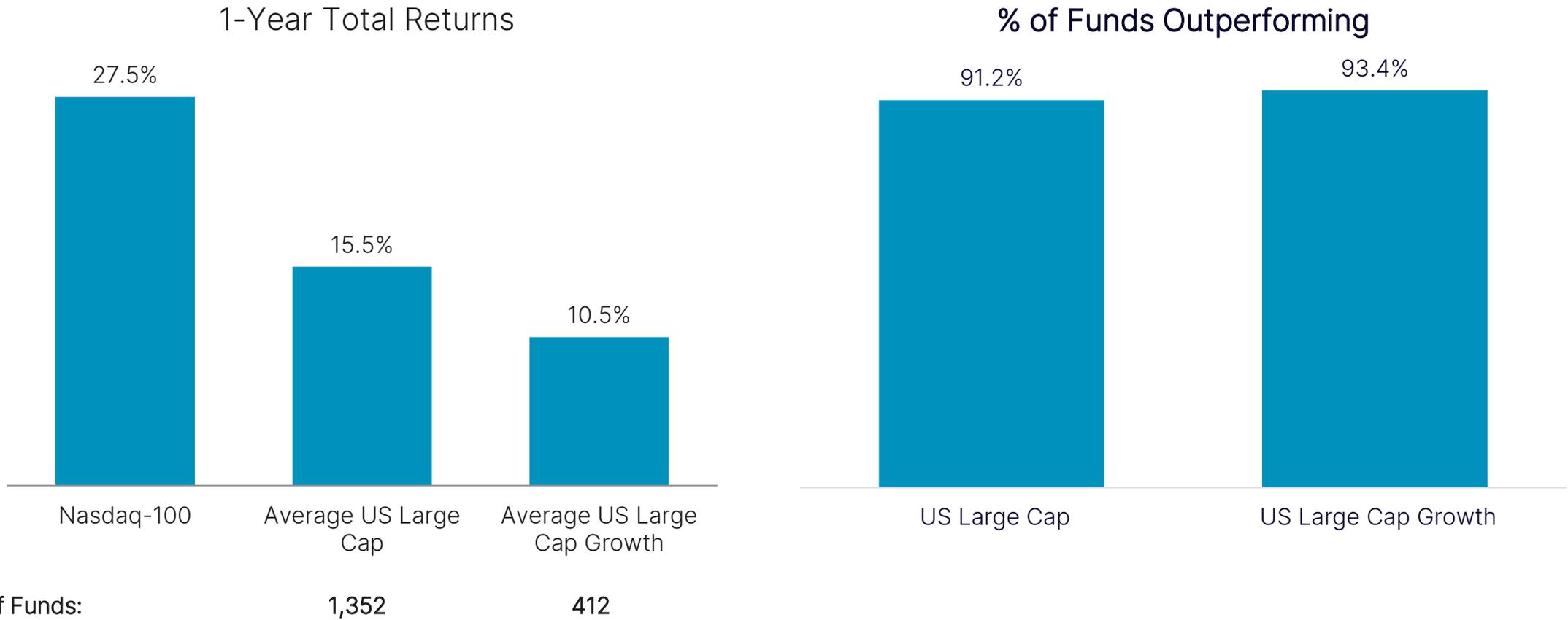
1,163

344

Source: Nasdaq Global Indexes, Bloomberg, Morningstar. Data as of 12/31/2021.
Includes all US ETFs and Mutual Funds that were active for the entire period.



Nasdaq-100 vs. US Large Cap Fund Universe



Source: Nasdaq Global Indexes, Bloomberg, Morningstar. Data as of 12/31/2021.
Includes all US ETFs and Mutual Funds that were active for the entire period.

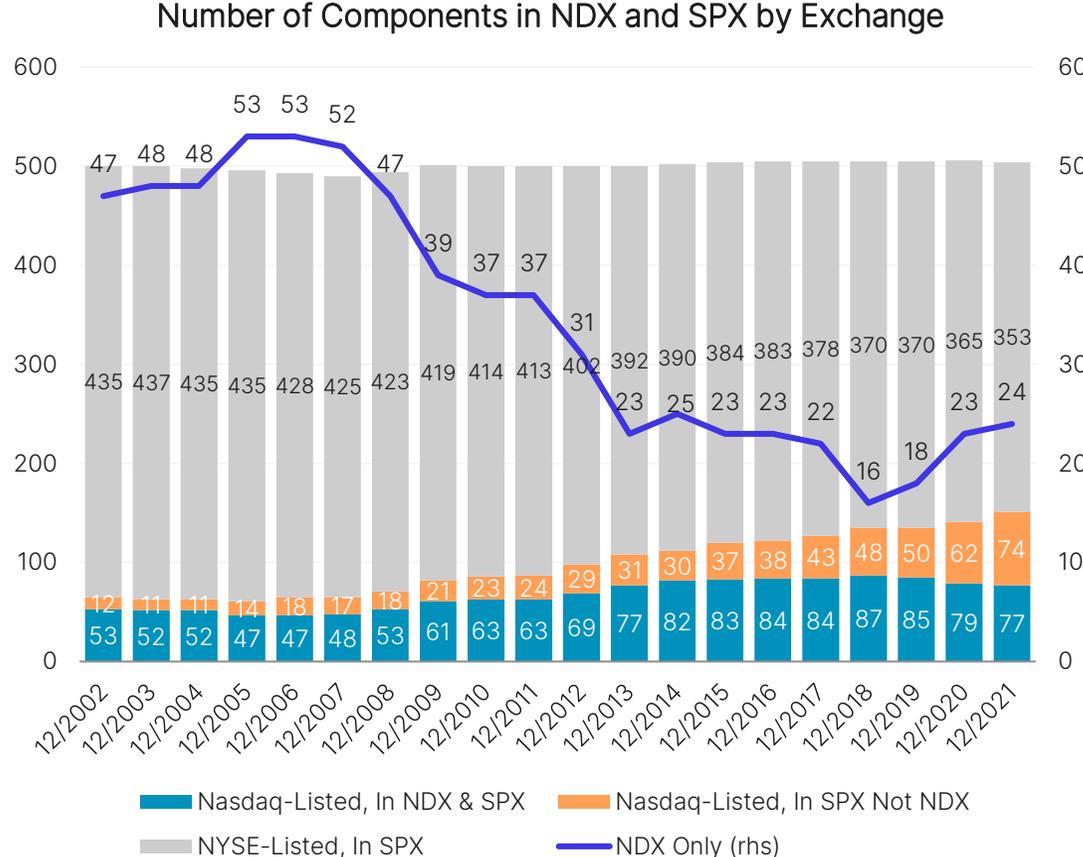
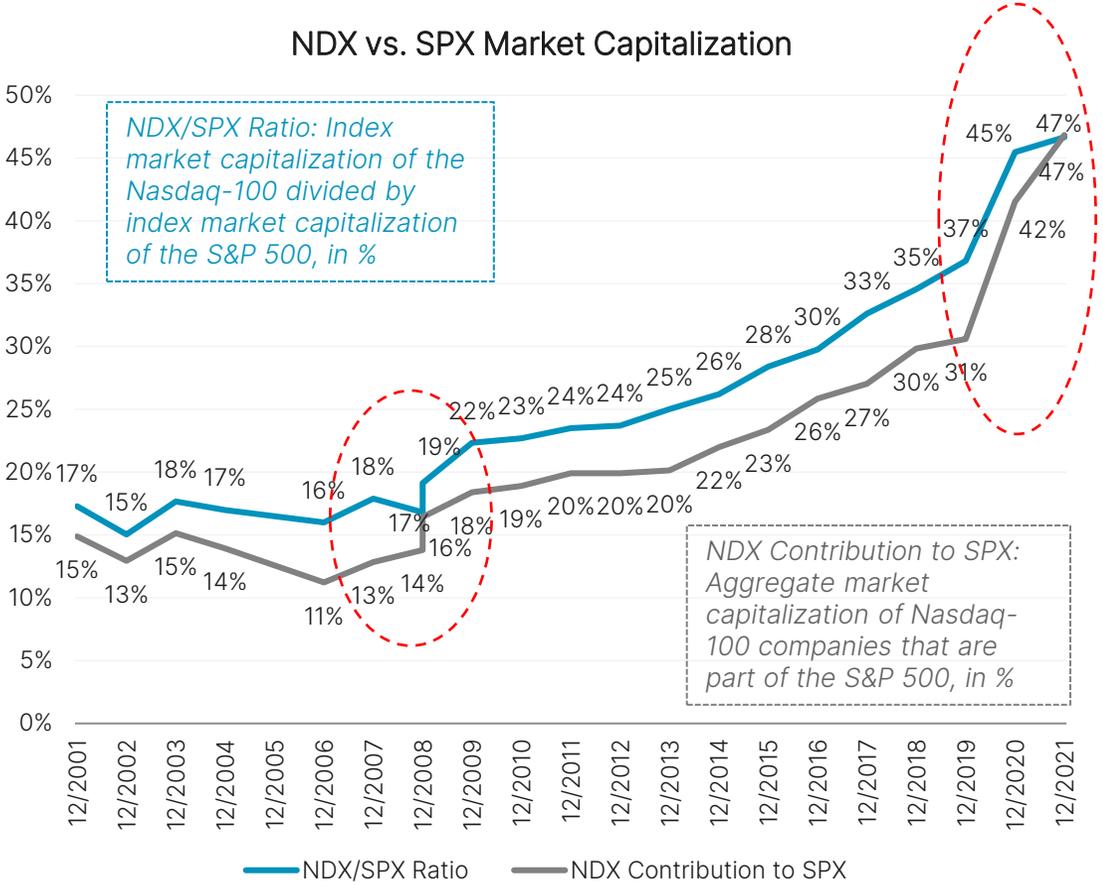


Coveted Placement

The 100 that Make the Index



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

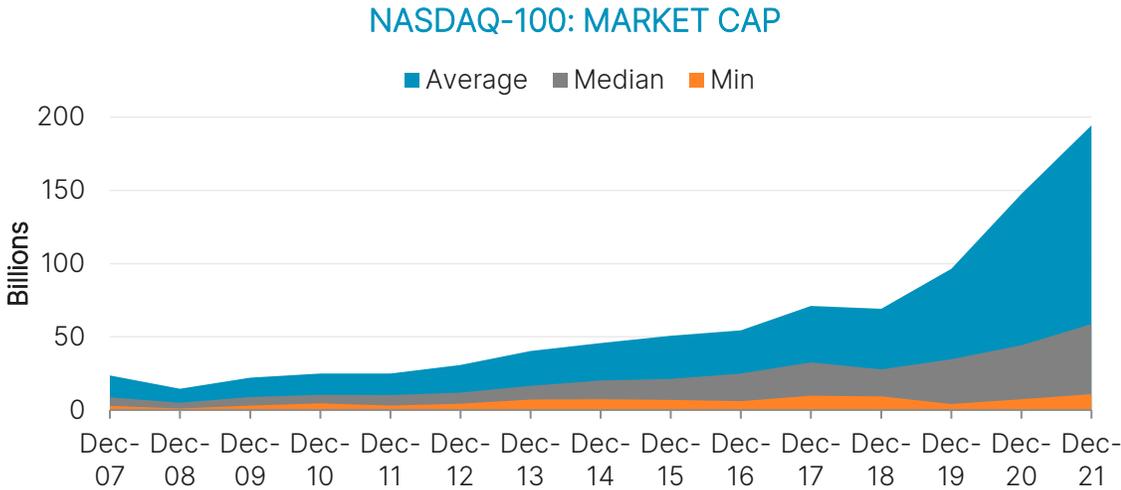


Source: Nasdaq Global Indexes, Bloomberg. Data as of 12/31/2021.

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

Average, median and minimum market caps of the NASDAQ-100 and the S&P 500 at year-end, 2007-2021

- All figures dropped during the 2008 Financial Crisis and have been steadily rebounding in spite of the Covid-19 pandemic and a brief dip during the Q4'18 bear market
- Twelve of the last thirteen years the average market cap has been higher in NDX than SPX. As of year-end 2021, NDX: \$194B, SPX: \$83B.
- The median market cap has been higher for NDX than SPX in each of the last nine years. As of year-end 2021, the medians were \$58.8B for NDX and \$34B for SPX. Despite the presence of very large outlier companies such as Apple, Amazon, Microsoft, Google and Facebook, the market cap of NDX tends to be truer to large cap than SPX.
- The smallest company in NDX (\$10.8B) has been larger than the smallest company in SPX (\$5.2B) for the last thirteen years.



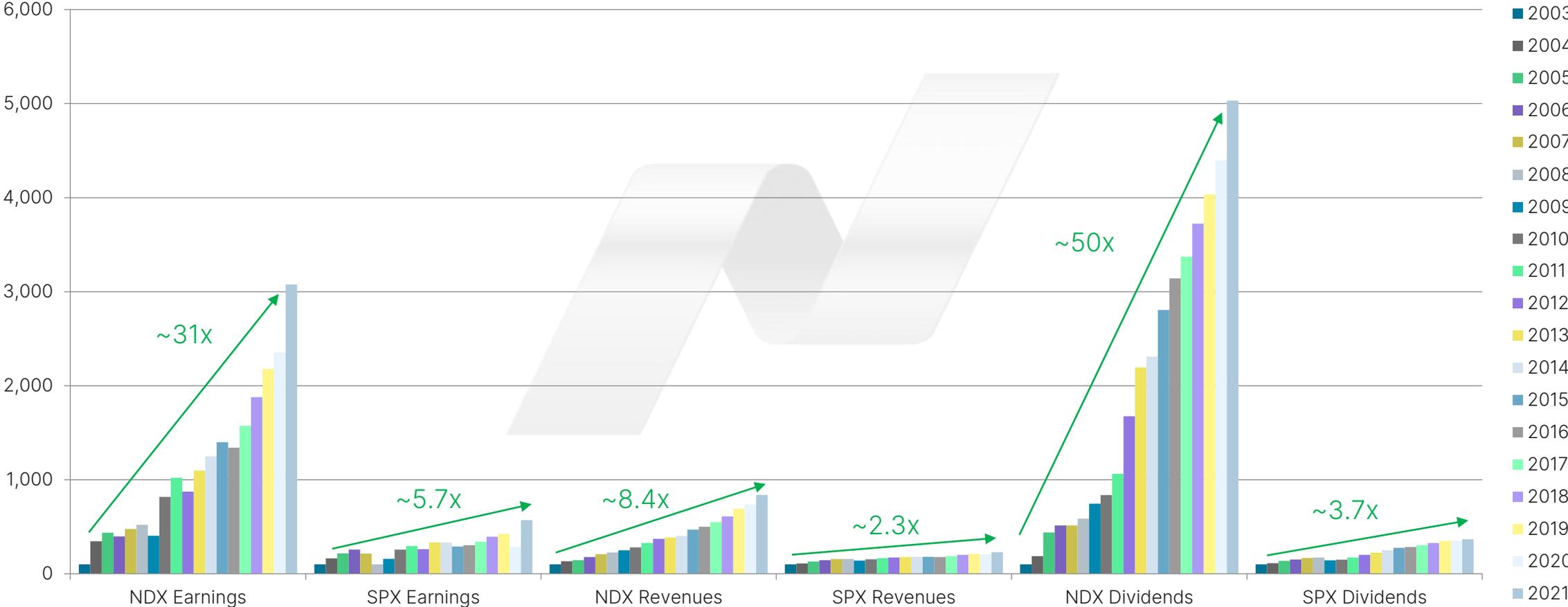
Nasdaq-100: New Additions in 2021 & 2022

No.	Effective Date	Ticker	Company Name	ICB Industry	ICB Sector	Market Cap, \$Bn	FY'21 Return (%)
1	7/21/2021	HON	Honeywell International Inc.	Industrials	General Industrials	143.5	(2.0)
2	8/26/2021	CRWD	CrowdStrike Holdings, Inc.	Technology	Software and Computer Services	42.6	(3.3)
3	12/20/2021	ABNB	Airbnb, Inc.	Consumer Discretionary	Travel and Leisure	57.7	13.4
4	12/20/2021	DDOG	Datadog, Inc.	Technology	Software and Computer Services	45.8	80.9
5	12/20/2021	FTNT	Fortinet, Inc.	Technology	Software and Computer Services	58.8	142.0
6	12/20/2021	LCID	Lucid Group, Inc.	Consumer Discretionary	Automobiles and Parts	62.6	280.1
7	12/20/2021	PANW	Palo Alto Networks, Inc.	Technology	Software and Computer Services	54.9	56.7
8	12/20/2021	ZS	Zscaler, Inc.	Technology	Software and Computer Services	45.0	60.9
9	1/24/2022	ODFL	Old Dominion Freight Line, Inc.	Industrials	Industrial Transportation	29.1	83.6
10	2/22/2022	AZN	AstraZeneca PLC	Health Care	Pharmaceuticals and Biotechnology	203.2	16.5



The Fundamentals

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



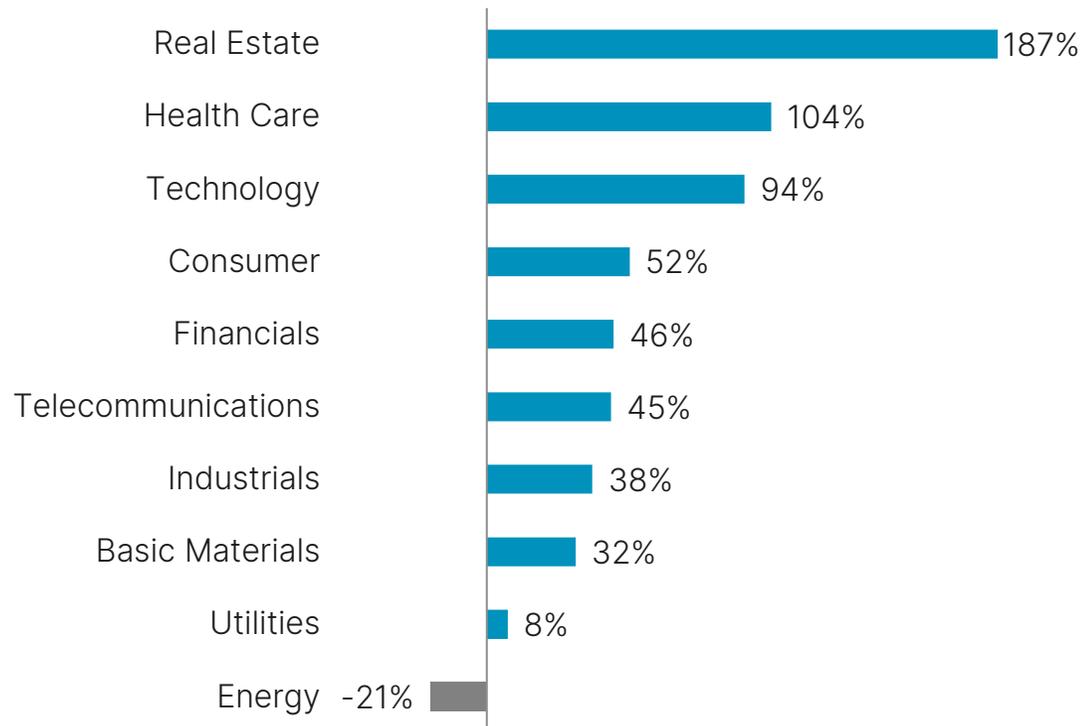
Current TTM Dividend Yield: 0.81% (NDX) vs. 1.55% (SPX)

Source: Nasdaq, Factset, Bloomberg. Data as of 12/31/2021. Current TTM Dividend Yields as of 8/3/2022.

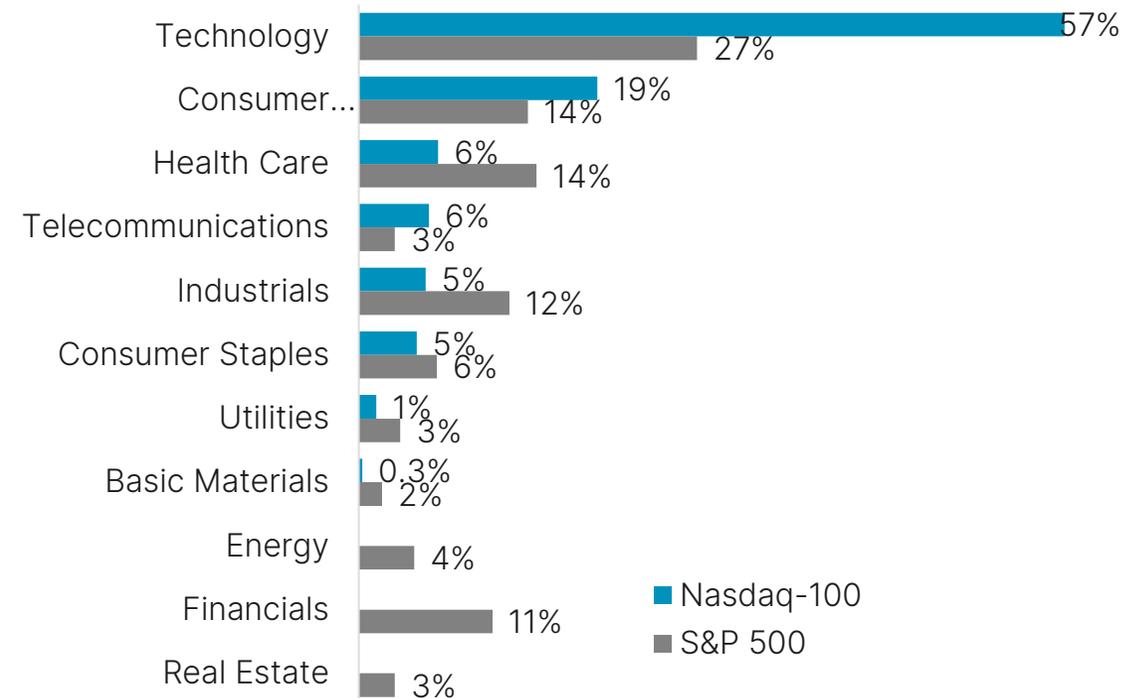
The Decade of the Nasdaq-100

The underlying story for the rise in the Nasdaq-100 is that the U.S.'s economic growth is shifting from capital-intensive, traditional industries (Industrials, Materials & Energy) to the “new-economy” sectors such as Health Care, Technology & Consumer. (Note: Real Estate was by far the smallest sector, representing ~1% of aggregate revenue.)

10-Year Sales Growth Across Industries in US Large & Midcaps

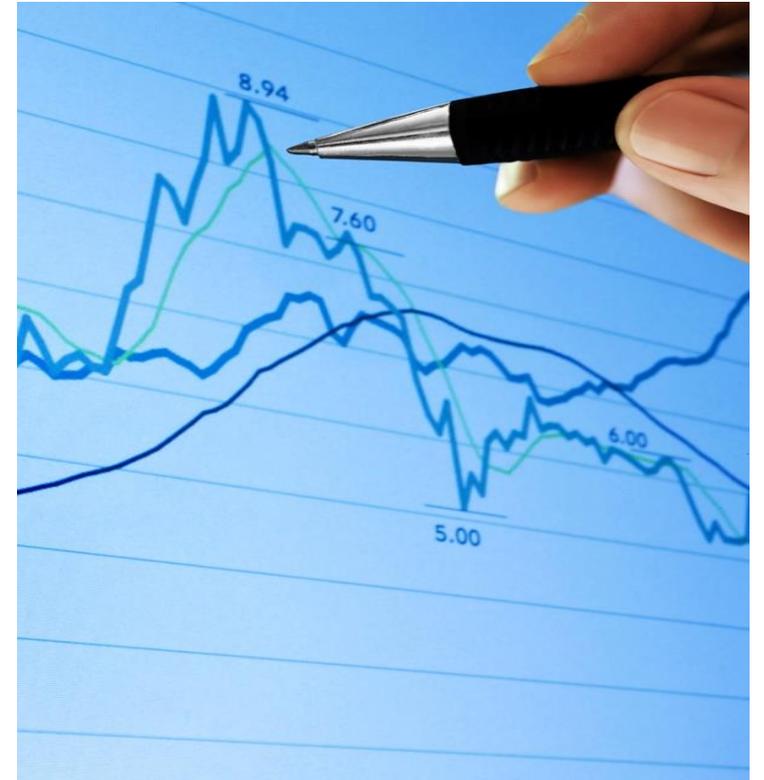


Industry (ICB) Weights (%) of Nasdaq-100 vs. S&P 500 (as of June 30, 2022)



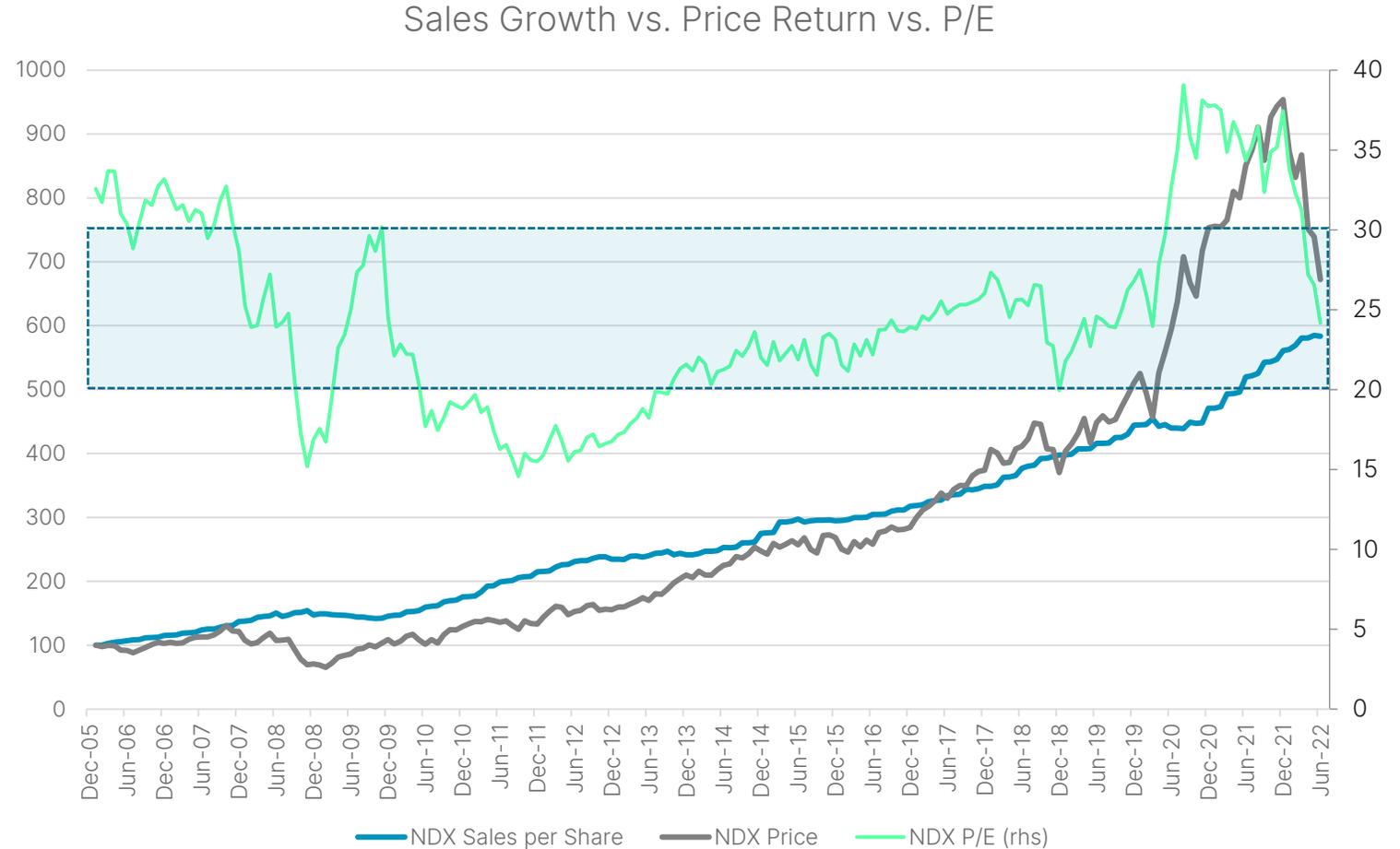
Nasdaq-100 Index: Fundamentals

- The fundamental data behind the NASDAQ-100 has drastically improved over the past decade despite a volatile economy and the greatest financial market collapse since the Great Depression.
- Earnings, the most basic number to value a company, have skyrocketed, showing maturation of the companies as they increase revenues but reduce costs. Costs have been controlled, shares were bought back, dividends have increased and P/E has contracted.
- Since 2003, NDX has had a Compound Annual Growth Rate (CAGR) of:
 - + 21% in earnings
 - + 13% in revenues
 - + 24% in dividend value
 - - 7% in P/E
- The shift in NDX fundamentals has resulted in significant outperformance over other US large cap indexes.



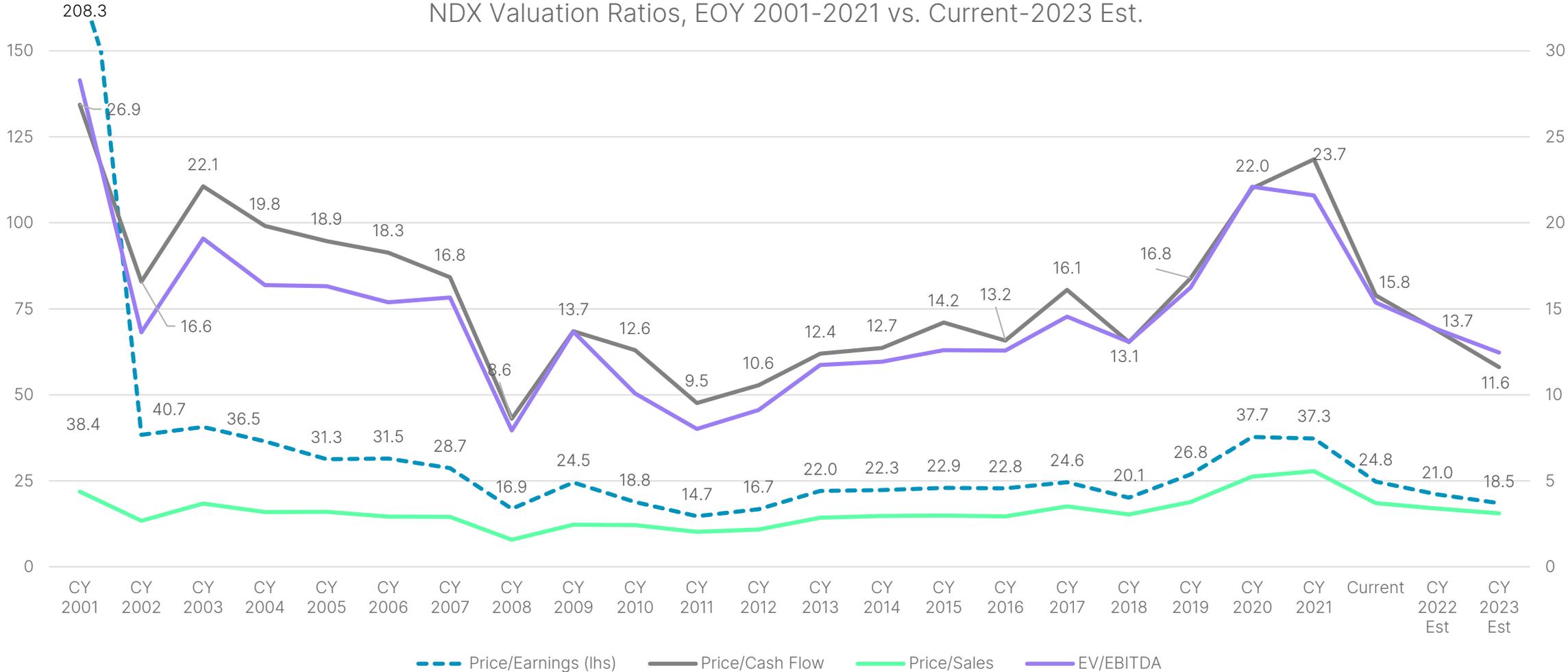
Nasdaq-100 Index: Valuation vs. Sales Growth

- From 2014-2019, NDX P/E ratio (TTM basis) had stabilized in the low-to-mid 20s, below where it was in the mid-2000s
- The trend briefly diverged during 2020-2021, with P/E climbing to a range in the mid-to-upper 30s
- Fundamental story has been the main driver of long-run recovery, rewarding the growth of NDX companies
- Sales: +483%
Price: +572%
Valuation: -26%



Nasdaq-100 Index: Valuations vs. Long-Run History

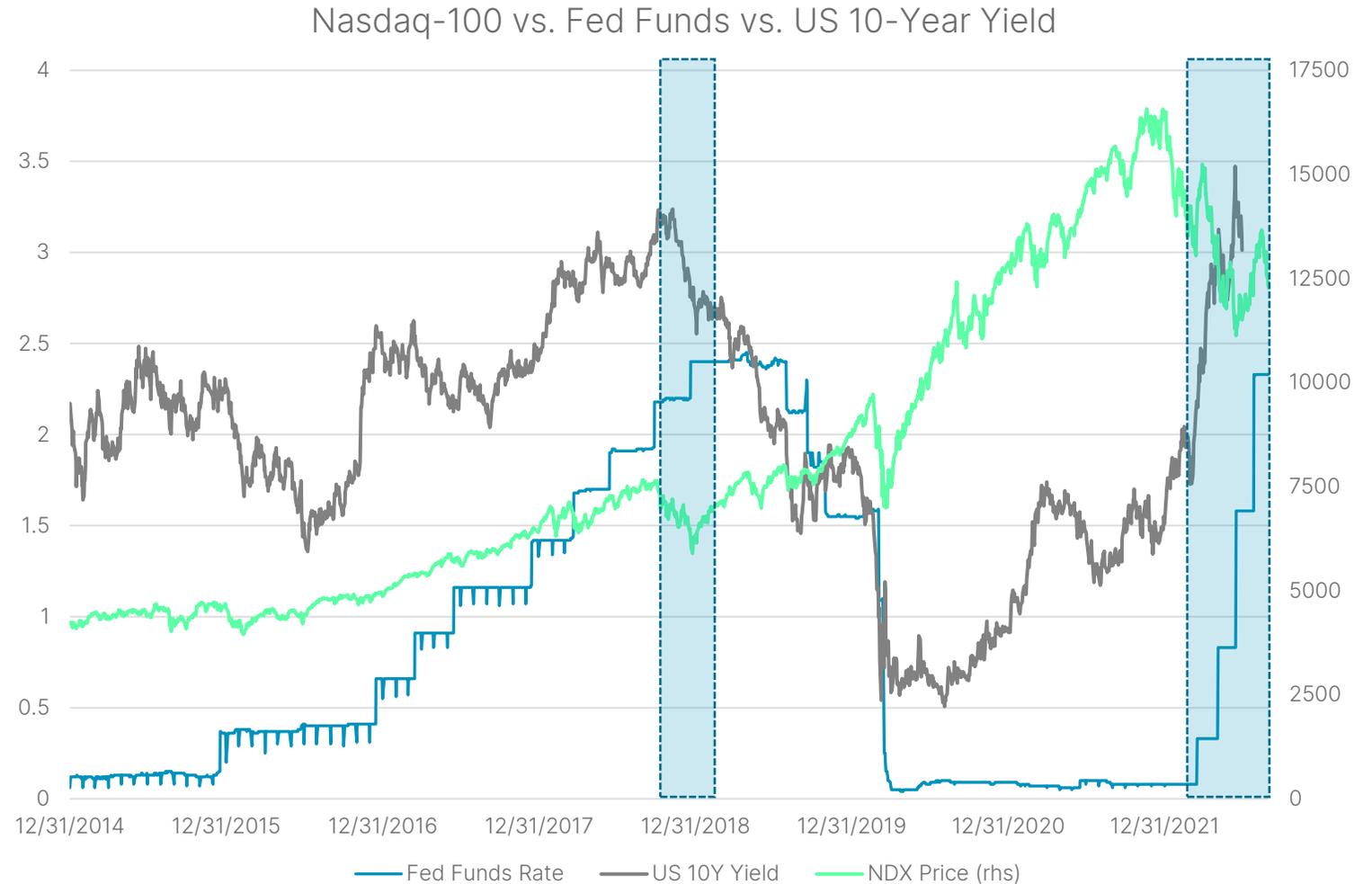
NDX Valuation Ratios, EOY 2001-2021 vs. Current-2023 Est.



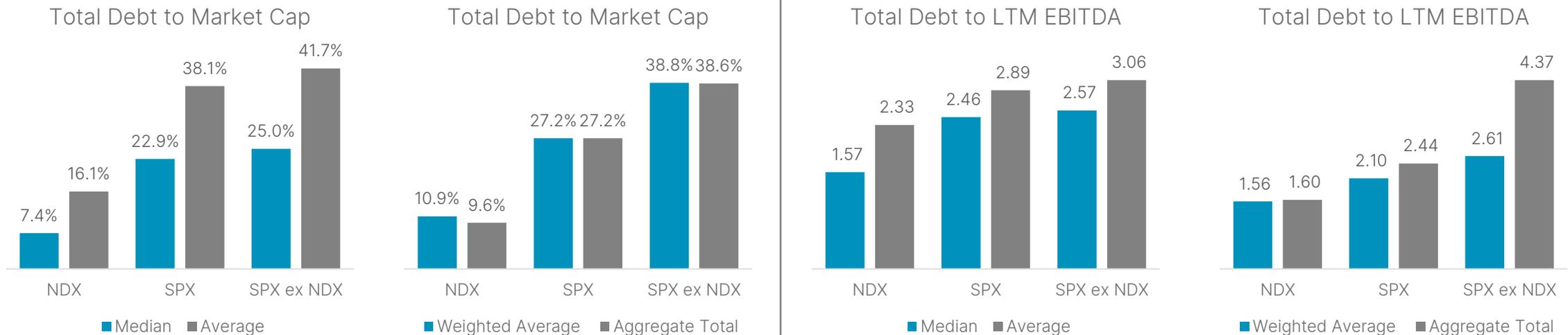
Source: Nasdaq, FactSet, Bloomberg. Data as of 5/20/2022.

Nasdaq-100 Index: Performance vs. Interest Rates

- The last Fed rate hiking cycle began in December 2015, and consisted of 9 hikes of 25 bps each (total = 225 bps)
- The Nasdaq-100 dropped 23% during Q4 of 2018, until the Fed began telegraphing a pause in hikes
- In 2022, the Fed has already raised rates by 225 bps, and is expected to hike by increments of 50-75 bps until inflation cools
- US 10-year Treasury yield suggests rates peaking around 3% to 3.5%



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



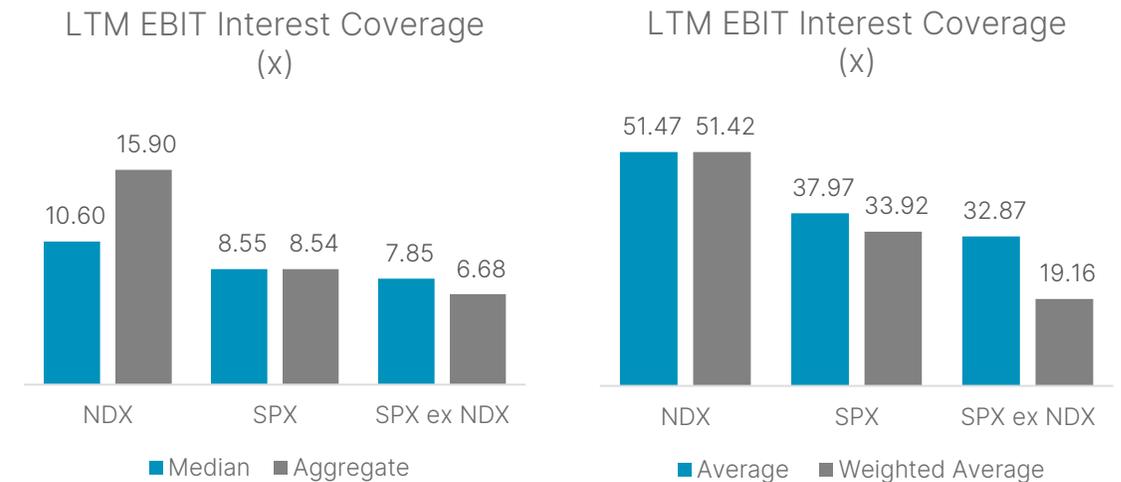
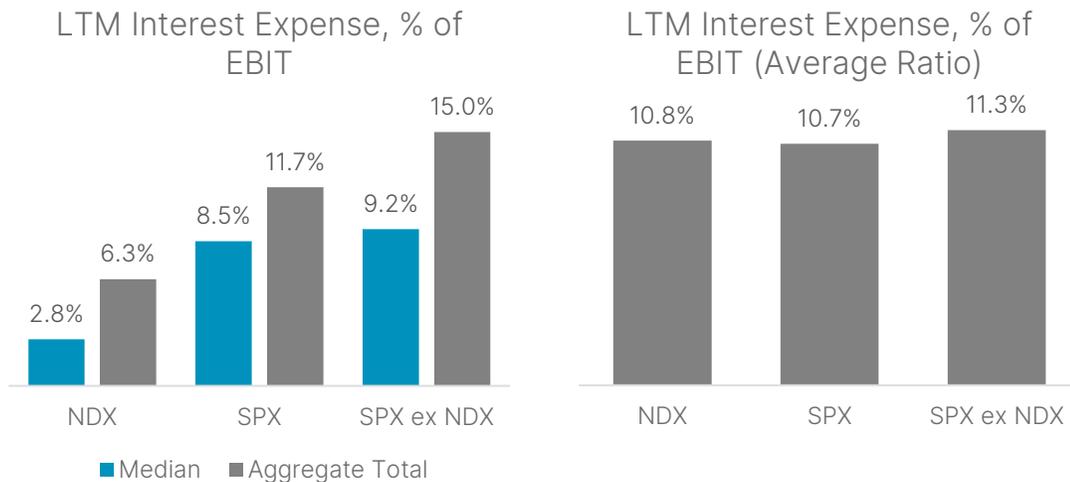
The median company in the Nasdaq-100 Index has a debt-to-market-cap ratio that is **68% lower** than the median for the S&P 500 Index. The average ratio is **58% lower** for NDX

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 a debt-to-market-cap ratio that is **68% lower** than the median for the S&P 500 Index. The aggregate ratio for the index is **46% lower** for NDX

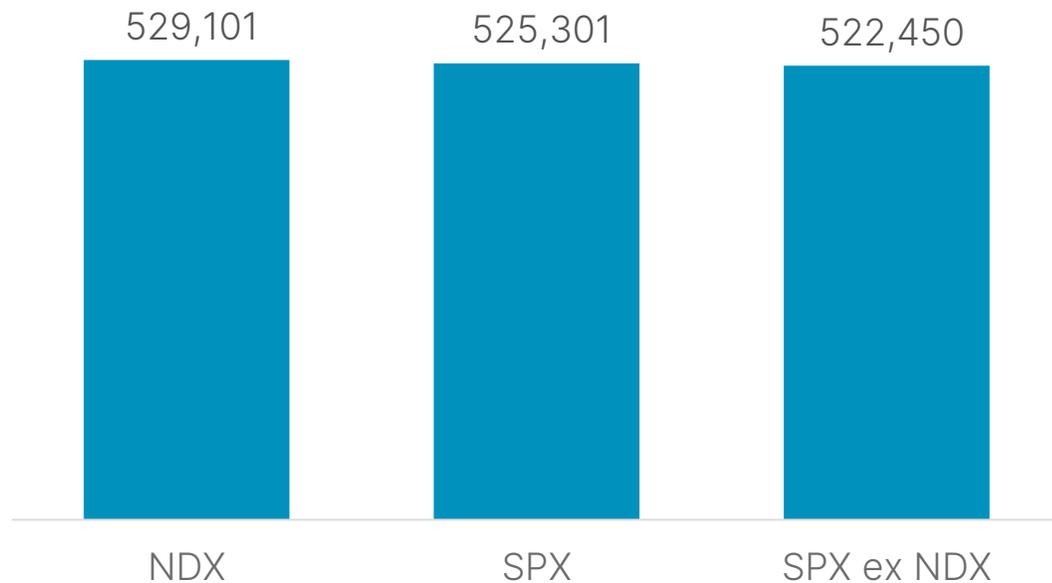
The average company in the Nasdaq-100 Index with nonzero interest expense and positive EBIT had a ratio of 10.8%, in-line with the averages for both SPX and SPX ex NDX

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)

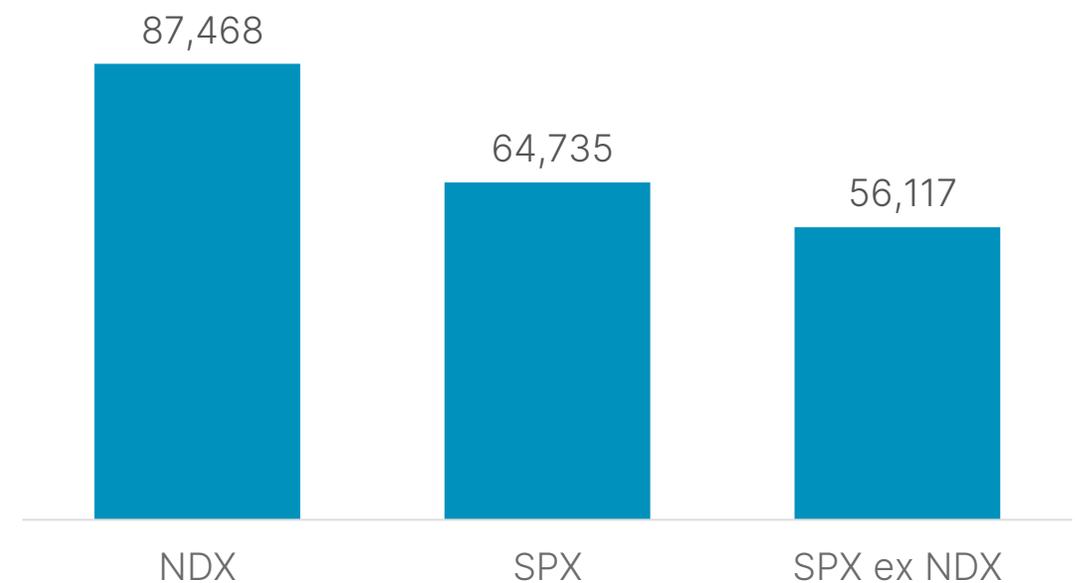
Nasdaq-100 vs. S&P 500: Employee Efficiency

LTM Revenue per Employee



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

LTM Profit per Employee



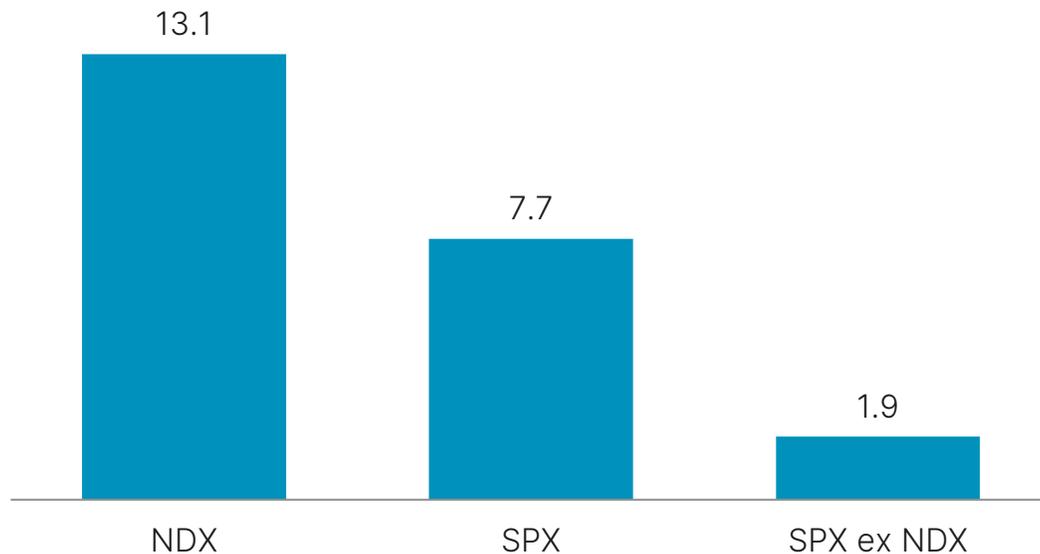
In aggregate, Nasdaq-100 companies generated **35% higher** profit per employee than S&P 500 companies and **56% higher** than SPX ex NDX

Quantifying Innovation

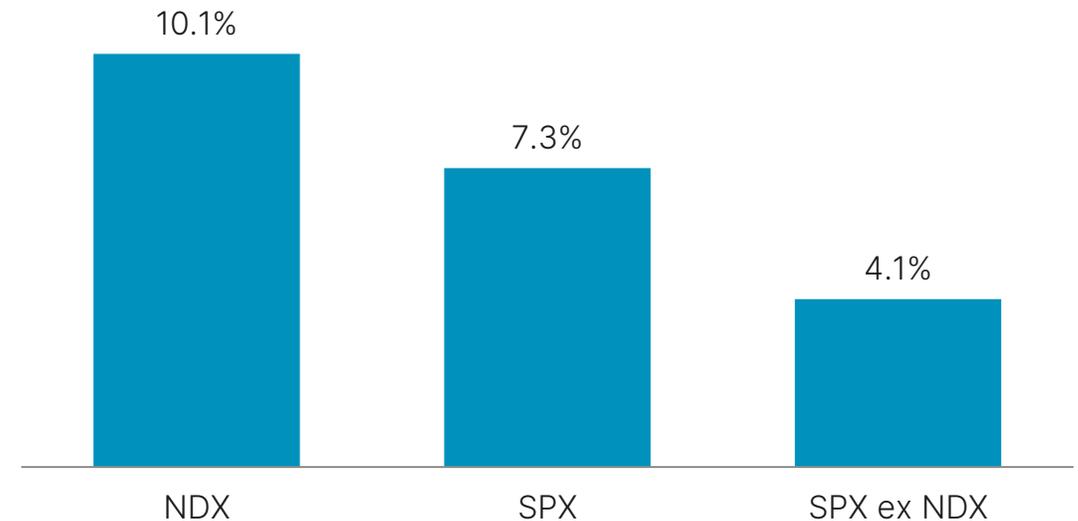
Research and Development Powerhouse

- 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, \$Bn

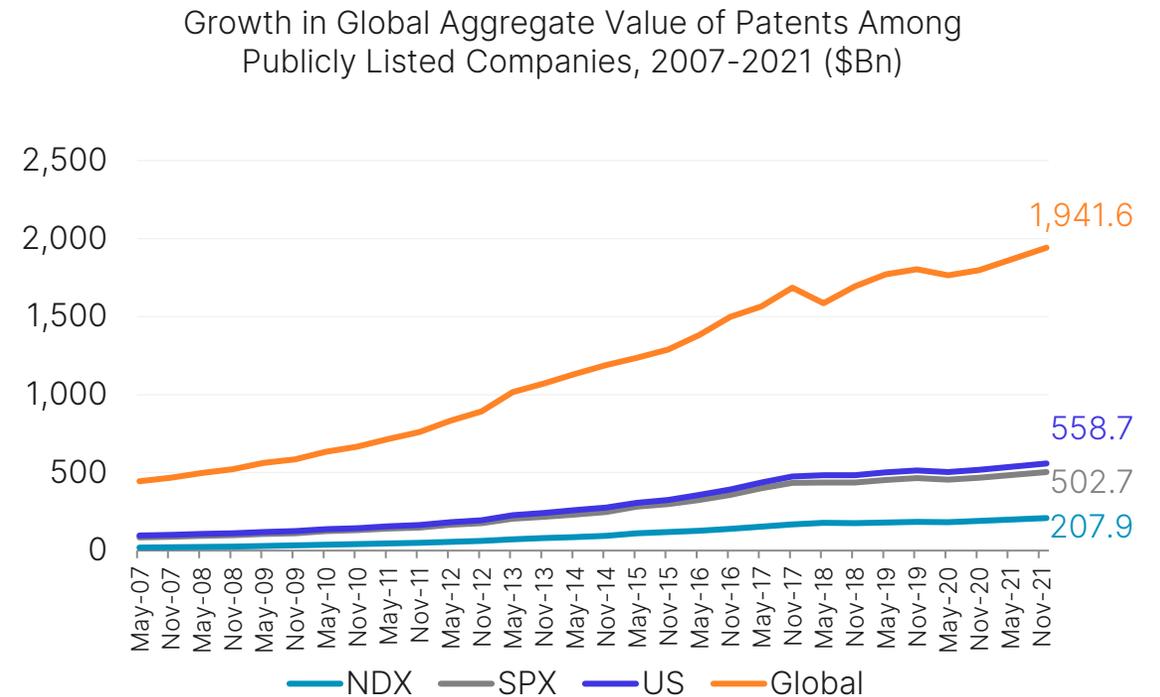
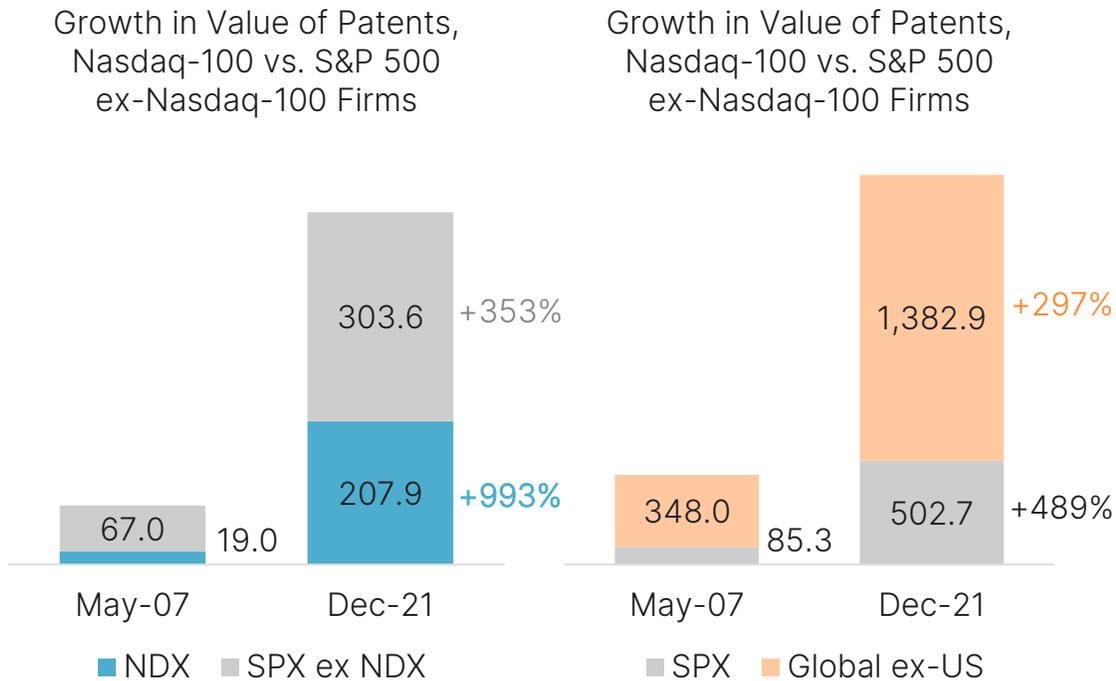


Weighted Average R&D as % Sales



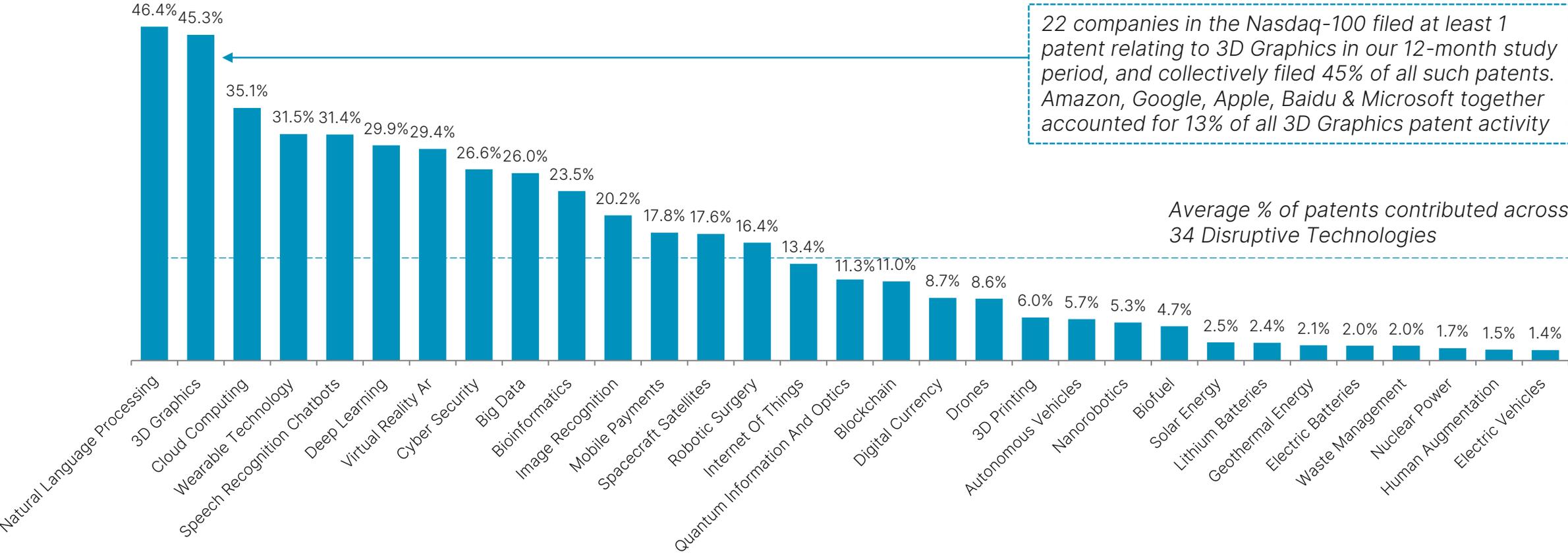
Accelerating Growth of Intangible Assets

The current crop of Nasdaq-100 constituents has grown the value of their patents by ~10x since May 2007, vs. ~3.4x across all publicly-listed, tracked companies globally. Growth for the S&P 500 overall was ~5x, but only ~3.5x excluding the contribution of overlapping Nasdaq-100 firms. Global growth ex-US was only ~3x



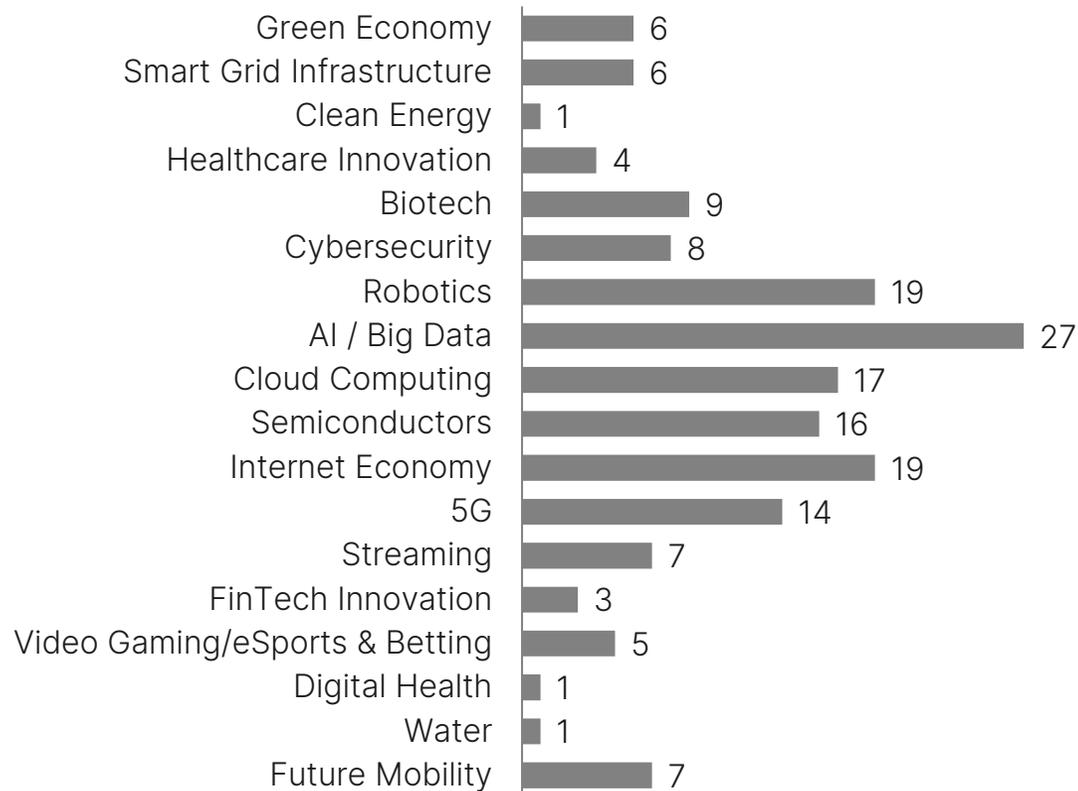
Disruptive Technology and R&D: Nasdaq 100

- 58 companies in the Nasdaq-100 (representing 82% 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

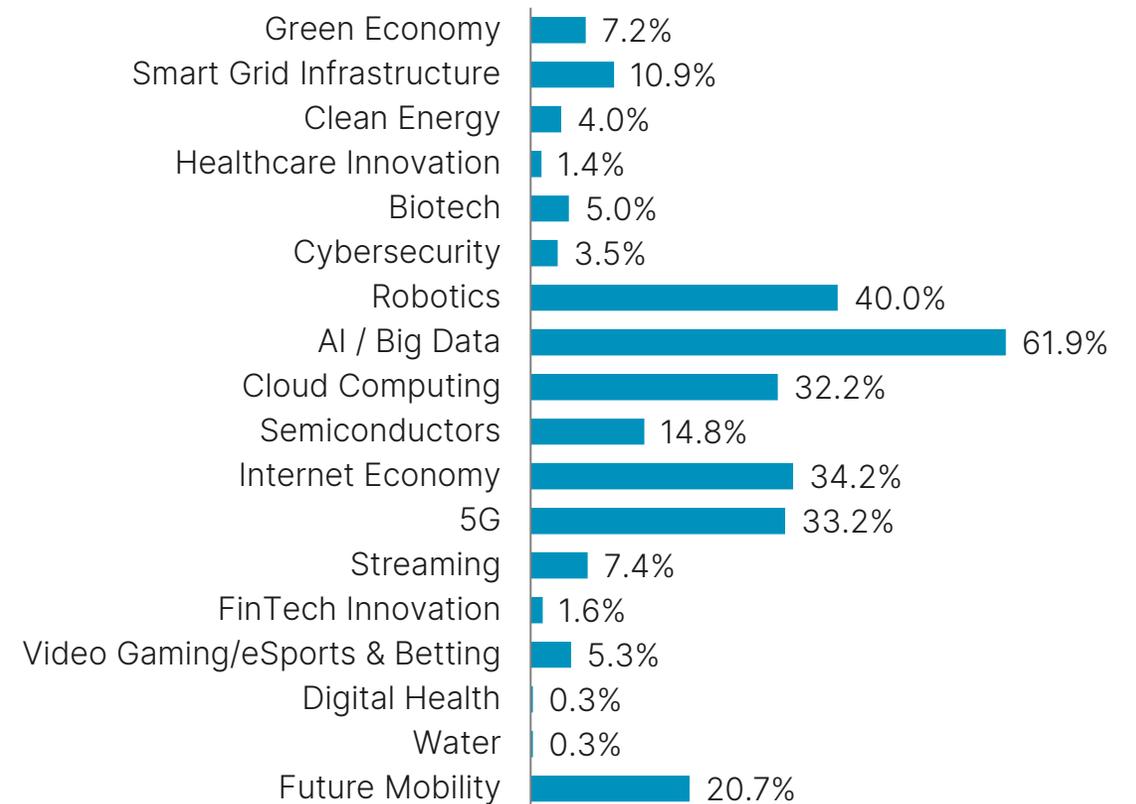


Nasdaq 100 by Thematic Exposures

of Constituents per Theme



Index Weight per Theme

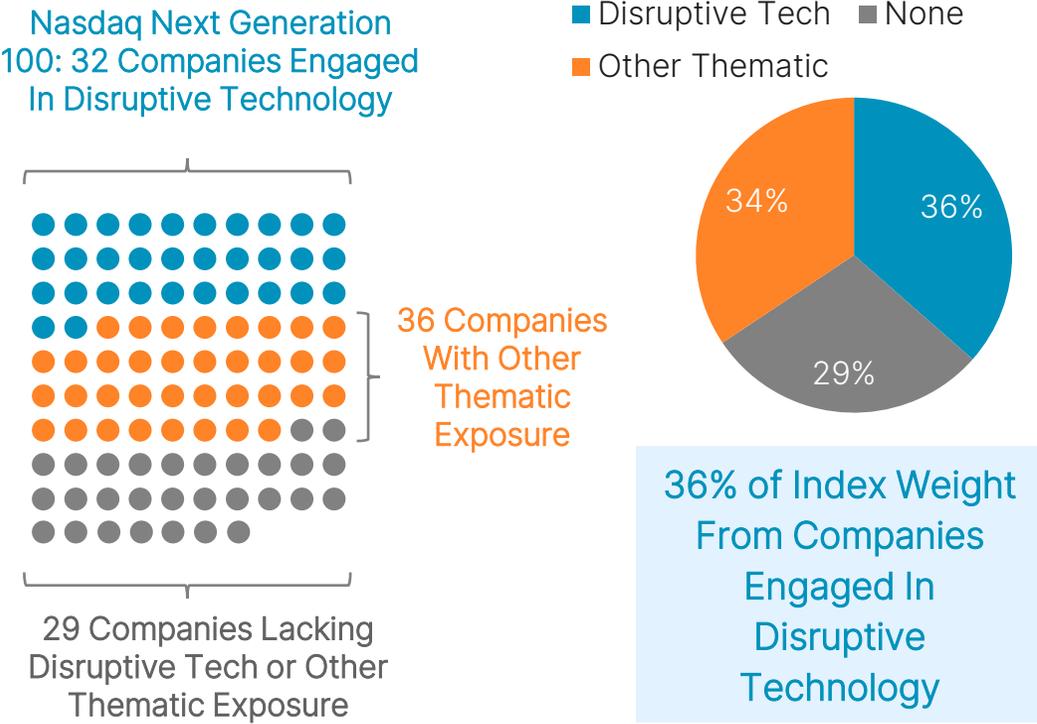
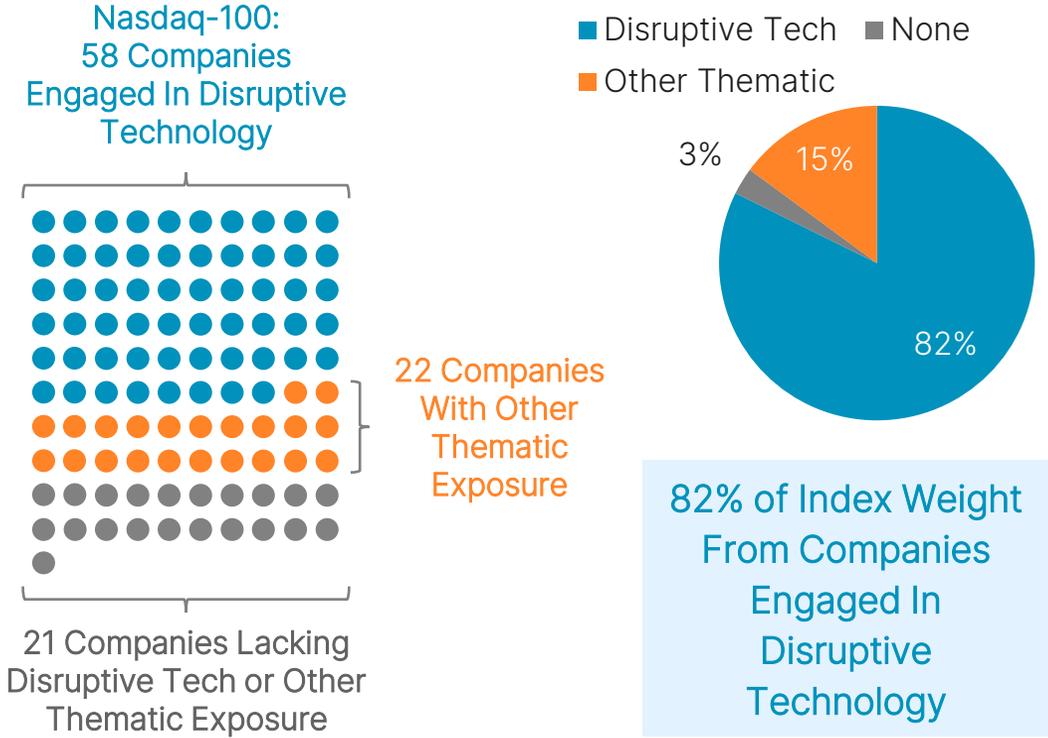


Source: Nasdaq, FactSet. Data as of 6/30/2022.

Based on overlap with existing Nasdaq Thematic Indexes, except for 5G, Streaming, and Video Gaming/eSports & Betting where competitor products were analyzed.

Nasdaq Innovation Suite & Disruptive Tech

The Nasdaq-100 Index and the Nasdaq Next Generation 100 Index (collectively, the “Innovation Suite”) both contain substantial exposures to multiple relevant investment themes, particularly within Disruptive Technology as defined by the patent-driven methodology of the Nasdaq Yewno Global Disruptive Tech Benchmark Index



Source: Nasdaq, FactSet. Data as of 6/30/2022. Based on overlap with Nasdaq Yewno Global Disruptive Technology Benchmark Index.

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