



Nasdaq Next
Generation 100[®]:
A Second Home for
Innovation

January 2024

Nasdaq Next Generation 100 Index: Methodology

- Rebalanced quarterly (March, June, September, December)
- Reconstituted annually (effective after the close of trading on the third Friday in December)
- Global companies listed on Nasdaq, including ADRs
- Modified market-cap weighting process with quarterly and annual weight adjustments

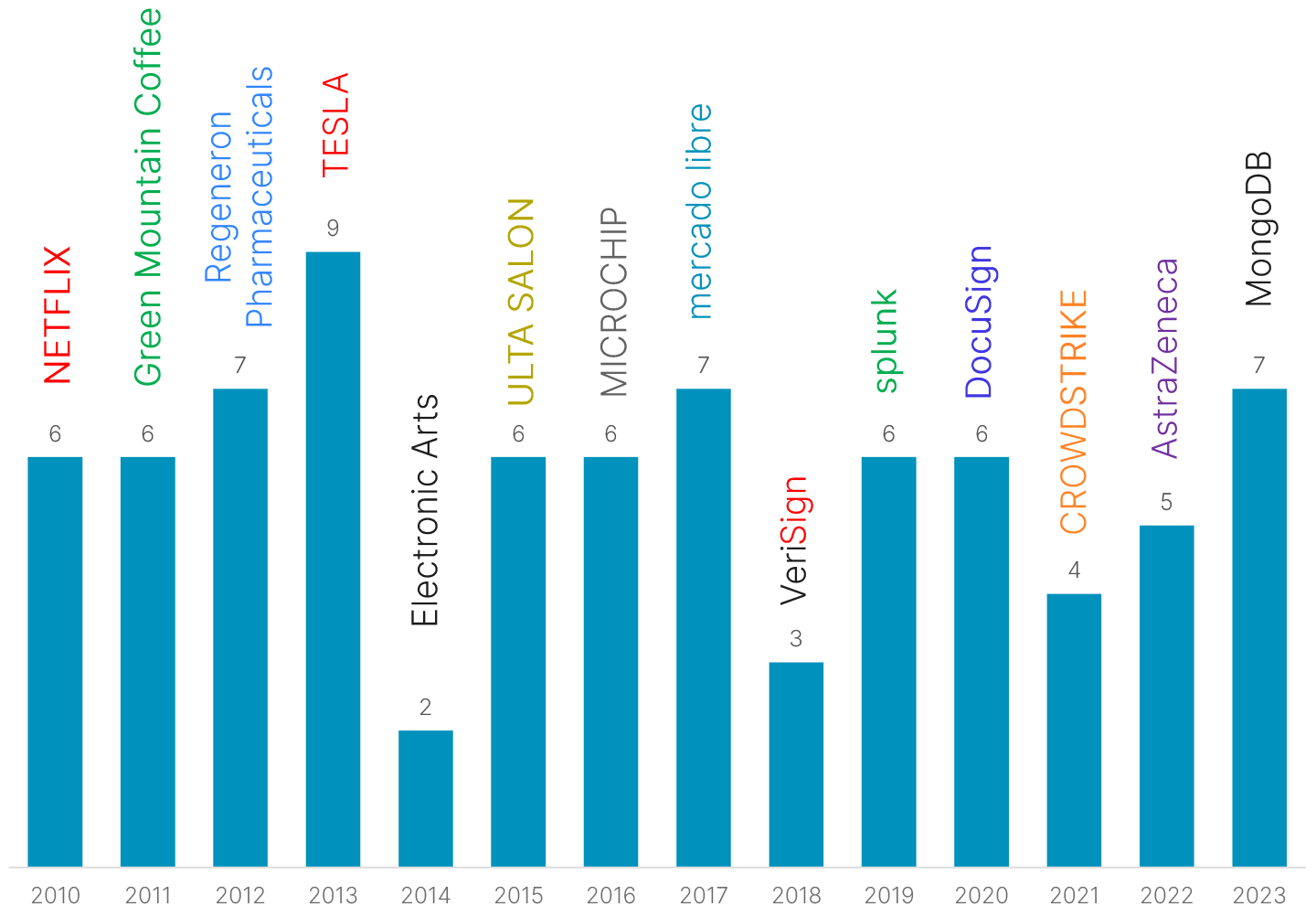
The Nasdaq Next Generation 100 Index[®] (NGX[®]) is designed to measure the performance of the next generation of Nasdaq-listed non-financial companies; that is, the largest 100 companies outside of the Nasdaq-100 Index[®] (NDX[®]).

Constituent Weighting

- Index Securities' initial weights are determined by dividing each Index Security's market capitalization by the aggregate market capitalization of all Index Securities
- No index security weight may exceed 4%

NGX Names Added to Nasdaq-100, 2010-2023

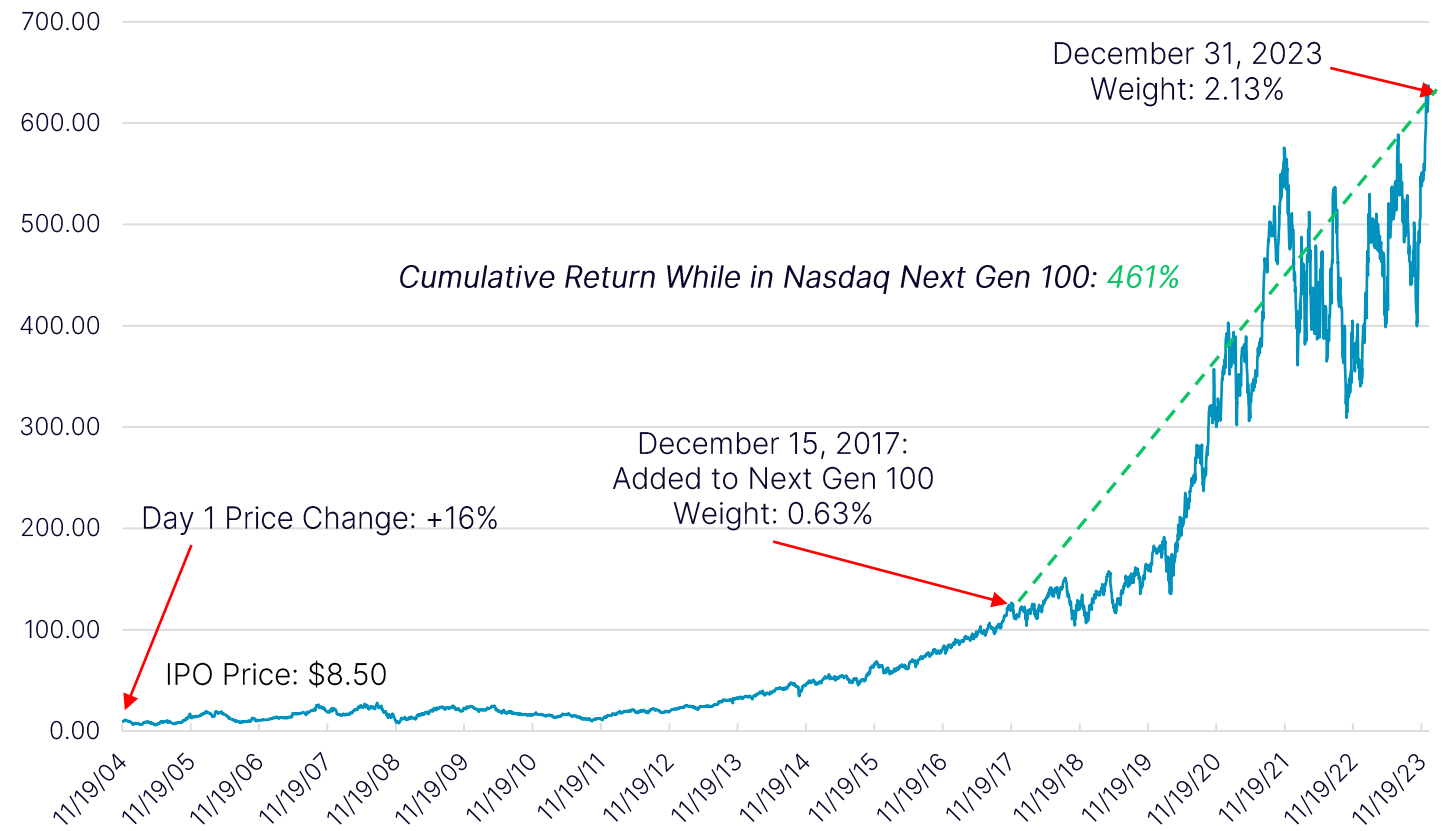
- Since 2010, a total of 80 NGX constituents have “graduated” into the Nasdaq-100
- Some well-known examples are Netflix in 2010, Tesla in 2013, DocuSign in 2020, and AstraZeneca in 2022
- As of December 31, 2023, 39 of [the current](#) 100 companies in the Nasdaq-100 had graduated from the Nasdaq Next Generation 100 Index at some point over the past decade (based on simulated backtest [and live](#) results)



Next In Line To Graduate: Monolithic Power Systems

- Monolithic Power Systems designs, develops, and markets integrated power semiconductor solutions and power delivery architectures for computing and storage, automotive, industrial, communications, and consumer applications markets.
- Founded in 1997 in Kirkland, Washington
- ICB Industry: **Technology**
- Current Market Cap: \$30.2Bn
- 3Q'23 Revenue: \$475MM, down **4%** vs. \$495MM in 3Q'22
- R&D Expense: \$64.8MM (**14%** of Revenue)
- Gross Margin: **55.5%**
- Free Cash Flow: \$99.4MM
- Net Income: \$121.2MM
- # of Employees: ~3,247

Price History, IPO thru December 31, 2023



Next In Line To Graduate: Anylam Pharmaceuticals

- Anylam Pharmaceuticals is a global commercial-stage biopharmaceutical company, which engages in the discovery, development and commercialization of RNAi therapeutics. Its products include ONPATTRO, GIVLAARI, and OXLUMO.
- Founded in 2002 in Cambridge, Massachusetts
- ICB Industry: [Health Care](#)
- Current Market Cap: \$24.0Bn
- 3Q'23 Revenue: \$751MM, up **184%** vs. \$264MM in 3Q'22
- R&D Expense: \$253.2MM (**34%** of Revenue)
- Gross Margin: **88.8%**
- Free Cash Flow: \$342.3MM
- Net Income: \$147.8MM
- # of Employees: ~2,002



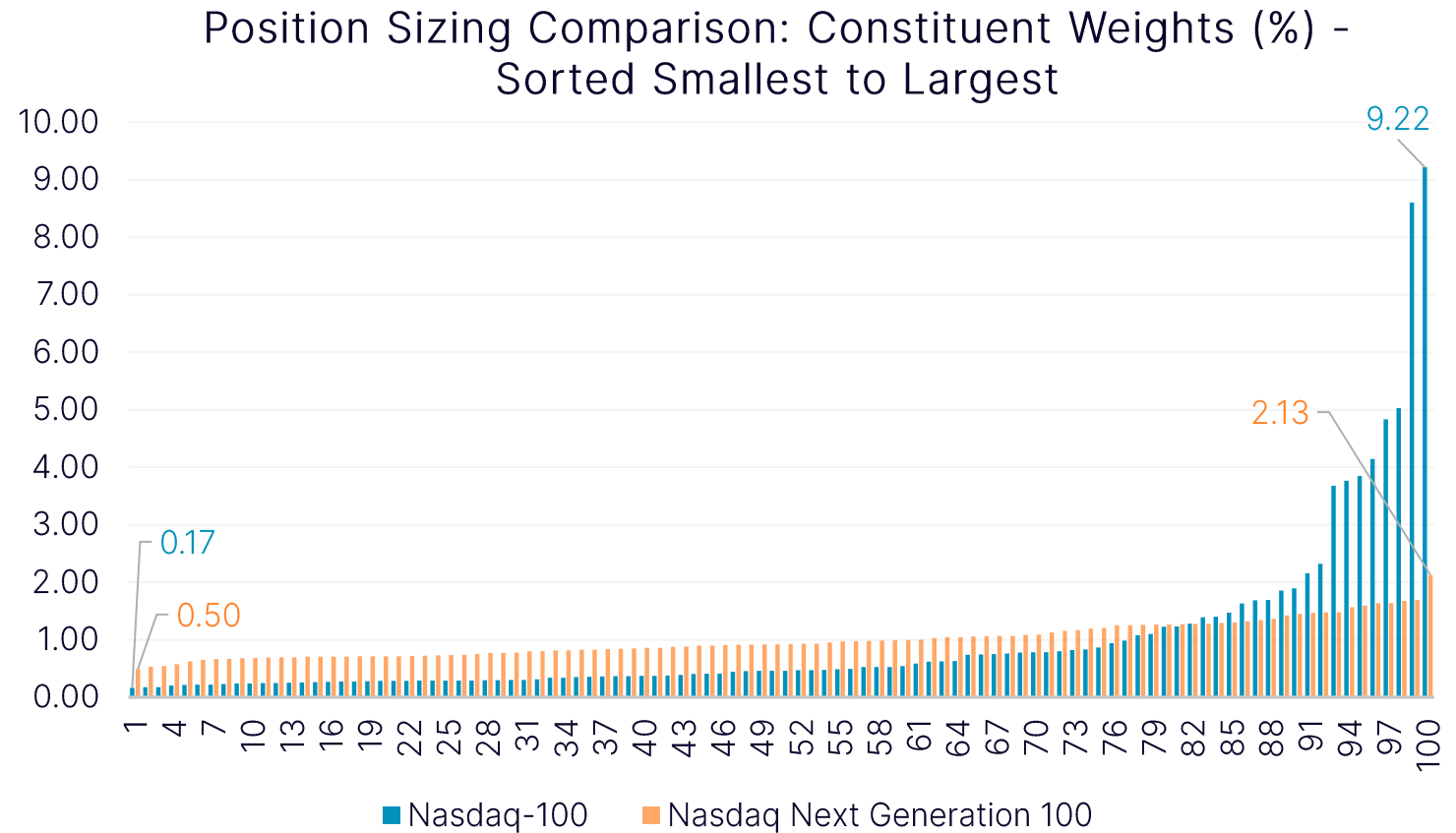
Next In Line To Graduate: Ulta Beauty

- Ulta Beauty engages in the retail of beauty products through retail stores, salon services, and e-commerce. Its products include makeup, skin care, tools and brushes, fragrance, and bath and body.
- Founded in 1990 in Bolingbrook, Illinois
- ICB Industry: **Consumer Discretionary**
- Current Market Cap: \$23.8Bn
- 3Q'23 Revenue: \$2.5B, up **6%** vs. \$2.3B in 3Q'22
- Gross Margin: **39.9%**
- Free Cash Flow: **-\$1.8B**
- Net Income: \$249.5MM
- # of Employees: ~53,000



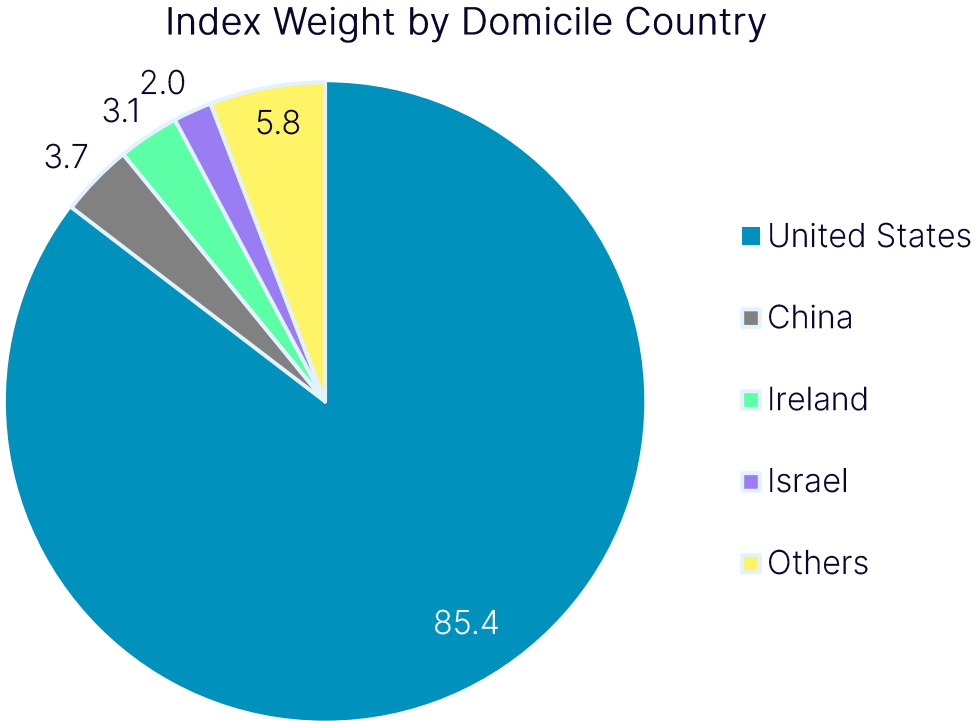
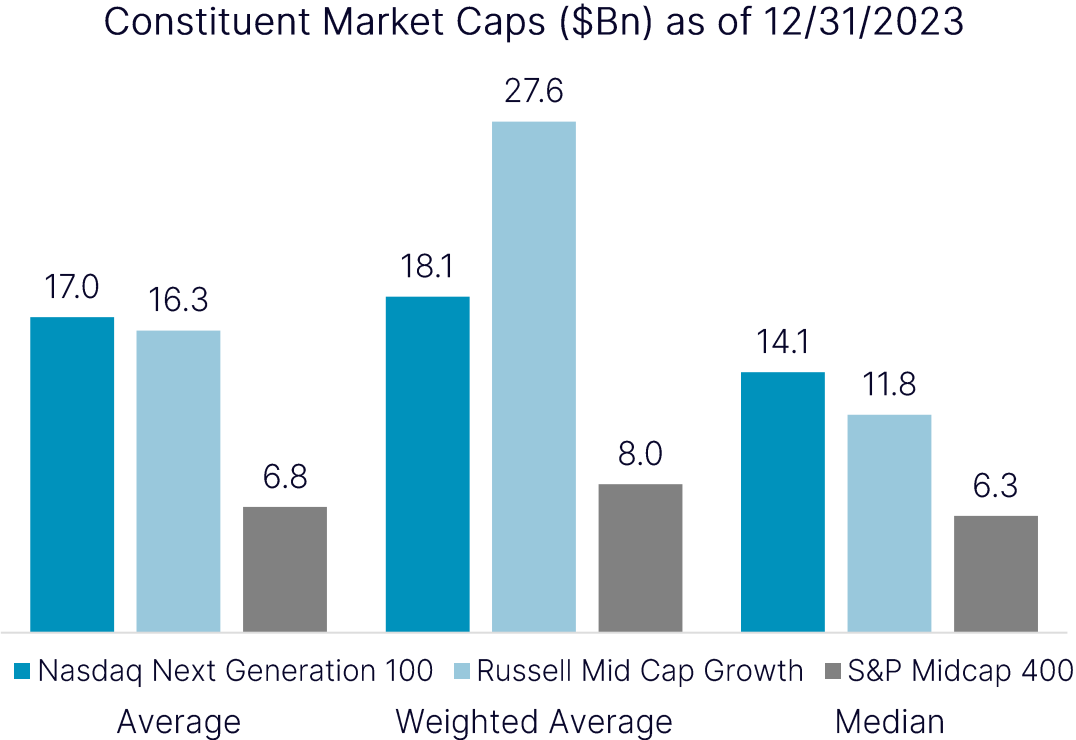
Position Sizing vs. Nasdaq-100

- The Nasdaq Next Generation 100 is market cap weighted, in-line with benchmarks like the Nasdaq-100
- Due to the 4% weighting cap, the index has an implicit safeguard against excess concentration in any one constituent
- The Nasdaq Next Generation 100's largest component has a weighting of 2.13% versus 9.22% for the Nasdaq-100's largest component



Market Capitalization & Globality

The Nasdaq Next Generation 100 Index tilts much smaller than the Nasdaq-100, but still meaningfully above the S&P Midcap 400 – closer to the Russell Mid Cap Growth. It also maintains a sizable international allocation, due to a relatively large number (16) of non-US-headquartered, Nasdaq-listed companies.

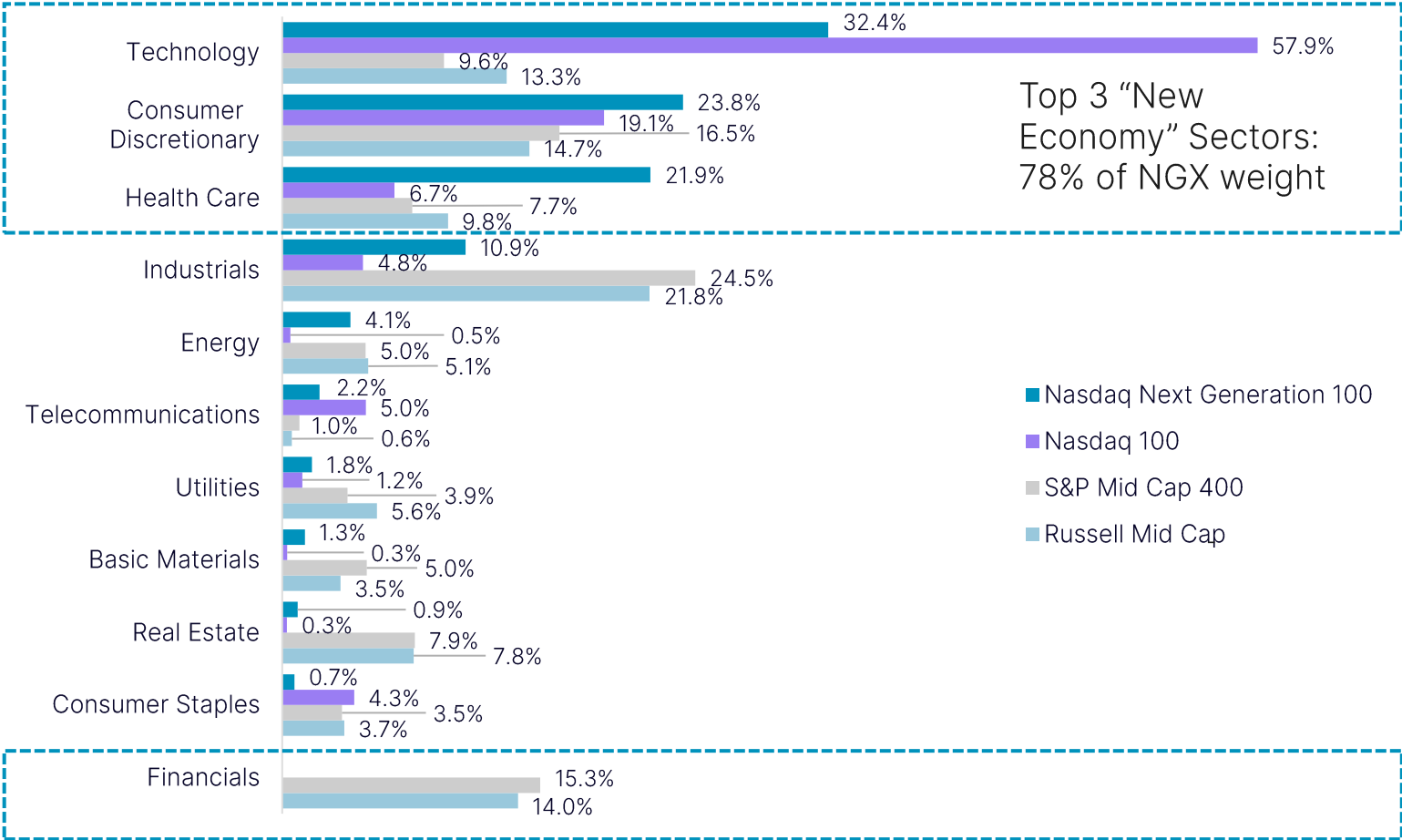


Source: Nasdaq Global Indexes, Factset. Data as of 12/31/2023.

Industry Exposure vs. NDX & Midcap Benchmarks

Industry (ICB) Breakdown as of 12/31/23

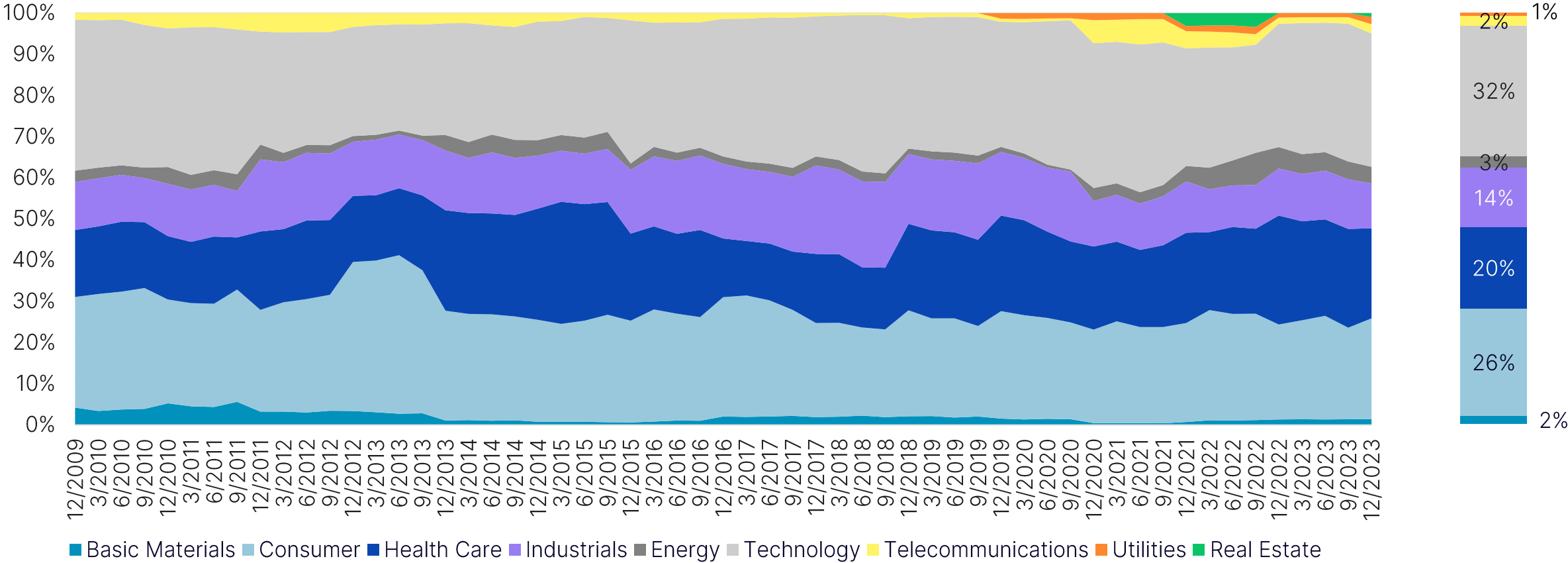
- The Nasdaq Next Generation 100 is overweight on Technology, Healthcare and Consumer Discretionary compared to S&P Midcap 400 and Russell Midcap.
- The Index is underweighted on Industrials, Real Estate, Materials and Consumer Staples compared to midcap benchmarks.
- No exposure to Financials by design



Source: Nasdaq Global Indexes, Factset. Data as of 12/31/2023.

Industry Exposure Over Time

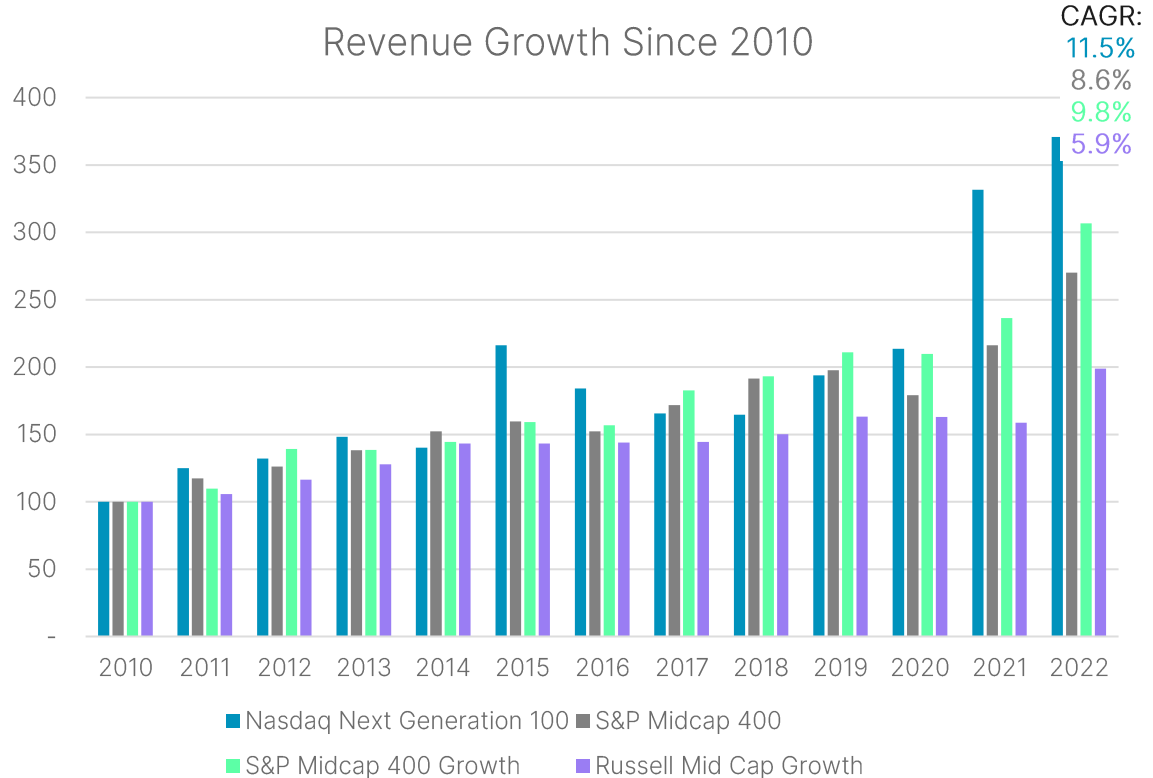
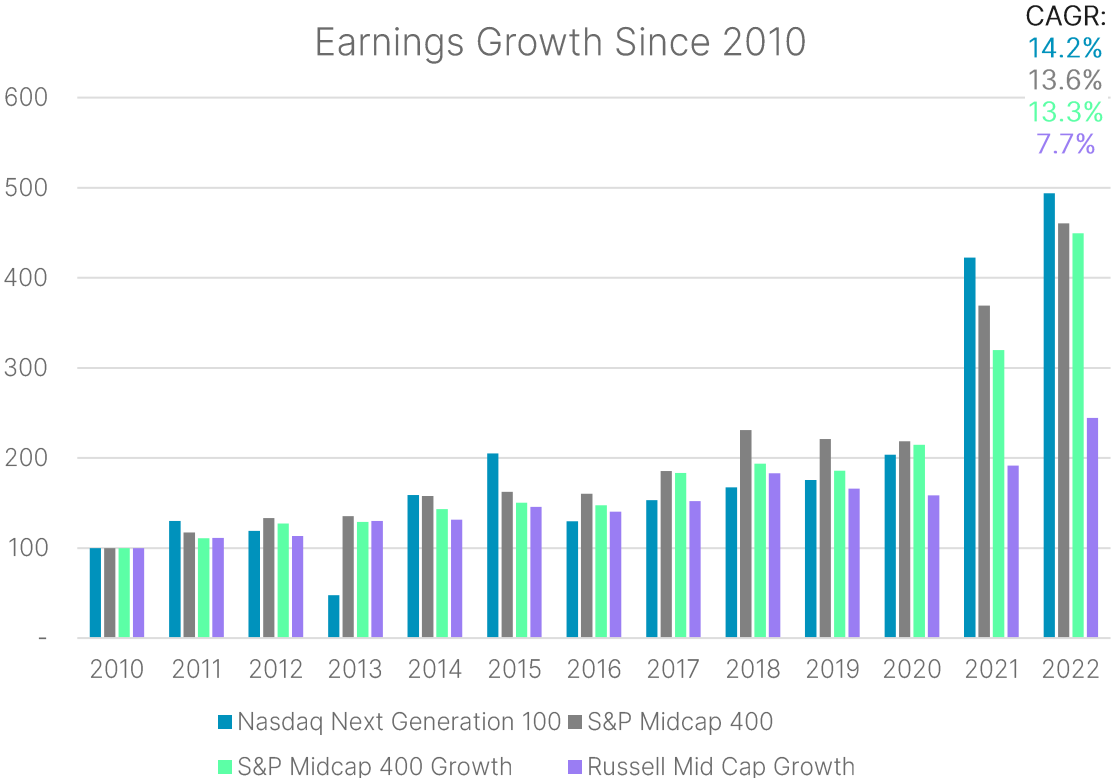
Index Weight by ICB Industry Since 2009



Source: Nasdaq Global Indexes, Factset. Data as of 12/31/2023.

Index Fundamentals vs. Midcap Benchmarks

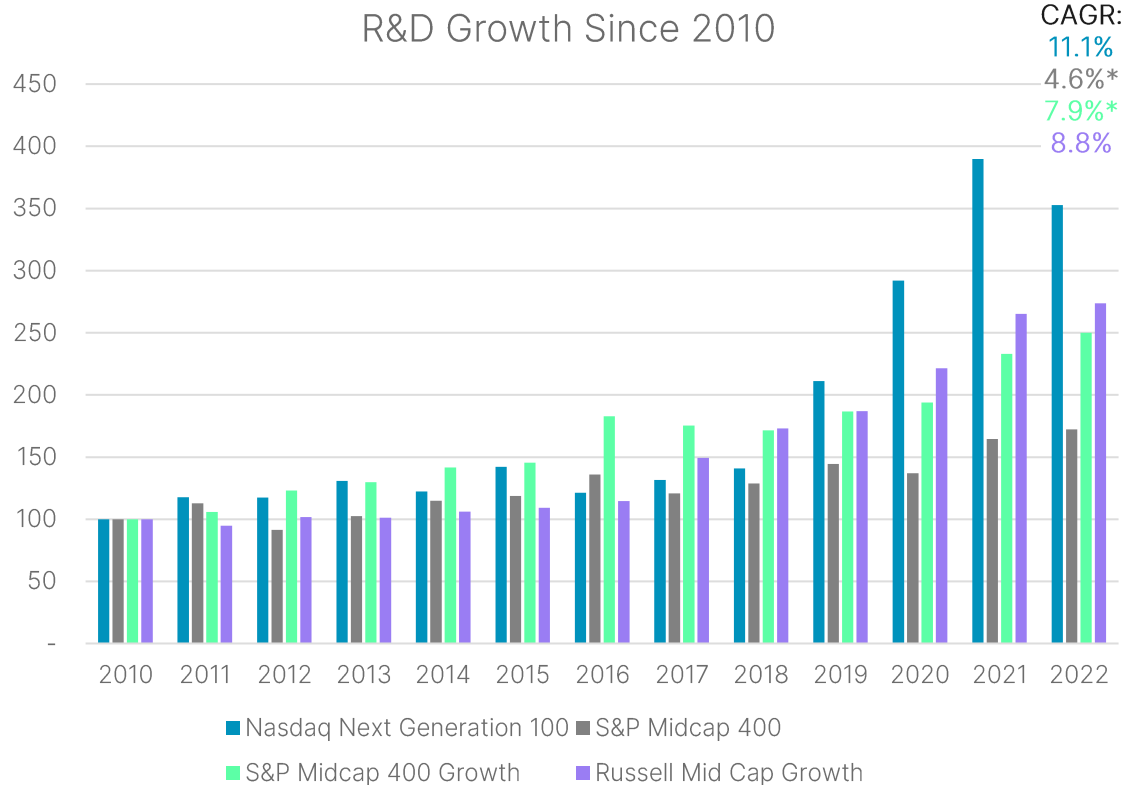
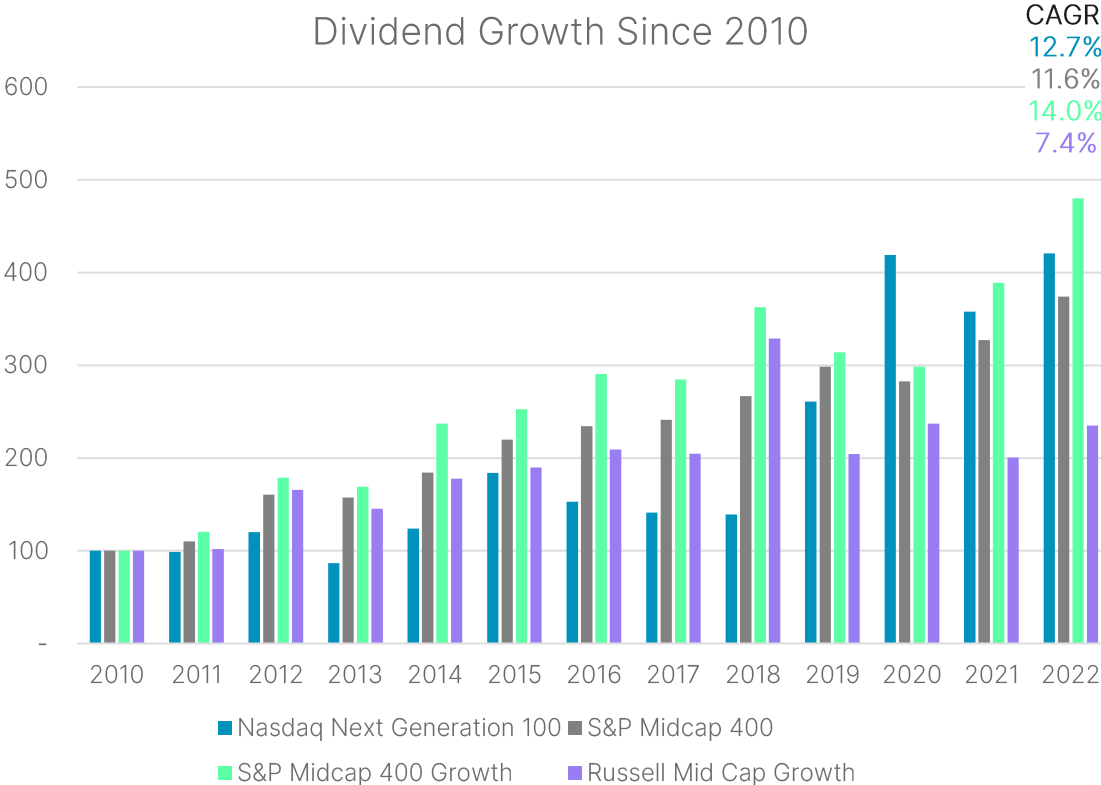
Compared to similar midcap benchmarks from S&P and Russell, Nasdaq Next Generation 100 constituents have grown their revenues and earnings at a higher rate over the past decade. The trend sharply diverged in 2021 as NGX began to grow earnings at an accelerated rate along with the S&P 400/S&P 400 Growth; as of 2022, Russell Mid Cap Growth had underperformed significantly on both earnings and revenue growth vs. the others



Source: Nasdaq, Bloomberg, FactSet. Data as of 4/18/2023.
 NGX 2020 Earnings excludes the impact of United Airlines, which was added to the index on December 21, 2020 and recorded a full-year loss of \$7.9B related to Covid-19 shutdowns.
 NGX 2021 Earnings excludes the impact of a one-time non-operating gain of \$11.1B recorded by Liberty Global.

Index Fundamentals vs. Midcap Benchmarks

Compared to similar midcap benchmarks from S&P and Russell, Nasdaq Next Generation 100 constituents have grown their R&D expenditures at a much higher rate over the past decade. Dividend growth has been in-line with S&P Midcap benchmarks, but significantly faster than the Russell Mid Cap Growth



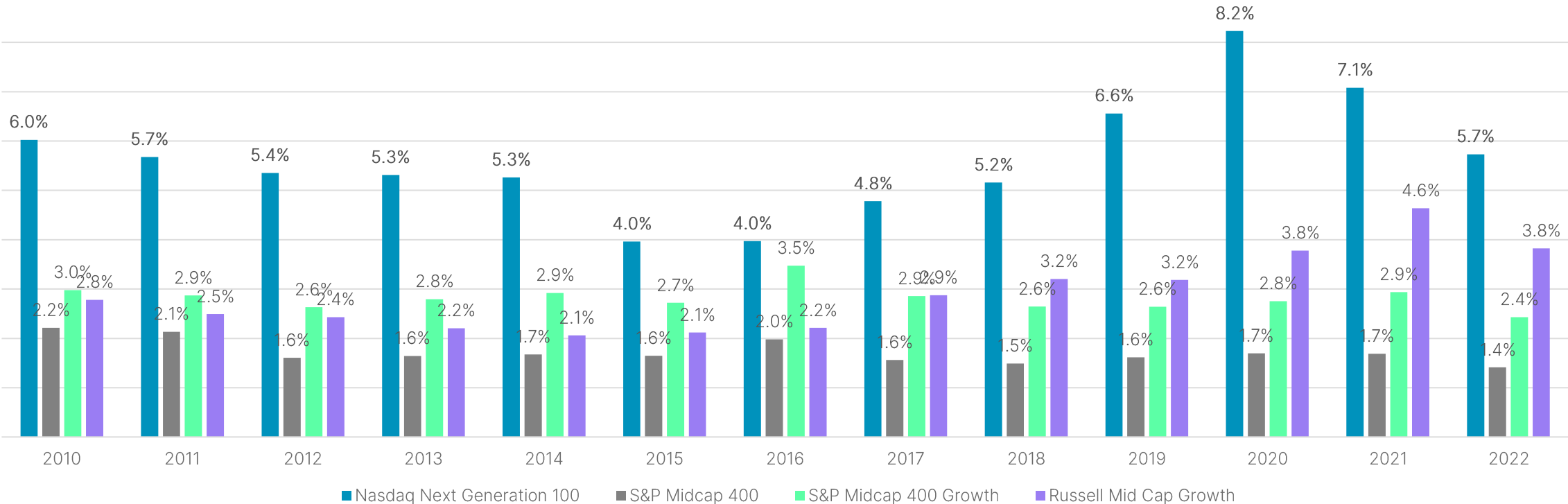
Source: Nasdaq, Bloomberg, FactSet. Data as of 4/18/2023.

*As of mid-April 2023, S&P had still not published R&D Expense per Share for its indexes, thus 2022 values were imputed by applying 2010-2021 CAGRs to 2021 reported values.

R&D Intensity vs. Midcap Benchmarks

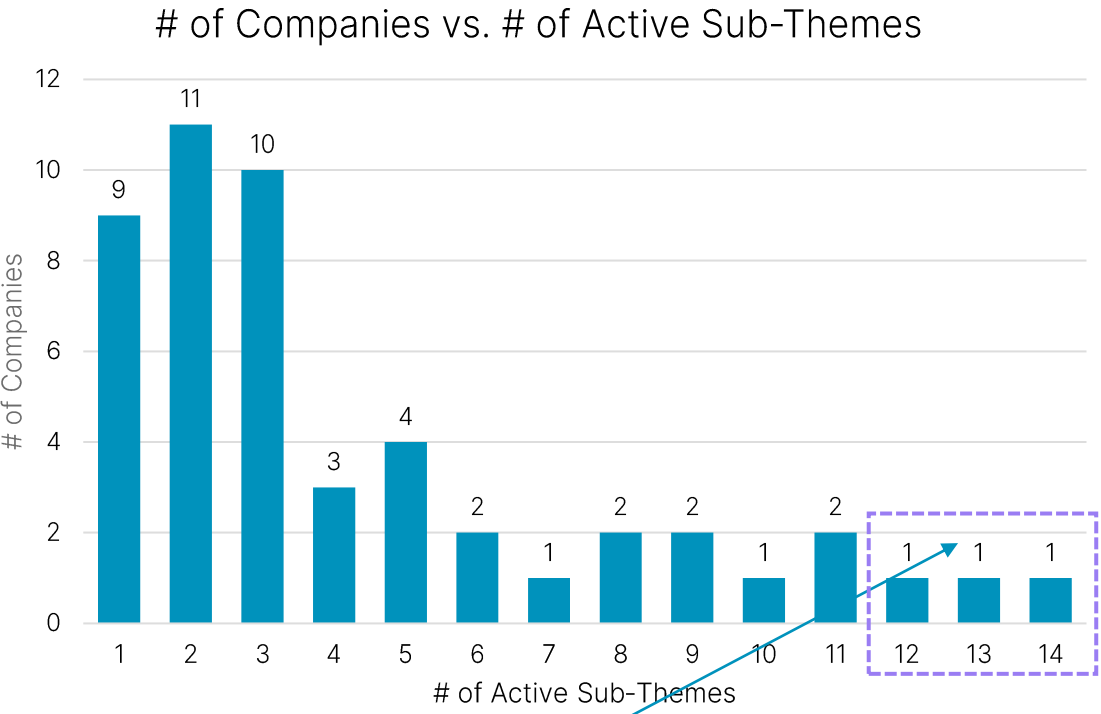
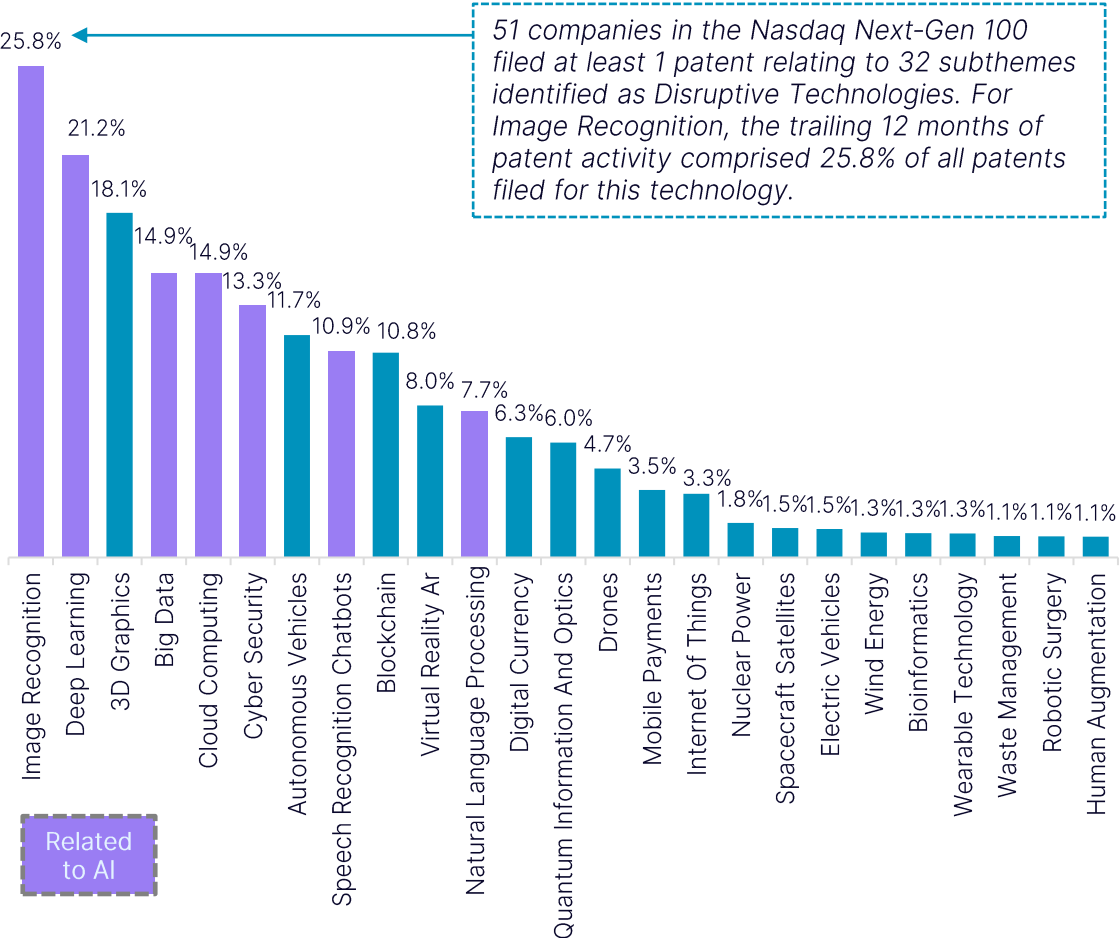
Compared to similar midcap benchmarks from S&P and Russell, Nasdaq Next Generation 100 constituents consistently spend a higher proportion of their total revenues on research & development

R&D Expense as % of Revenue



Source: Nasdaq, Bloomberg, FactSet. Data as of 4/18/2023. As of mid-April 2023, S&P had still not published 2022 R&D Expense per Share for its indexes. Values were imputed by applying 2010-2021 CAGRs to 2021 reported numbers.

Disruptive Technology and R&D: Nasdaq Next Gen 100

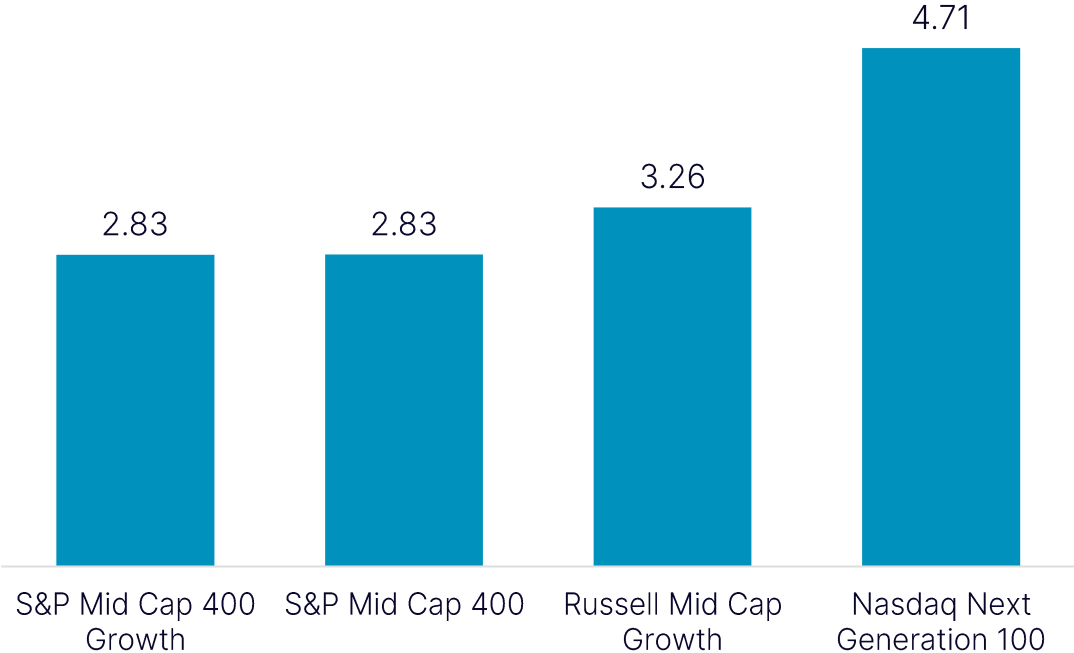


Of the 51 index constituents with data indicating patent activity in the last 12 months in one or more of 32 Disruptive Tech subthemes, the average company filed patents across 4.6 sub-themes. Baidu (not shown) was an outlier and had patents filed across 23 subthemes. Among the other most active filers were NetEase with activity across 14 subthemes, eBay with 13 subthemes, and Western Digital with 12 subthemes.

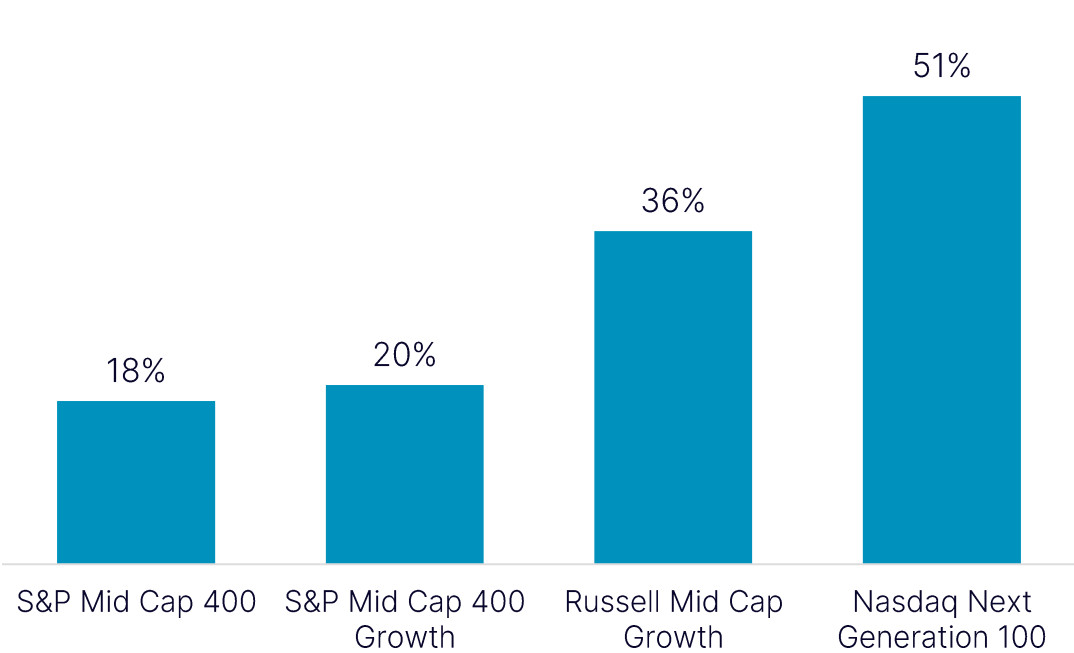
Disruptive Technology and R&D


Compared to similar midcap benchmarks from S&P and Russell, Nasdaq Next Generation 100 constituents tend to engage in more areas of disruptive technology patents, on average. The index also exhibits a higher proportion of overall constituents registering some level of patent activity across these 35 patent sub-themes

Average # of Sub-Themes per Active Company



% of Index Constituents with Patent Activity

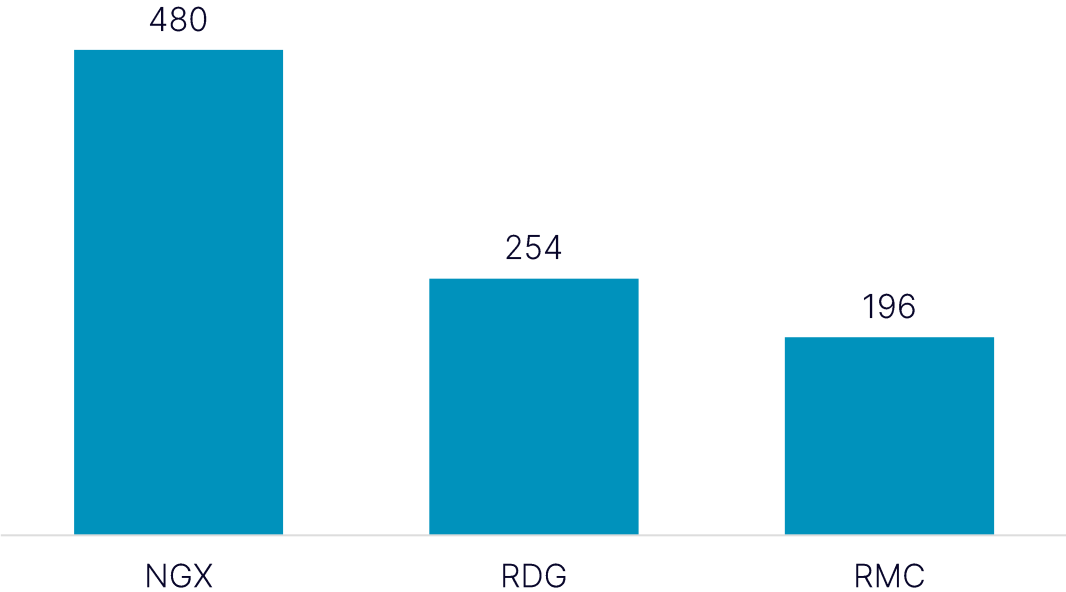


 Source: Nasdaq, Factset, Patent data as of 11/30/2023. Index data as of 12/29/2023.

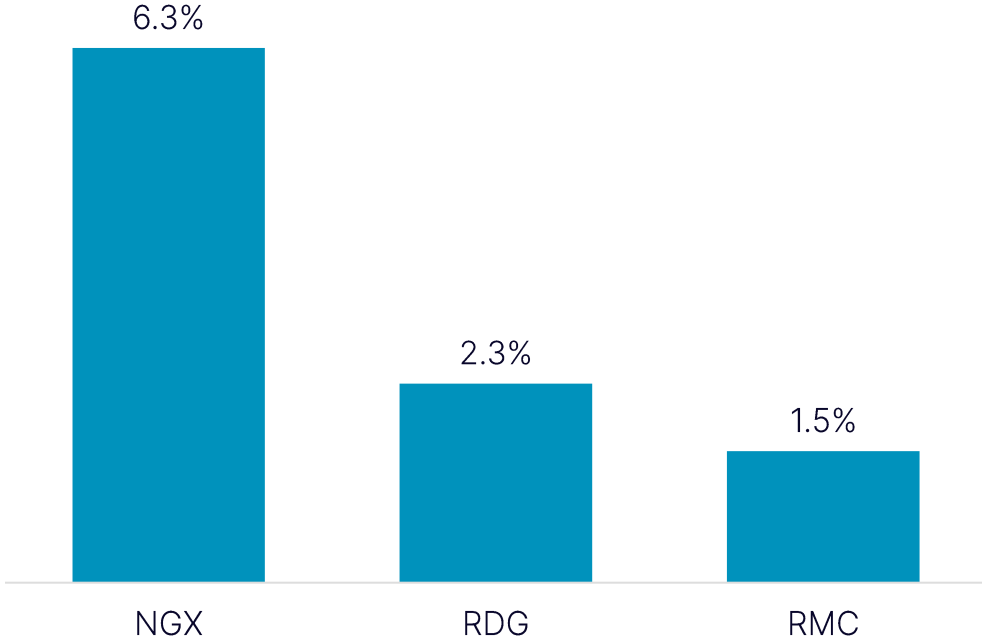
Research & Development vs. Russell Mid Cap

Compared to the Russell Mid Cap Growth Index (RDG), NGX constituents spend 90% more on R&D on a weighted average basis, and 2.7 times as a % of sales. Compared to the broader Russell Mid Cap Index (RMC), NGX companies spend way more than twice on R&D on a weighted average basis, and 4.1 times as much as a % of sales

Weighted Average Annual R&D Expense, \$MM



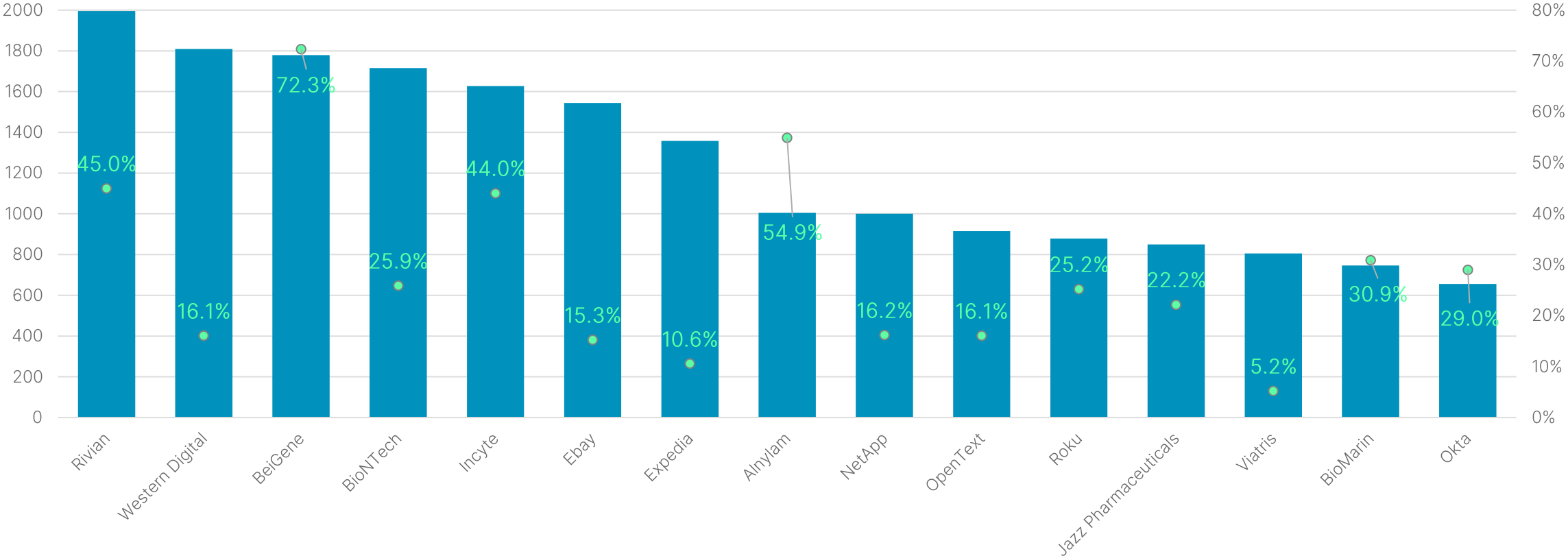
Weighted Average R&D as % Sales



Research and Development Powerhouse: Examples

- Rivian, Western Digital, BeiGene, BioNTech and Incyte are some of the biggest R&D spenders among NGX constituents.
- With an index weight of 14.4%, the below 15 NGX constituents allocated an average of 28.6% of their revenues to R&D over the past 12 months.

TTM R&D Expenses (MM) of Top NGX constituents

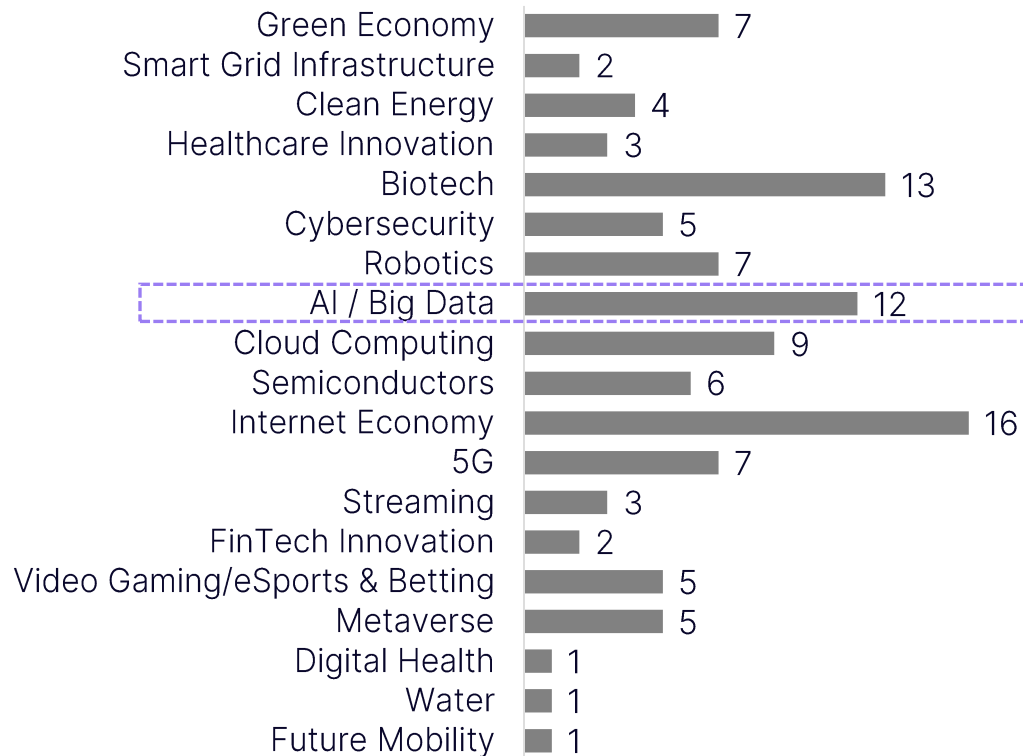


Source: Nasdaq Global Indexes, Bloomberg. Data as of 2/27/2024.

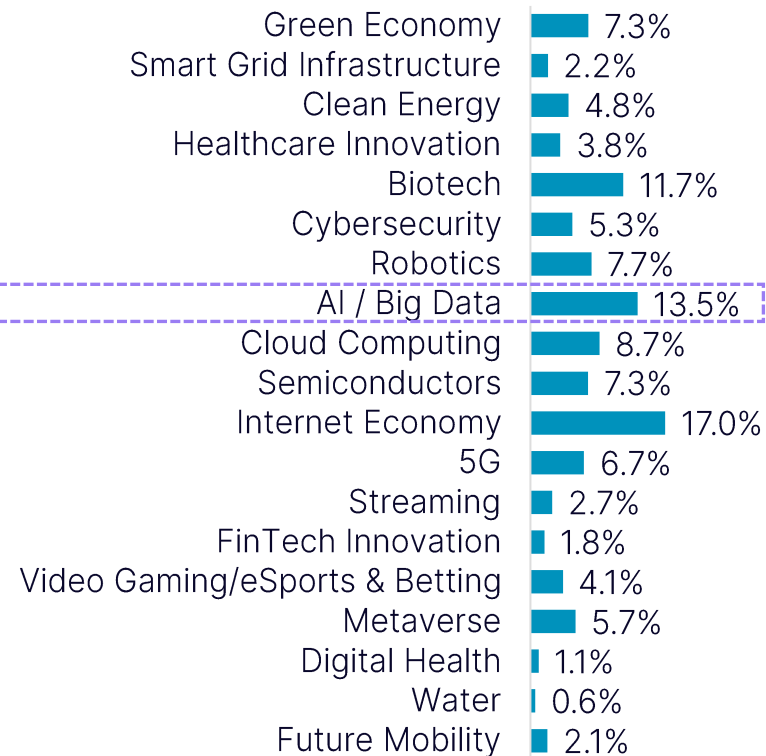
■ TTM R&D Expense (LHS) ● R&D as % sales (RHS)

Nasdaq Next Gen 100 by Thematic Exposures

of Constituents per Theme



Index Weight per Theme

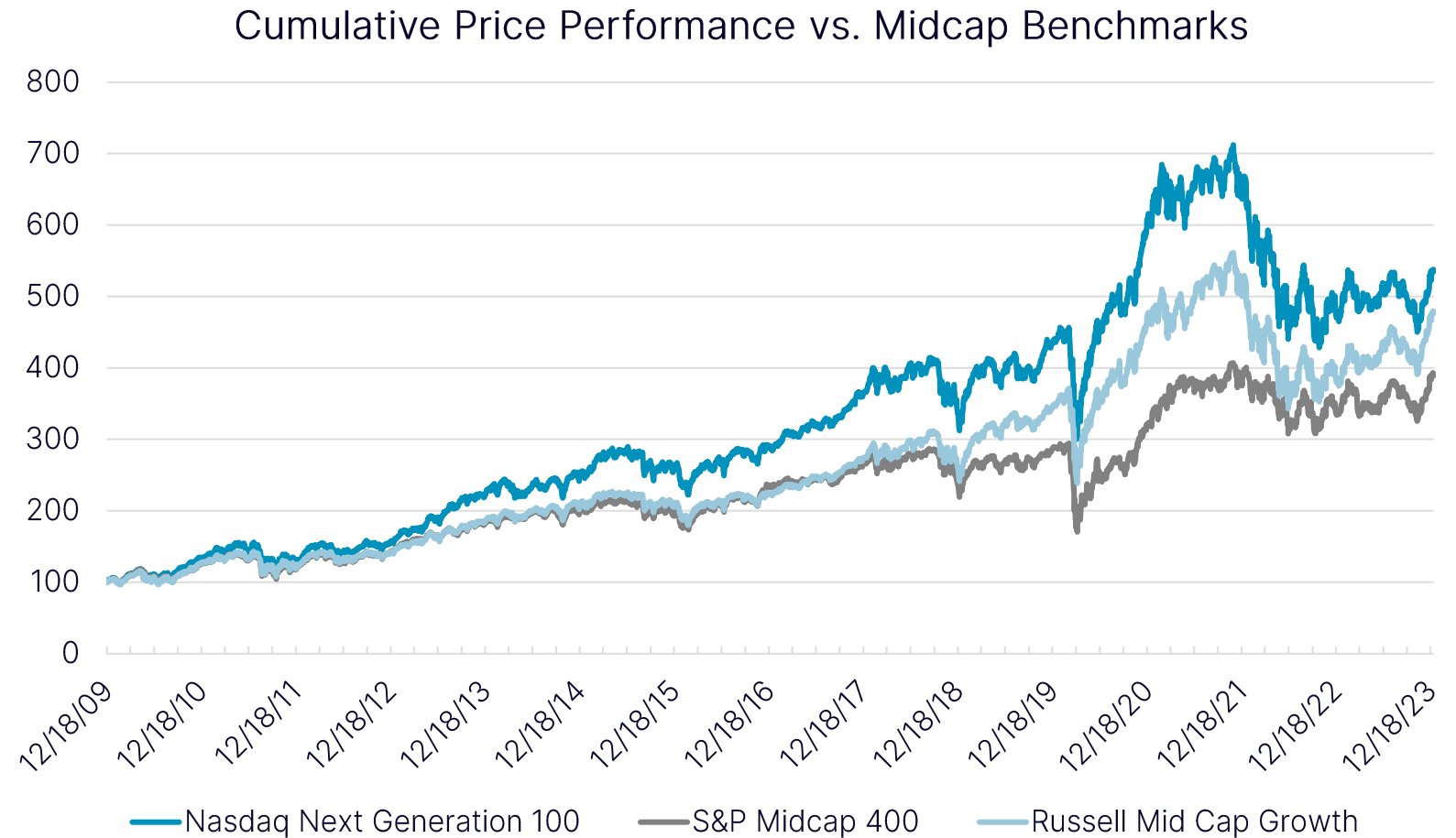


Source: Nasdaq, FactSet. Data as of 12/29/2023.

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

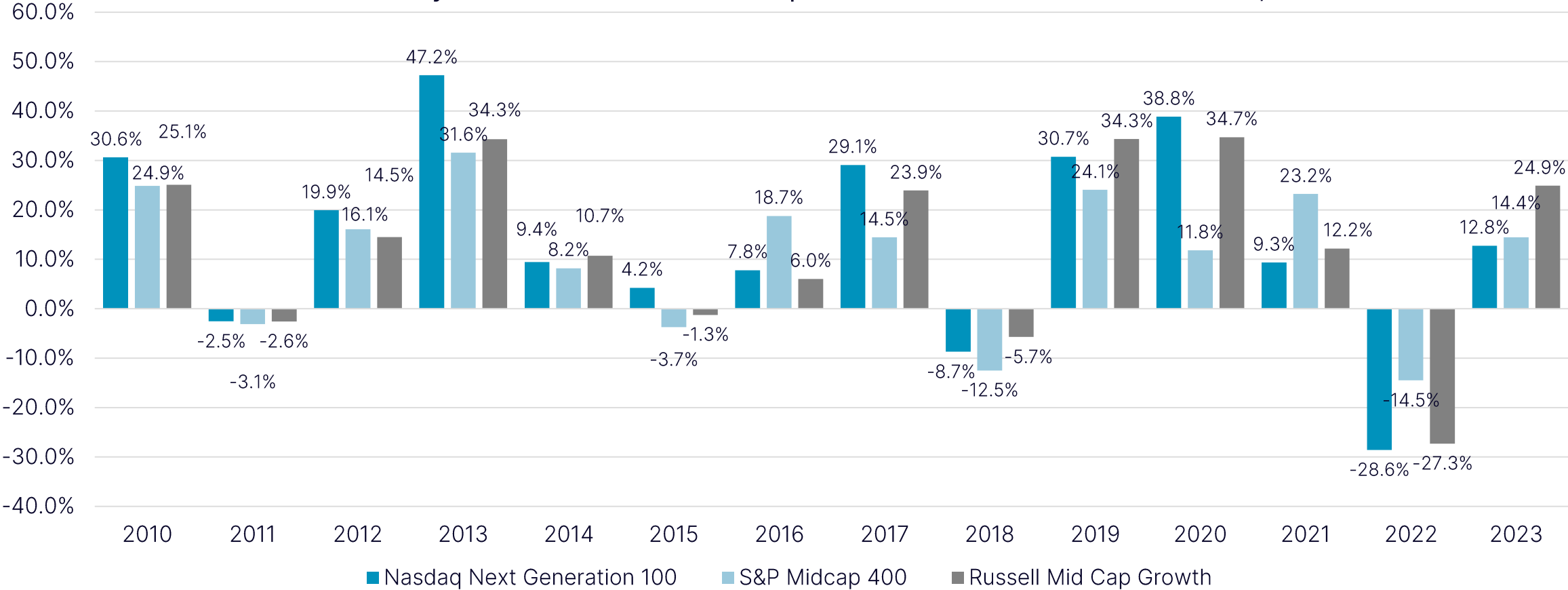
Nasdaq Next Generation 100 Performance

- Index launched on 8/24/2020, and simulated performance dates back to 12/18/2009.
- On price return basis, index gained 435% from start date of back test through 12/29/2023, with an annualized return of 11%.
- S&P Midcap rose only 289%, with annualized return of 10%
- Russell Midcap Growth index gained 376%, with annualized return of 12%



Nasdaq Next Generation 100 Performance

Price Returns by Calendar Year vs. Midcap Market Benchmarks thru Dec 29, 2023



Source: Nasdaq Global Indexes, Factset. Data as of 12/31/2023.

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