Nasdaq-100 Equal Weighted™ Index: Tactical Complement to the Nasdaq-100®

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The Nasdaq-100 Equal-Weighted Index (NDXE™) was launched to offer investors an equal-weighted alternative to tracking the same innovation-driven companies that are part of the Nasdaq-100 (NDX®), but with much lower levels of concentration on a sector, size, or individual company basis. The index functions as a tactical complement to the Nasdaq-100, and is particularly useful as a means of maintaining meaningful exposure to the same fundamental drivers that have propelled the Nasdaq-100 higher, but with less concentration risk.

Reasons to consider NDXE:

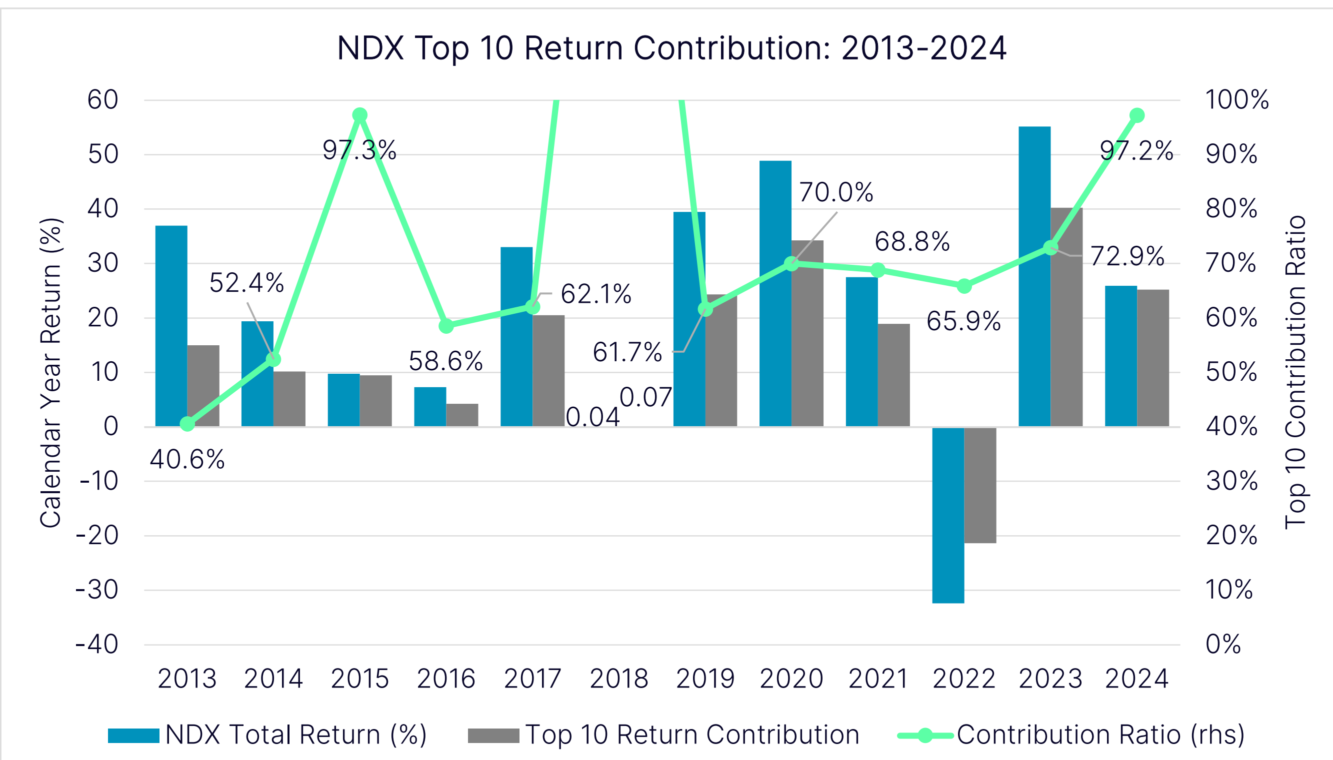
- Only ~8% exposure to the NDX Megacaps ("Magnificent Seven" + Broadcom), vs. ~50% for NDX (as of December 31, 2024)
- Only ~44% exposure to the Technology sector (based on ICB Industry) vs. ~60% for NDX
- Only $257B weighted average market cap vs. $1,317B for NDX
- Attractive valuations with a P/BV of 4.01 vs 6.11 for NDX and EV/Sales of 3.09 vs 4.94 for NDX while having Gross margins that are comparable (46.8% vs 49.2%)
- Market leadership is never guaranteed: of today's 10 largest NDX companies, only Microsoft was ranked in the top 10 at the turn of the century:

NDX Top 10	31-Dec-99	NDX Top 10	31-Dec-24
Market Cap ($B)	Company Name	Market Cap ($B)	Company Name
$602.40	Microsoft Corporation	$3,785.30	Apple
$366.50	Cisco Systems, Inc.	$3,288.76	NVIDIA
$275.00	Intel Corporation	$3,133.80	Microsoft
$159.50	Oracle Corporation	$2,306.89	Amazon.com
$150.60	WorldCom Inc.	$2,159.97	Alphabet
$130.80	Dell Inc.	$1,296.35	Tesla
$125.50	Ericsson	$1,276.41	Meta Platforms
$121.80	Sun Microsystems	$1,086.72	Broadcom
$116.20	QUALCOMM, Inc.	$406.73	Costco Wholesale
$113.90	Altaba, Inc. (f/k/a Yahoo!)	$381.27	Netflix

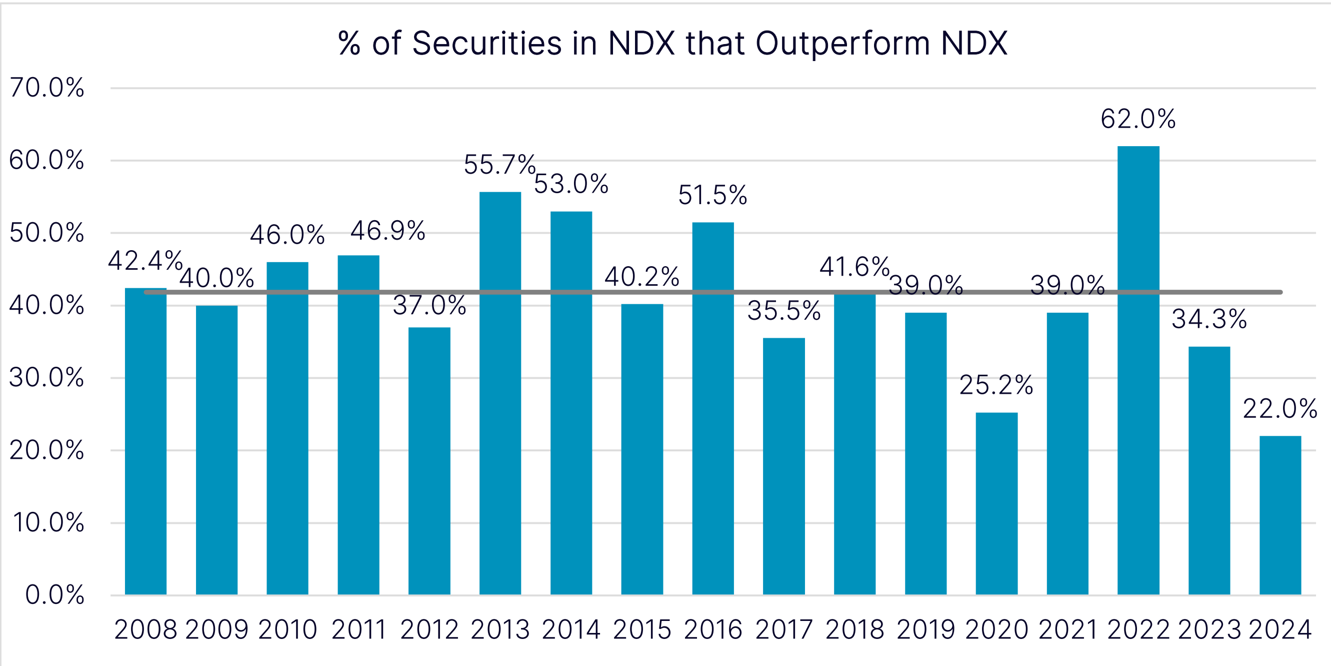
Nasdaq-100 Return Concentration: 2024 vs. Historical Record

NDX experienced another strong run-up in 2024, up 24.9% on a price-return basis. Continuing the trend from 2023, NDX was driven by very strong returns across its largest constituents with the “Magnificent Seven” of Apple, Microsoft, Alphabet, Amazon, Meta Platforms, Tesla, and Nvidia, which as a group gaining 57.4% on average for the year. The newest megacap, Broadcom, was up 107.7%. NDXE was up only 6.3%. This puts the 2 year outperformance of NDX vs NDXE at an astounding 51.2% (92.1% for NDX vs. 40.9% for NDXE). While extreme differences can exist and even persist, one might want to be prepared for a reversion to the mean where NDXE could outperform NDX.

The investment community likes to invent creative monikers for the group of market leaders. Recall FANG/FAANG (Facebook, Apple, Amazon, Netflix and Google) was the original name. It then expanded to FANGMA by adding Microsoft. Then we had the “Magnificent 7” adding Tesla, with Nvidia replacing Netflix for the “N”. Adding Broadcom, we now have BAATMAN. The point is that the constituents change over time but the importance of key innovation drivers remains. To avoid relying on the latest quirky acronym, it may be simplest to consider an analysis of the top 10 largest index constituents (company-level), by weight, over each of the past 10 years to put 2024’s performance concentration in perspective. Specifically, the top 10 highest-weighted companies in the Nasdaq-100 (based on the weight at the end of 2024) contributed 25.2% of the index’s 25.9% total return, for a contribution ratio of 97.2%. This is indeed higher than any year in the past decade except 2015, when the top 10 contributed 97.3% of that year’s 9.7% index-level total return. On average, over the decade preceding 2024, the top 10 NDX weights contributed 68% of the index’s returns. (We are excluding consideration of 2018, during which the index returned 0.03%). This was, in turn, notably higher than the top 10’s cumulative contribution ratio of 56.0% observed from 2002-2012. The trend for NDX has thus been towards steadily higher performance concentration throughout much of the 21st century.



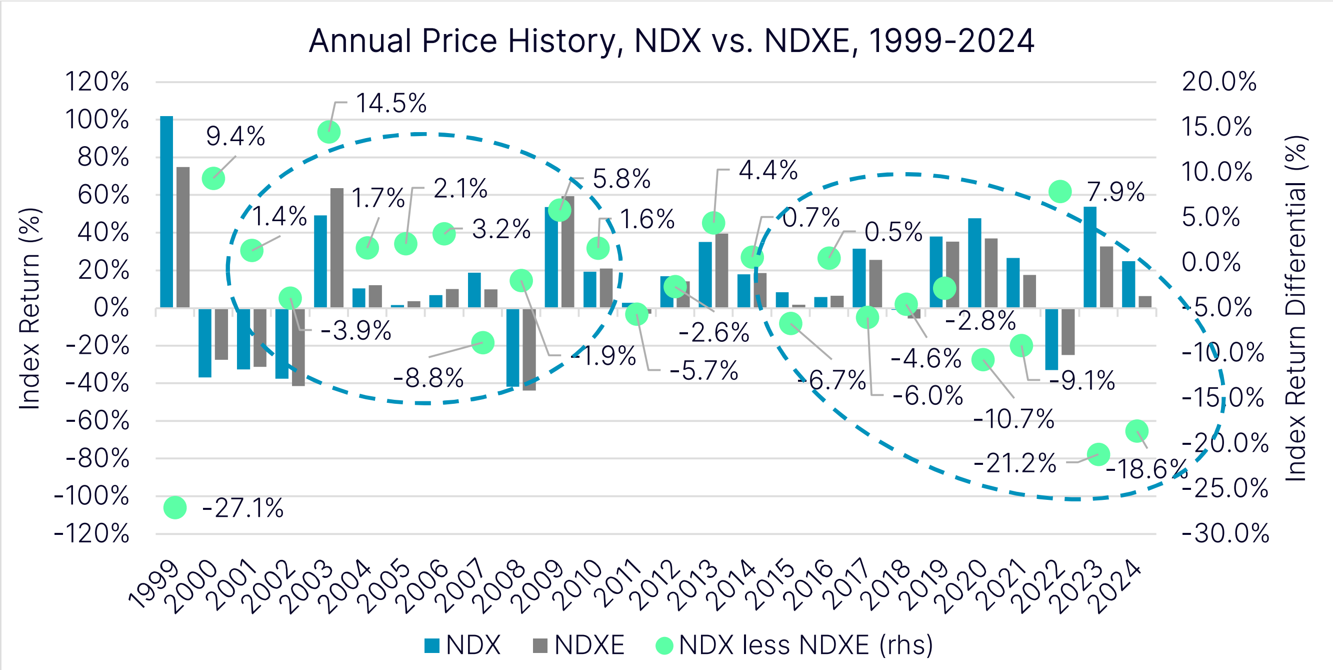
Another way to look at the dominance of the largest names in NDX is to look at the breadth of performance. One way to measure this is the hit rate or percentage of names that outperform the capitalization weighted index. A low hit rate would indicate lower breadth meaning that very few names are driving index performance whereas a higher hit rate would mean that there are a greater number of names supporting the index. Since 2008, the average hit rate has been 41.8%. More recently, we have seen a sharp decline in this number with the percentage of names beating the benchmark in 2023 and 2024 dropping to 34.3% and 22% respectively.



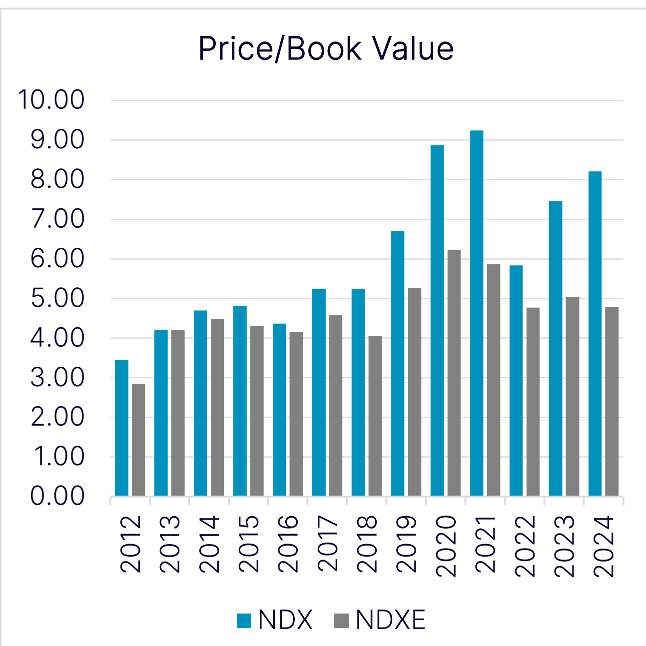
Not surprisingly, there is a strong negative correlation of -0.78 between the hit rate and the percentage of excess return of NDX-NDXE. When the mega cap names dominate performance as they have in 2023 and 2024, NDX tends to outperform NDXE and a smaller percentage of the securities are able to beat the benchmark.

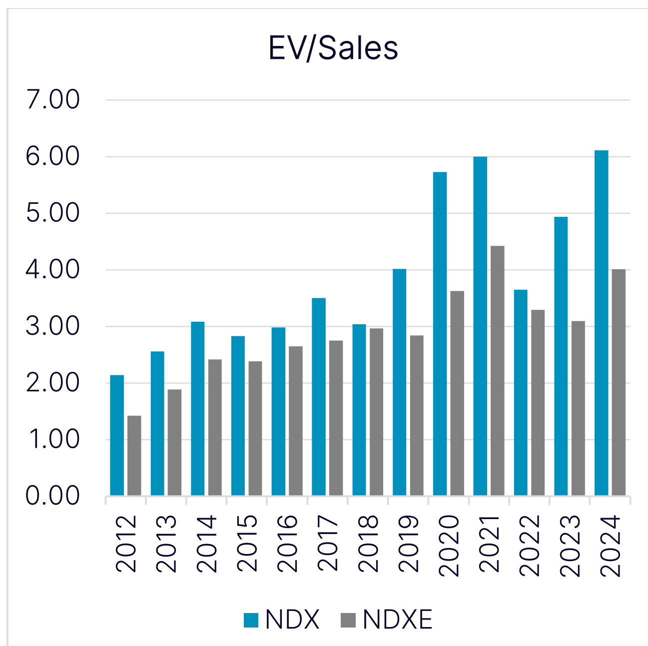
NDX/NDXE Performance Gap: 2024 vs. Historical Record

2024 witnessed the second largest outperformance of NDX vs. NDXE since 1999, when the two indexes gained 102.0% and 74.9%, respectively. Following that historic year, NDXE went on to outperform NDX six out of the next seven years, including in 2003 when it was up 63.6% vs. 49.1% -- the first year of positive returns for either index since 1999. NDXE also outperformed NDX by approximately 8% in 2022's bear market, and may yet again be primed for a period of outperformance as valuations across the rest of the indexes' constituents either catch up to the eight megacaps, or vice versa.



NDXE maintains a considerable advantage over NDX in terms of both P/BV and EV/Sales.



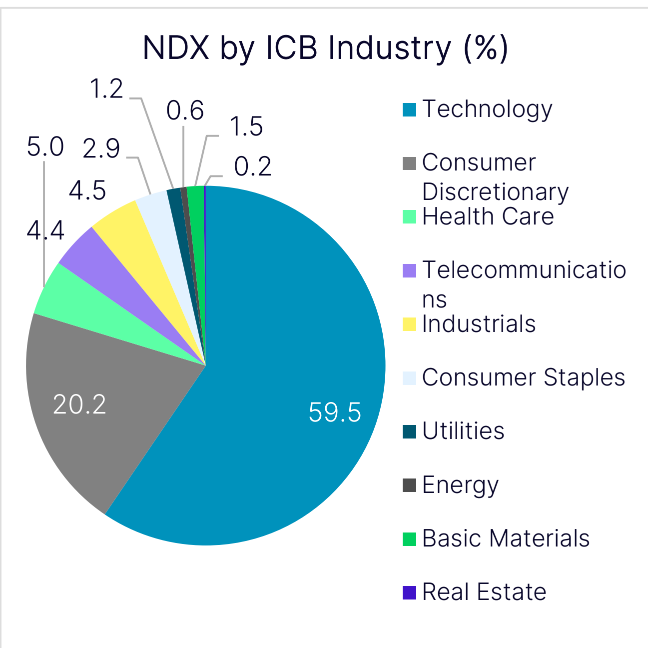


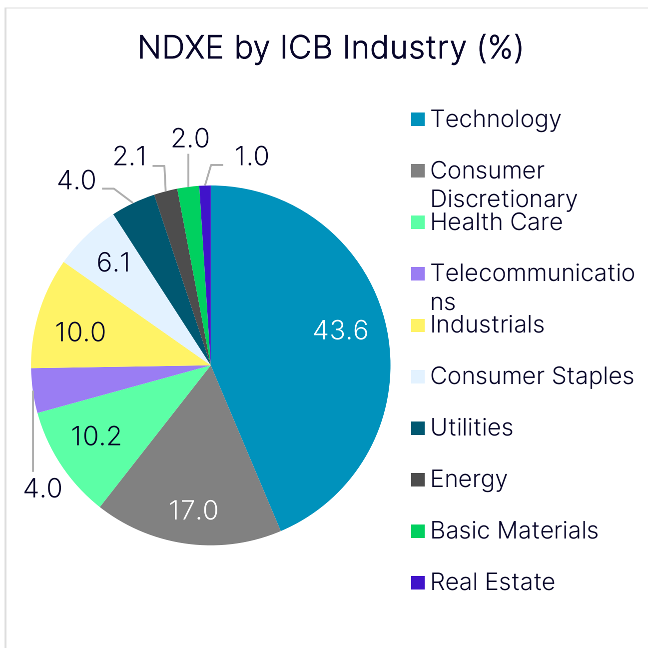
NDXE's equal-weighting approach means that there is less of an implicit bet on mega-cap firms in general. Instead of a weighted-average market cap of $1,317Bn for NDX, NDXE's average market cap of $257Bn reflects a 80% reduction in the index's typical constituent size. If Nvidia, Microsoft, Amazon, Alphabet or Apple (currently weighted between 5-10% each in NDX) were to experience a particularly bad day or month or year (down 50%, for example), the impact of a loss is muted by approximately 80-90%, reducing total portfolio drag. Indeed, this is what we observed in 2022 as the biggest NDX constituents entered bear markets and disproportionately drove losses in the index. Of the NDX's 32.4% total-return loss for the year, the seven largest constituents were all ranked at the very bottom in terms of return contribution, down by 46% on average and contributing a loss of 21% -- or nearly two-thirds of the overall index total, despite averaging just under half of the index weight. In stark contrast, these names contributed only 3.3% of the 24.3% loss in NDXE, or roughly one-seventh of the overall index total return. On average, the negative return contribution for these seven constituents was 83% lower in NDXE vs. NDX, doubtless helping drive an outperformance by the equal-weighted version of 8.1% in 2022 (7.9% in on a price return basis).

Company Name	Average NDX Weight, FY'22	Total Return, FY'22	NDX Return Contribution	NDXE Return Contribution	Reduction in Return Contribution
Amazon	6.6%	-50%	-3.6%	-0.5%	86%
Tesla	4.1%	-65%	-3.4%	-0.7%	78%
Apple	12.9%	-26%	-3.3%	-0.3%	92%
Meta Platforms	3.2%	-64%	-3.0%	-0.8%	73%
Microsoft	10.4%	-28%	-2.7%	-0.3%	90%
NVIDIA	3.3%	-50%	-2.0%	-0.5%	77%
Alphabet	7.3%	-39%	-2.9%	-0.2%	86%
Total/Average	47.7%	-46%	-21.0%	-3.3%	83%

NDX vs. NDXE: Sector (ICB Industry) Exposure Differentials

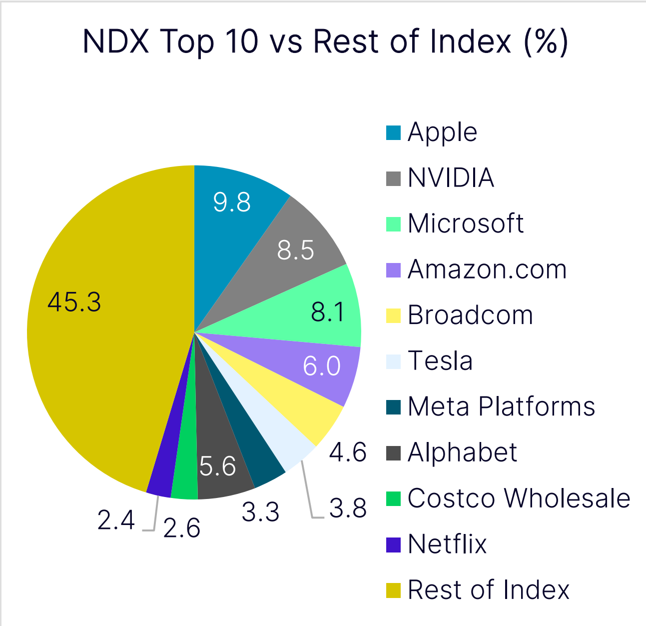
As of December 31, 2024, NDXE's exposure to the Tech sector (per ICB Industry) is approximately 16 percentage points lower than NDX, with the bulk of the difference made up by increased exposures to Health Care, Industrials, and Consumer Staples.

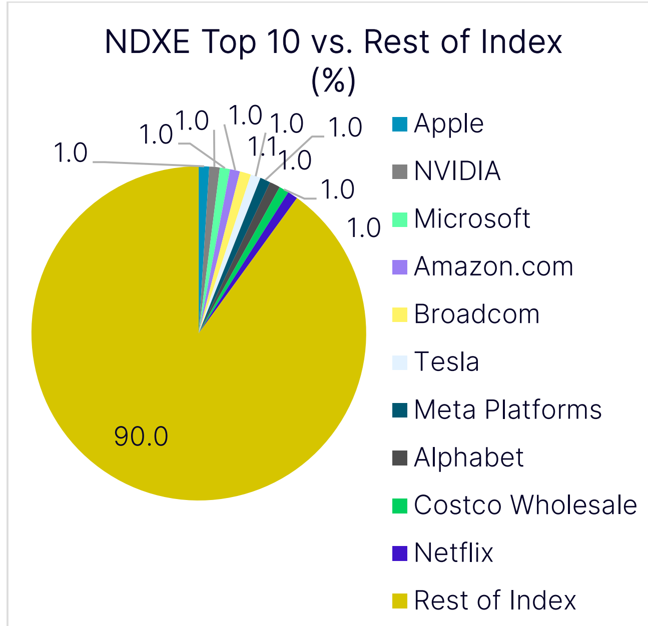




NDX vs. NDXE: Top 10 Concentration

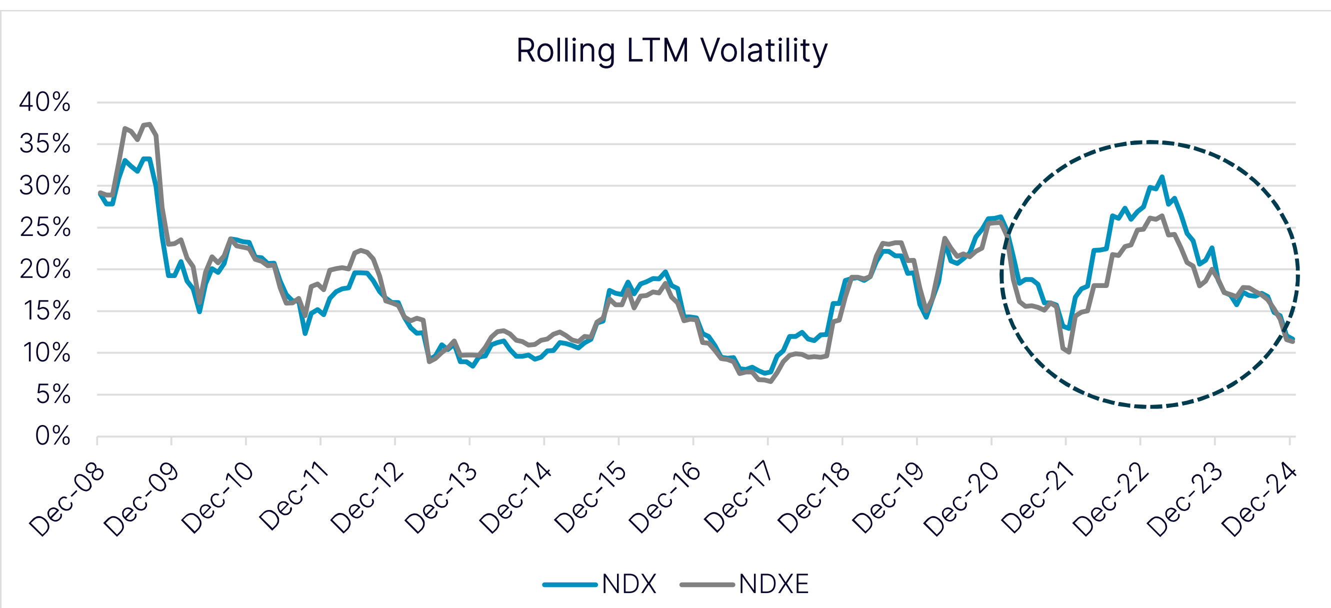
NDXE's concentration in its top 10 constituent companies is only 10% of index weight vs. nearly 54% for NDX:



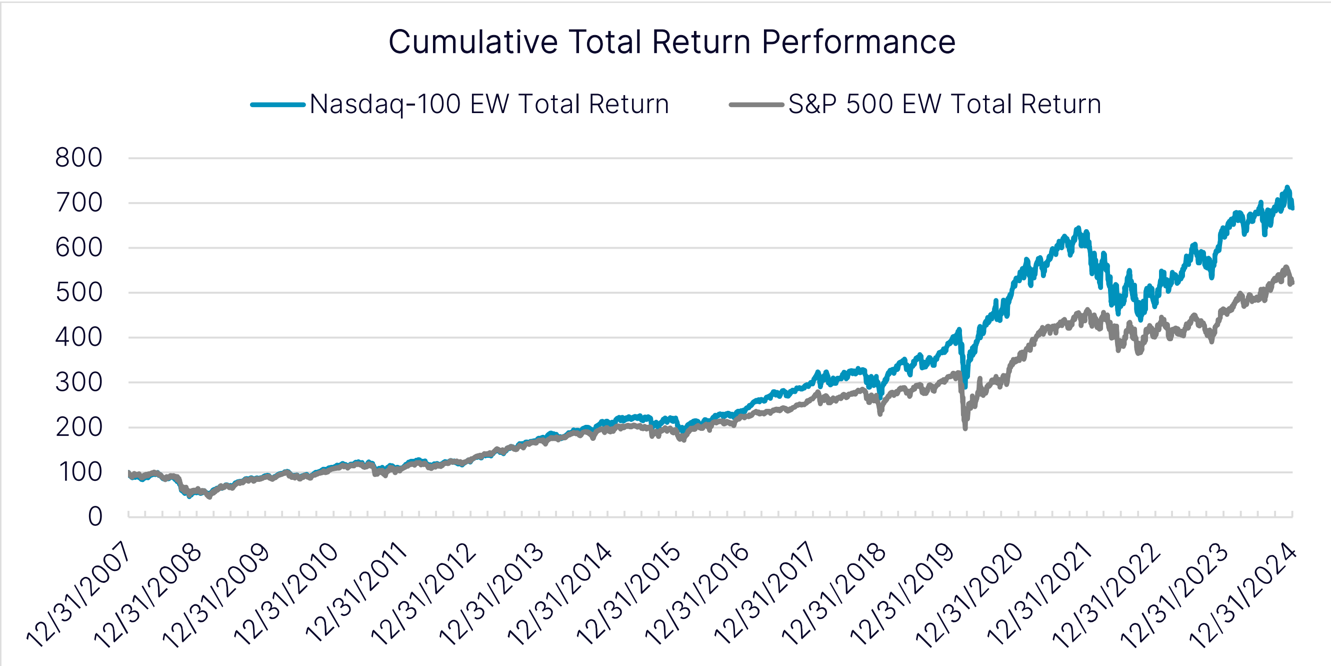


NDX vs. NDXE: Volatility Differentials Swinging in Favor of Equal-Weight

NDXE's lower single-stock concentration and more diversified sector exposures – which tend to be towards lower beta, more defensive/value-oriented areas such as Health Care, Industrials, and Consumer Staples – have led to lower volatility over the past seven years: 17% annualized vs. 17.9% for NDX (based on monthly returns from December 31, 2017 – December 31, 2024).



NDXE vs. S&P 500 Equal Weight: Outperformance Mirrors NDX vs. S&P 500



Compared to the S&P 500 Equal-Weighted Index, the Nasdaq-100 Equal Weighted Index has delivered impressive outperformance over an extended time horizon, up 589% on a total-return basis from December 31, 2007 – December 31, 2024 vs. only 423% for its competitor benchmark. On an annualized basis, that translates to nearly 180 bps of outperformance each year (12.02% vs. 10.22%). This impressive track record comes despite the Nasdaq-100 Equal Weighted Index trailing the S&P 500 Equal-Weighted Index for 3 out of the last 4 calendar years. Even including this recent period of underperformance, it has bested its competitor index in 58% of the calendar years since 2007.

NDXE Can Offer Investors a Tactical, Complementary Tool to Manage NDX Exposure

While betting against the Nasdaq-100 has not proven to be an enduring strategy for much of the 21st century, the index is very much prone to swings in performance and valuations that are driven by its largest constituents. Investors who recognize the benefits of tracking the index for its fundamental strength and exposure to innovation-driven growth can always look to its equal-weighted version as a tactical tool for navigating market fluctuations. For investors concerned about excessive concentration in the Nasdaq-100's largest constituents or the Tech sector more broadly, NDXE offers a complementary tracking tool that can be used to tactically manage exposure risk while continuing to deliver competitive performance much of the time.

Products currently tracking NDXE include the First Trust Nasdaq-100 Equal Weighted ETF (Nasdaq: QQEW), the Direxion Nasdaq-100 Equal Weighted Shares ETF (Nasdaq: QQQE), the Invesco Nasdaq-100 Equal Weight UCITS ETF (London: IEWQ), the Invesco NASDAQ 100 Equal Weight Index ETF – CAD / CAD Hedged ETF (Canada: QQEQ / QQEQ.F), and the Betashares Nasdaq 100 Equal Weight ETF (Australia: QNDQ).

Sources: Nasdaq Global Indexes, FactSet, Bloomberg.