Growth and Quality: A Robust Formula for Screening Nasdaq-Listed Innovators

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Index Highlights

- The Nasdaq-100 Select Equal Weight™ Index (NDXSE™) starts with the Nasdaq-100 Index® (NDX®) and selects the top 50 companies based on growth and quality characteristics. Selected companies are equally weighted.

- NDXSE displays higher growth and quality metrics than the Nasdaq-100 Index and the Nasdaq-100 Equal-Weighted™ Index (NDXE™).

- NDXSE has outperformed the Nasdaq-100 Equal Weighted Index indicating positive alpha from stock selection.

- NDXSE has created incremental alpha vs. NDX while having a smaller drawdown than both NDX and the Nasdaq-100 Equal Weighted Index.

- NDXSE may offer investors an attractive approach to maintaining meaningful exposure to the Nasdaq-100 while rigorously minimizing concentration risk to the biggest mega cap companies, and at the same time, focusing the exposure to some of the higher quality, faster-growing names.

Executive Summary

The Nasdaq-100 Index® (NDX®) includes 100 of the largest domestic and international non-financial companies listed on The Nasdaq Stock Market® based on market capitalization. NDX was launched in 1985 and has become a bellwether measure of many of the most innovative, large-cap companies in the US and globally, with most of its exposure concentrated in the "new economy" sectors of Technology, Consumer Discretionary, and Healthcare. In 2001, the Nasdaq-100 Equal-Weighted™ Index (NDXE™) (the "Equal Weight Index") was launched to offer investors an equal-weighted alternative to tracking the same innovation-driven companies that are part of NDX, but with much lower levels of concentration on a sector, size, or individual company basis. In the most recent iteration, the Nasdaq-100 Select Equal Weight Index™ (NDXSE™) (the "Select Index") was launched on June 23, 2025, to track the equally weighted performance of the 50 companies from NDX with the highest combined blended growth and quality scores.

Growth and quality are important factors in creating a differentiated return series. Over the last five years (since 5/31/2020), the correlation between growth and quality has been 0.65 (using daily total returns of Nasdaq Factor Family US Growth™ Index (NQFFUSGT™) and Nasdaq Factor Family US Quality™ Index (NQFFUSQT™)), indicating that there is a decent amount of diversification benefit from combining these 2 factors. Importantly, their five-year correlations to NDX were 0.83 and 0.75, respectively, suggesting that overlaying them as selection factors may be beneficial from a diversification standpoint.

Index Methodology Overview

The Nasdaq-100 Select Equal Weight Index utilizes the Nasdaq-100 Index as its base universe, ensuring that any security selected for inclusion has already met all eligibility criteria applied to Nasdaq-100 constituents.

Each quarter, the Select Index is reconstituted and rebalanced with the changes becoming effective at the market open on the first trading day following the third Friday in March, June, September and December, based on data from the last trading day in February, May, August and November, respectively.

The constituent selection process is as follows:

- Start with the 100 companies in NDX.

- For each growth and quality metric, calculate its percentile rank within the NDX universe of securities.

- Calculate a growth score for each NDX company by taking the simple average of the universe percentile rank across the following three normalized metrics:

  o Annualized 3-year Sales Growth Rate

  o Annualized 3-year Forward Earnings Per Share (EPS) Estimated Growth Rate

  o Annualized 3-year Free Cash Flow (FCF) Growth Rate

- Calculate a quality score for each NDX company based on a simple average of the universe percentile rank across the following two normalized metrics:

  o Return on Equity (ROE) [Net Income/Shareholder's Equity]

  o Gross Profit Margin [(Revenue-Cost of Goods Sold)/Revenue]

The blended Score for each company is calculated as the equal-weighted average of each company's growth Score and quality Score.

Companies are ranked by their Blended Scores and the top 50 companies with the highest scores are selected for Index inclusion.

The graphics below summarize the index construction process:

Base Universe	Eligibility Criteria	Security Ranking	Selection	Weight
Nasdaq-100 Index	Must be included in the Nasdaq-100 Index as of the Reconstitution effective date. Multiple classes of securities issued by the same company are each eligible, subject to meeting all other Security Eligibility Criteria.	Annualized 3-year Sales Growth Rate Annualized 3-year Forward EPS Estimated Growth Rate Annualized 3-year Free Cash Flow Growth Rate Return on Equity Gross Profit Margin	The 50 securities with the strongest Blended Growth and Quality Ranks are selected.	The index is equally weighted. The index is reconstituted and rebalanced on a quarterly basis.

NDXSE Blended Score
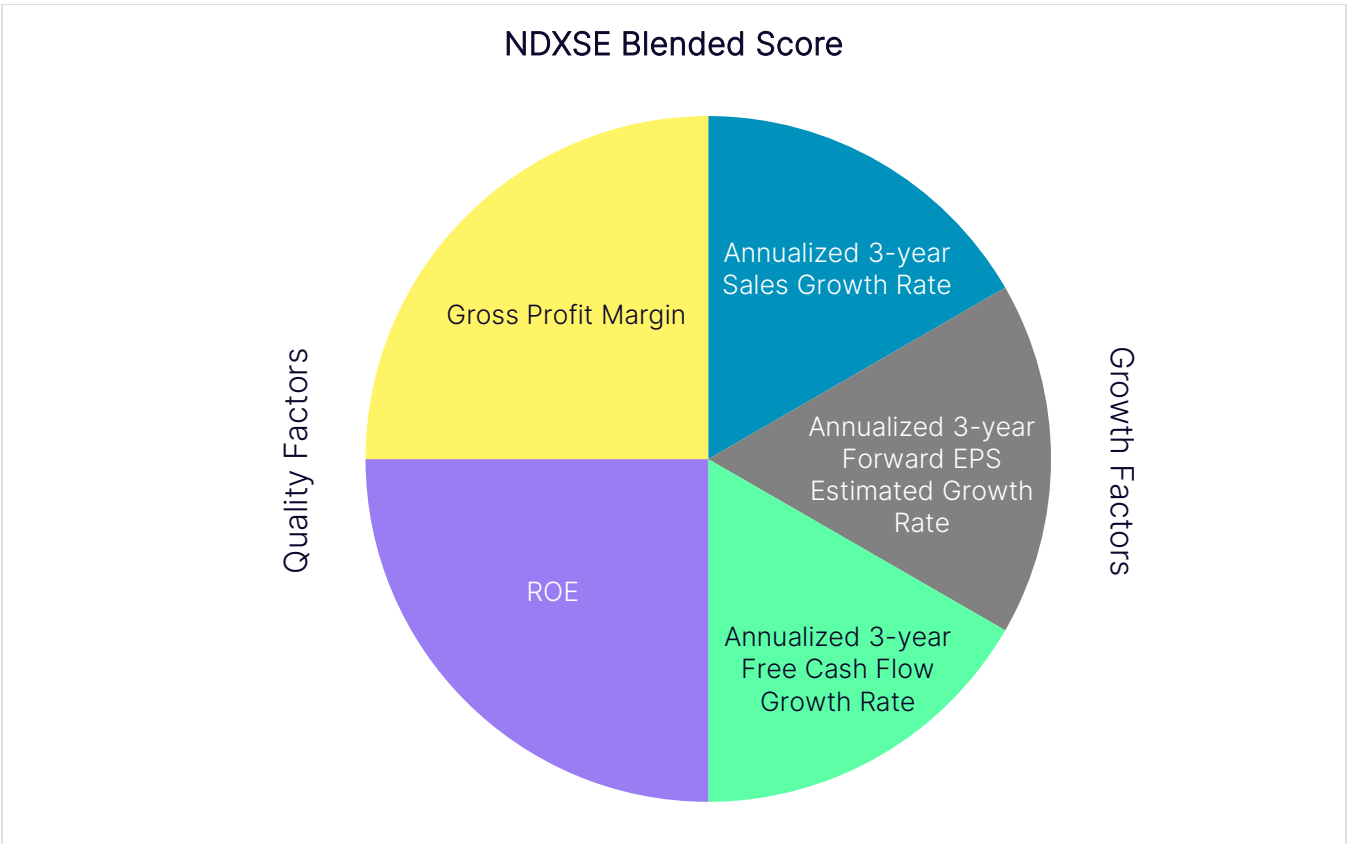
As an example, we'll take a look at Microsoft (Nasdaq: MSFT) and its factors as of the most recent reconstitution at the end of May 2025.

	GROWTH			QUALITY	
	Annualized 3-year Sales Growth Rate	Annualized 3-year Forward Earnings Per Share (EPS) Estimated Growth Rate	Annualized 3-year Free Cash Flow (FCF) Growth Rate	ROE	Gross Profit Margin
Raw Data	11.9%	14.5%	2.9%	30%	69%
Percentile Rank (100=best)	68%	41%	51%	15%	85%

Averaging the three growth and two quality percentile ranks, MSFT earned total growth and quality scores of 53% and 50%, respectively. Averaging the growth and quality scores resulted in a blended score of 51.3%. This ranked MSFT as the 36th best company. Since the Select Index takes the top 50 companies based on their blended score rank, MSFT was selected for inclusion.
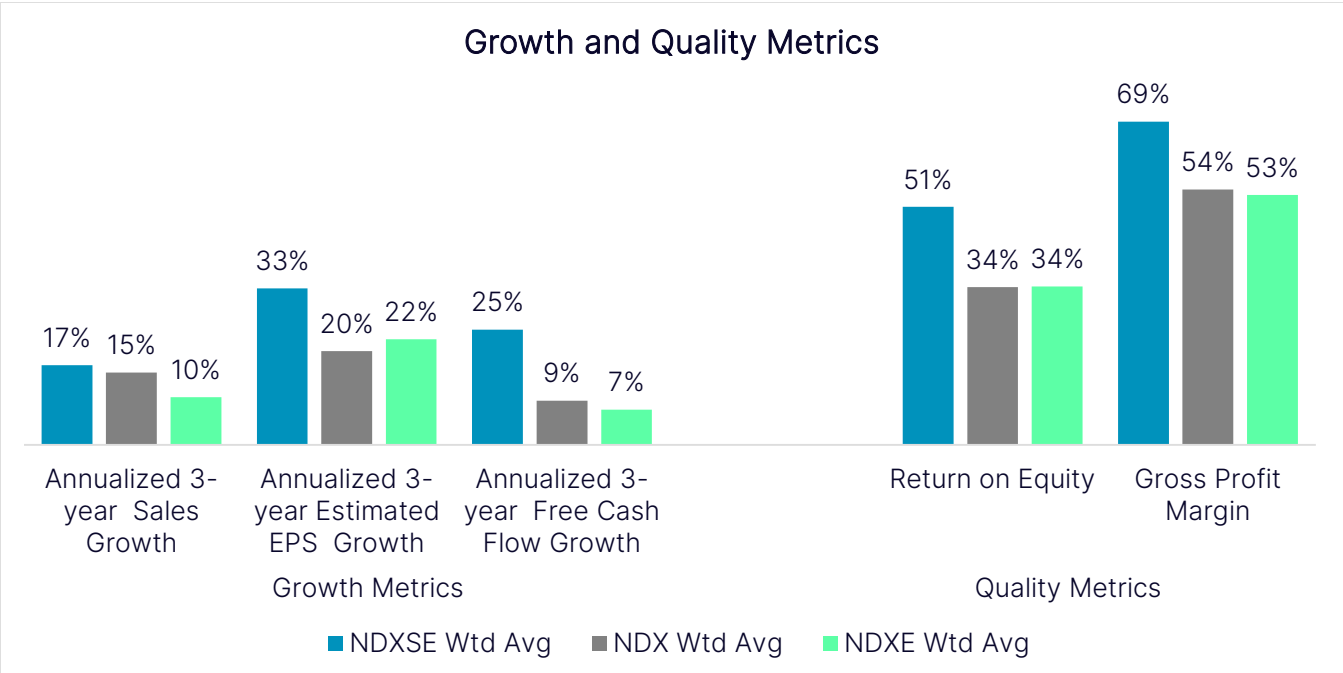
	Growth Score	Quality Score	Blended Score	Blended Score Rank	Pass if Blended Score Rank <50
MSFT	53%	50%	51.35%	36	Pass

Source: Nasdaq Global Indexes, Factset (data as of May 31, 2025)

For a complete description of the Select Index construction process, please refer to the index methodology document at https://indexes.nasdaqomx.com/docs/NDXSE_Methodology.pdf

Portfolio Characteristics

The Select Index (NDXSE) uses growth and quality metrics to select companies from NDX. Accordingly, one would expect that the Select Index would have higher values for these metrics than both NDX and the Equal Weight Index (NDXE). The chart below indicates that this is indeed the case. The Select Index has annualized 3-year growth rates in sales, estimated EPS and free cash flow that are higher than both NDX and the Equal Weight Index. Similarly, when looking at the quality metrics, the Select Index has higher ROE and profit margins than both NDX and the Equal Weight Index.

Growth and Quality Metrics

Growth Metrics

- Annualized 3-year Sales Growth: NDXSE 17%, NDX 15%, NDXE 10%
- Annualized 3-year Estimated EPS Growth: NDXSE 33%, NDX 20%, NDXE 22%
- Annualized 3-year Free Cash Flow Growth: NDXSE 25%, NDX 9%, NDXE 7%

Quality Metrics

- Return on Equity: NDXSE 51%, NDX 34%, NDXE 34%
- Gross Profit Margin: NDXSE 69%, NDX 54%, NDXE 53%

Legend: NDXSE Wtd Avg, NDX Wtd Avg, NDXE Wtd Avg

Source: Nasdaq Global Indexes, Factset (Data as of May 31, 2025)

Looking at the sector composition (as per ICB Industry classifications), one can see that the Select Index has a weight of 60% in the Technology sector. This is similar to NDX but is meaningfully above the Equal Weight Index, which has a Technology weight of only 44% and thus overweighs certain other sectors such as Industrials and Consumer Staples on a relative basis. Comparing the weights to the S&P 500 Equal Weight Index (SPW) as proxied by the holdings in the Invesco S&P 500 Equal Weight ETF (RSP), we see that SPW has only 13% weight in Technology.

## ICB Industry Weights (%)

Legend: NDXSE, NDX, NDXE, SPW
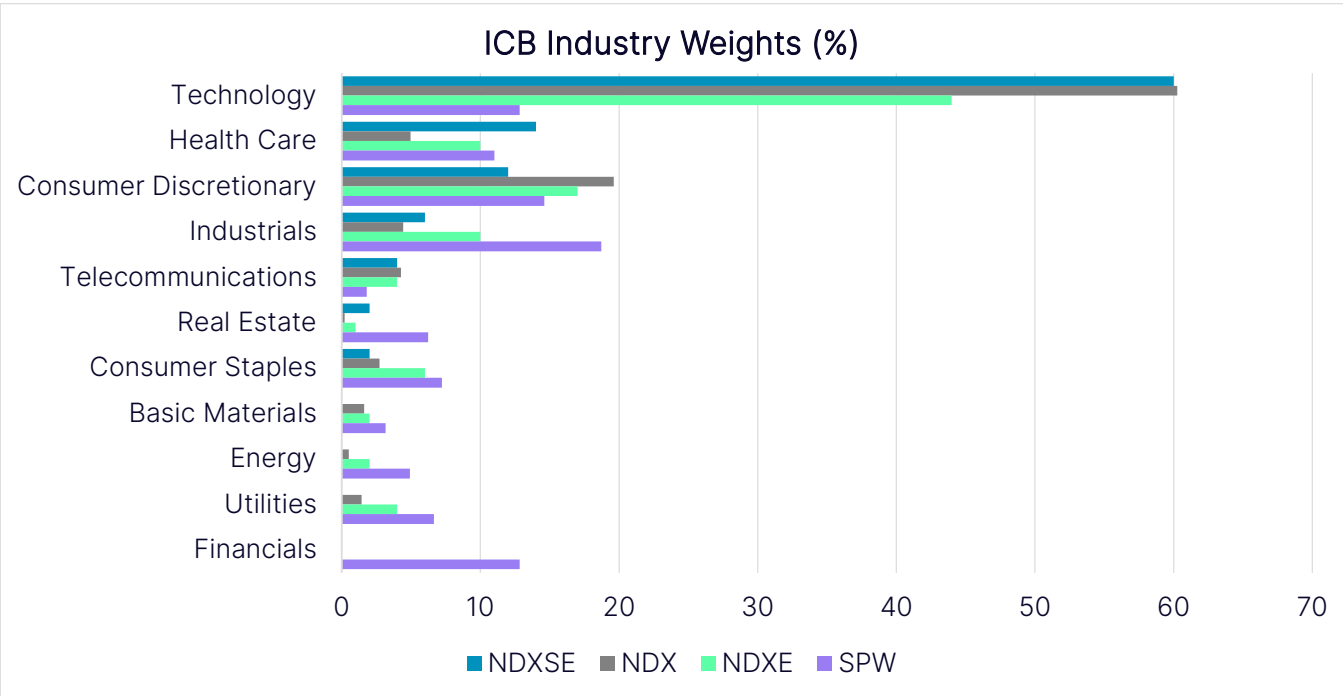
Source: Nasdaq Global Indexes (Data as of May 31, 2025)

The sector weights for the Select Index appear fairly consistent over the course of the index back test dating to December 2007, with close to 80% exposure across Technology and Consumer Discretionary, very close to that of NDX.

## NDXSE ICB Industry Weights (%), 2007-2025
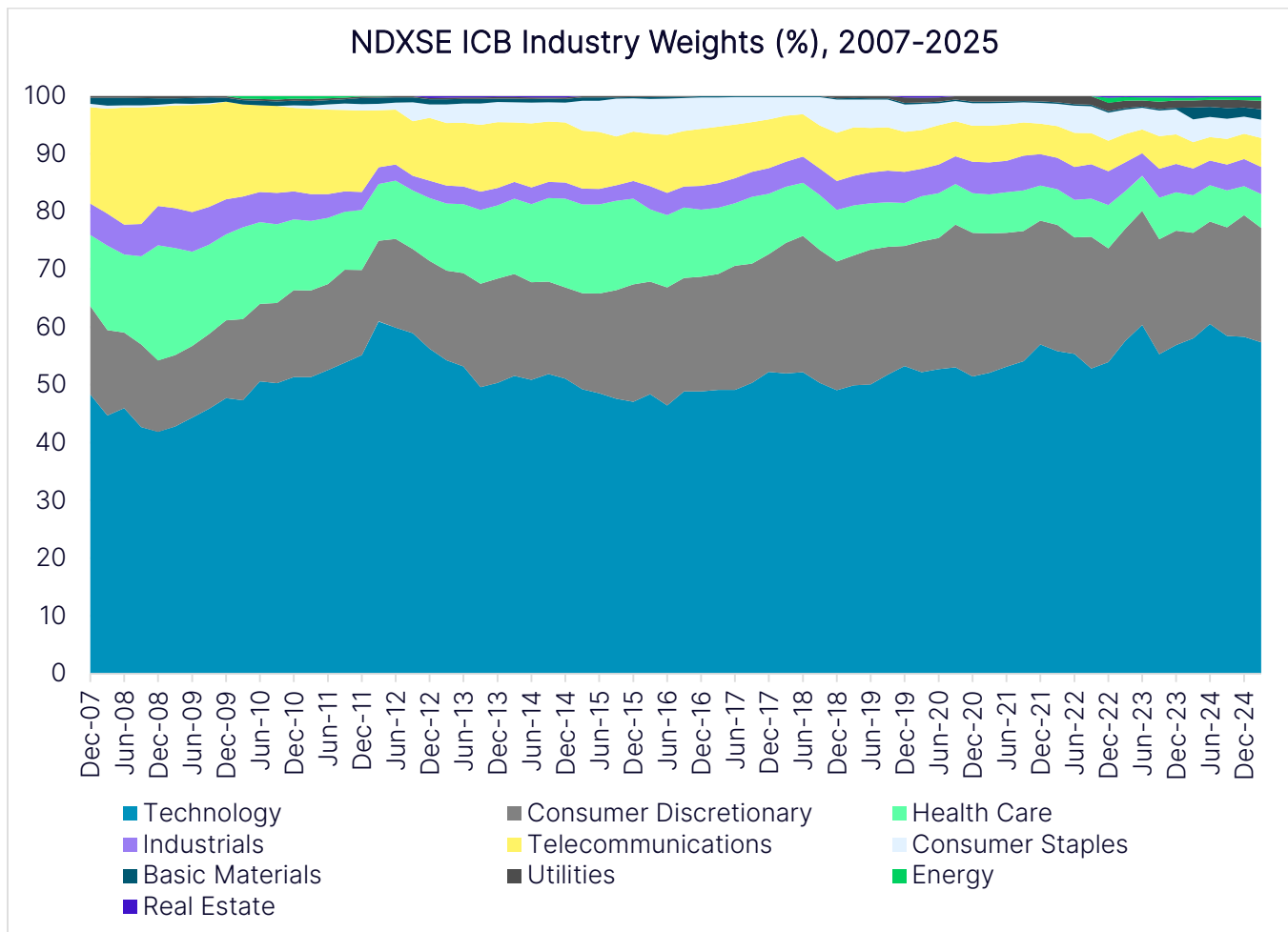
Source: Nasdaq Global Indexes. Data from December 2007-March 2025.

As of the June 2025 reconstitution, the Select Index did not currently include several mega cap Consumer Discretionary companies such as Netflix (Nasdaq: NFLX), Amazon.com (Nasdaq: AMZN) and Tesla (Nasdaq: TSLA) that are longtime members of the Nasdaq-100. Looking at the growth and quality scores in the chart below, NFLX and AMZN are lower in growth score, while TSLA is lower in quality score. This has recently reduced Consumer Discretionary's weight in the Select Index (12.0%) to be meaningfully lower than NDX (19.6%) and the Equal Weight Index (17.0%) as of the most recent reconstitution. Offsetting the underweight in Consumer Discretionary, the Select Index has a relative overweight in the Health Care sector at 14.0%, vs. 10.0% and 5.0% for NDXE and NDX, respectively.

NDX Components: Growth and Quality Scores
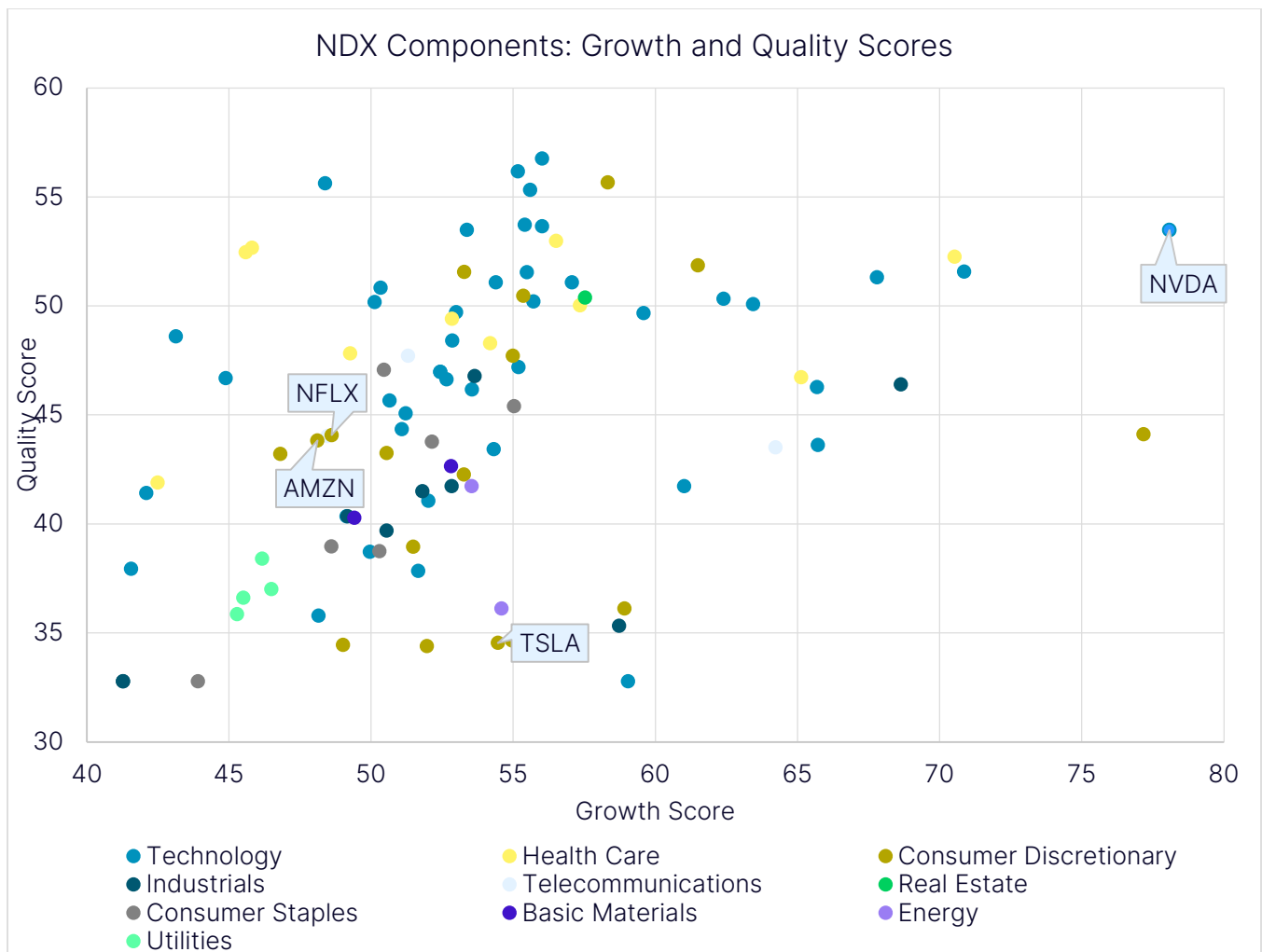
Source: Nasdaq Global Indexes (Data as of May 31, 2025)

The Select Index is a true large cap index with a median market capitalization of $124B. This is approximately 50% larger than NDX and the Equal Weight Index, and about 3.5 times that of the S&P 500 Equal Weight Index (SPW). Since NDX is weighted using a modified market cap approach, its weighted average market cap is much larger than the Select Index, though the Select Index still has a larger weighted average market cap vs. the Equal Weight Index and SPW.

Market Capitalization, ($B)
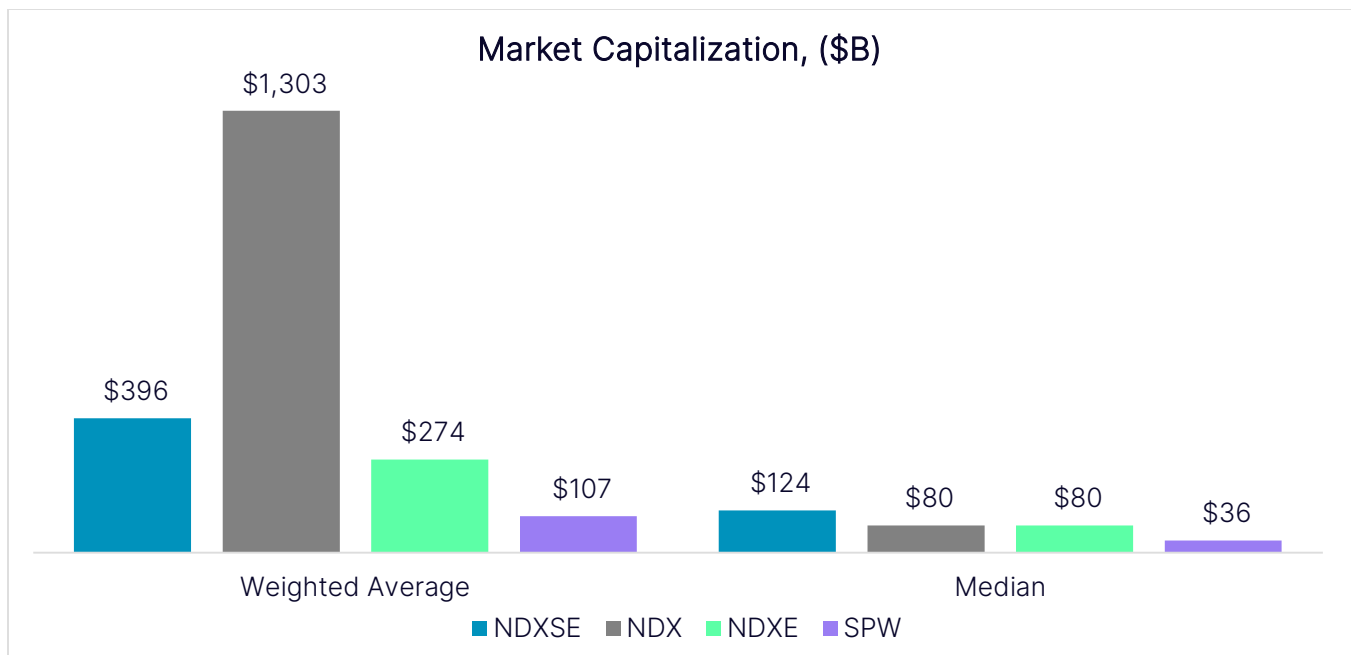
Source: Nasdaq Global Indexes, Factset (Data as of May 31, 2025)

Factor Exposure Analysis

In addition to looking at holdings-based characteristics, it is often useful to analyze the return series of an index to estimate exposures to fundamental factors via regression analysis. The regression coefficients estimate the sensitivity of a portfolio to changes in each factor, and the T-statistic is a measure of its significance. The Fama-French 5-factor model utilizes the following factors:

- CMA/Conservative minus Aggressive: returns of firms that invest conservatively vs. firms that invest more aggressively
- HML/Low Price-to-Book Value: returns of high value (or lower growth) stocks
- Market-RF/Beta: sensitivity to the excess returns of the market minus the risk-free rate
- RMW/Robust minus Weak: returns of more profitable firms minus less profitable firms
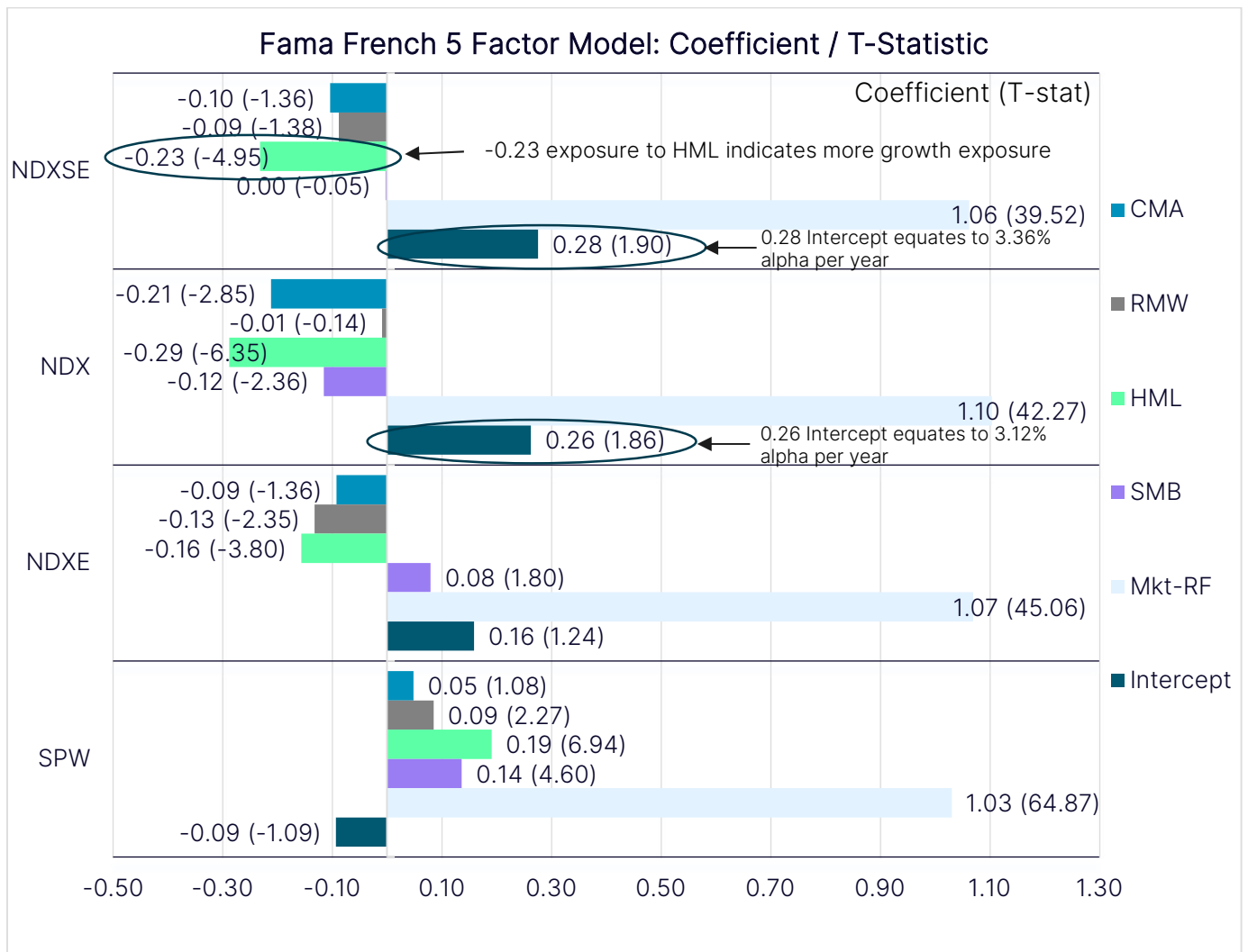- SMB/Small minus Big: returns of smaller firms minus larger firms

In this analysis, a regression of the back tested index returns against the five factors shows that the Select Index has a statistically significant coefficient of 1.06 to the Market-RF factor. This factor is often named Beta and is a measure of the sensitivity of the index to changes in the broad market price. A coefficient greater than 1 indicates that the index is likely to move by more than 1x the change in the market price. The Select Index coefficient of 1.06 is lower than both NDX and the Equal Weight Index with coefficients of 1.10 and 1.07, respectively.

The other fundamental factor that is statistically significant for the Select Index is HML, which is a measure of exposure to stocks with low price-book value ratios vs. high price-book ratios. In this case, the Select Index has a coefficient of -0.23, indicating that it has lower exposure to low price-to-book stocks (i.e. lower "value" exposure"). Negative HML exposures are often considered to be a higher exposure to the growth

factor. With a value of -0.23, the Select Index has more "growth" exposure than the Equal Weight Index which would be consistent with the Select index construction process. All of the other factors have an absolute value of the T-statistic <1.96 indicating that they are not statistically significant at the 95% confidence level.

Importantly, the intercept for NDXSE is 0.28 per month. This means that NDXSE has a 0.28% return per month (or 3.36% annualized) that cannot be explained by the five factors in the model. This is often referred to as Alpha. While the T-statistic of 1.90 is less than the 1.96 cut-off to be significant at the 95% level, it is still significant at the 94% confidence level. By comparison, NDX has an intercept of 0.26 and with a T-statistic of 1.86, it would be significant at the 93% confidence level. Thus, the Select Index provides incrementally higher Alpha (0.28 vs. 0.26) than NDX. In fact, all 3 Nasdaq-100 indexes (NDX, Select and Equal Weight) have higher levels of Alpha than SPW which has an Alpha of -0.09% per month or -1.11% per year.

The R^2 values for each regression are at least .91 indicating strong model fits meaning the model explains over 90% of the returns.

Fama French 5 Factor Model: Coefficient / T-Statistic

Coefficient (T-stat)

NDXSE
- -0.10 (-1.36)
- -0.09 (-1.38)
- -0.23 (-4.95) ← -0.23 exposure to HML indicates more growth exposure
- 0.00 (-0.05)
- 1.06 (39.52)
- 0.28 (1.90) ← 0.28 Intercept equates to 3.36% alpha per year

NDX
- -0.21 (-2.85)
- -0.01 (-0.14)
- -0.29 (-6.35)
- -0.12 (-2.36)
- 1.10 (42.27)
- 0.26 (1.86) ← 0.26 Intercept equates to 3.12% alpha per year

NDXE
- -0.09 (-1.36)
- -0.13 (-2.35)
- -0.16 (-3.80)
- 0.08 (1.80)
- 1.07 (45.06)
- 0.16 (1.24)

SPW
- 0.05 (1.08)
- 0.09 (2.27)
- 0.19 (6.94)
- 0.14 (4.60)
- 1.03 (64.87)
- -0.09 (-1.09)

Legend: ■ CMA ■ RMW ■ HML ■ SMB ■ Mkt-RF ■ Intercept

X-axis: -0.50, -0.30, -0.10, 0.10, 0.30, 0.50, 0.70, 0.90, 1.10, 1.30

Source: Nasdaq Global Indexes, Dartmouth.edu (Data are monthly returns from December 31, 2007 through April 30, 2025)

Backtested Performance Analysis

The annualized price return for the Select Index from December 21, 2007 through June 20, 2025 was 13.03%. This is well above the annualized price returns for the Equal Weight Index (10.81%) and SPW (7.84%), though it has modestly lagged relative to NDX (14.24%). Considering that the Select Index and the Equal Weight index are both equally weighted, the difference in their performance can be attributed to stock selection. The outperformance of the Select Index relative to the Equal Weight Index indicates that the selection process based on the growth and quality metrics has been effective in selecting companies whose stocks have had higher returns than the average in NDX. NDX's outperformance relative to the Select Index is largely a function of the weighting scheme and timing; the strong performance of mega cap stocks, especially in the last few years, has propelled NDX to higher returns than the Select Index; prior to that, the two tracked closely in cumulative performance.

The standard deviation of returns for the Select Index is only 0.11% higher than the Equal Weight Index suggesting there is no material difference in their risk profiles. All three Nasdaq indexes have higher risk adjusted returns than SPW, as measured by annualized return / annualized standard deviation.

The Select Index has historically outperformed the Equal Weight Index and SPW in 56% and 60% of the months, respectively, since December 2007.

Despite having the fewest number of names, the Select Index has had the smallest maximum drawdown vs. NDX, the Equal Weight Index and SPW. This may be attributable to the selection criteria that focus on companies that have strong growth in free cash flow, sales and estimated earnings as well as high quality as measured by ROE and profitability. Additionally, with a correlation of 0.65 between growth and quality, there appears to be a diversification benefit from the quality factor that may be providing something of a downside cushion vs. the growth exposure.

	NDXSE	NDX	NDXE	SPW
Annualized Price Return	13.03%	14.24%	10.81%	7.84%
Annualized Standard Deviation	22.93%	23.11%	22.82%	21.72%
Return/Risk	57%	62%	47%	36%
NDXSE Monthly Win Rate vs.	NM	46%	56%	60%
Max Drawdown	-48.59%	-51.50%	-55.18%	-57.37%

Source: Nasdaq Global Indexes, Factset (Data from December 21, 2007 through June 20, 2025)

Cumulative Price Return Performance
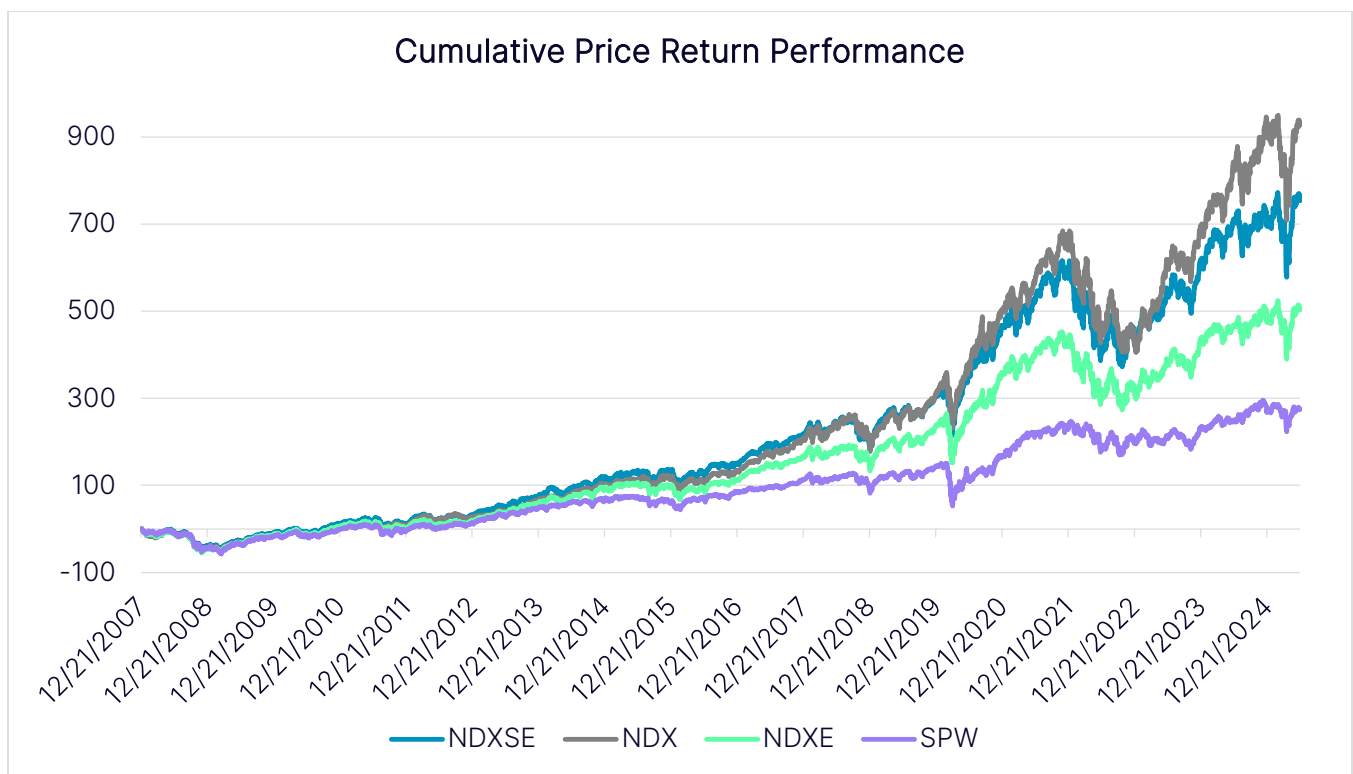
Source: Nasdaq Global Indexes, Factset (Data from December 21, 2007 through June 20, 2025)

Summary

Building on the strength of the Nasdaq-100 Index (NDX), the Nasdaq-100 Equal Weighted Index (NDXE) and the Nasdaq-100 Select Equal Weight Index (NDXSE) offer alternative ways to invest in many of the most innovative, large-cap companies in the US and globally that are Nasdaq-listed. The Equal Weight Index includes all 100 companies and equal weights them, while the Select Index utilizes a constituent selection process that prioritizes 50 companies with higher growth rates and stronger quality characteristics and then equal weights them. A review of the characteristics and performance of the Select Index shows differentiated exposures based on growth and quality metrics, sectors, market cap, and factor exposures. Starting with a base universe of 100 innovative companies in NDX, the Select Index selection process has the potential to deliver strong, positive alpha (as measured by the Fama-French 5-factor model) based on its back tested performance, with the added benefit of some downside mitigation and a competitive risk/return tradeoff compared to other equal-weight alternatives. In a market environment that has seen growth dominating most other factors for nearly two decades, and mega caps dominating most other size segments for years, investors who seek to maintain their exposure to Nasdaq-100 companies can now track a benchmark that offers both a lower level of concentration risk, and a multifactor approach to screening for higher quality, but still fast-growing, names.

Disclaimer: