



Innovation Meets Sustainability

Nasdaq-100 ESG™ Index &
Nasdaq Next Generation 100 ESG™ Index

December 2023
Reconstitution

December 2023 Reconstitution

NDXESG™ / NGXESG™ Index Objectives

- Reduce the degree to which the portfolio's economic value is at risk because of Environmental, Social, and Governance (ESG) factors, or more technically, aim to significantly improve the portfolio's ESG score;
- Exclude enterprises that create reputational risks or violate fundamental values;
- Eliminate business exposures that are off-limit for most ESG-conscious investors and
- Aim to deliver similar performance to the Nasdaq-100® (NDX®)/ Nasdaq Next Generation 100™ Index (NGX™) (very low tracking error).

NDXESG / NGXESG Index Mechanics

- At all times, the Nasdaq-100 ESG™ Index (NDXESG™) / Nasdaq Next Generation 100 ESG™ Index (NGXESG™) consists of a selection of securities in the Nasdaq-100 / Nasdaq Next Generation 100 Index.
- The Nasdaq-100 and Nasdaq Next Generation 100 Indexes are reconstituted annually in December.
- The ESG characteristics of the underlying issuers are re-evaluated each quarter (March, June, September, and December). Hence, there is an NDXESG / NGXESG reconstitution and rebalancing each quarter.
- Securities removed from the Nasdaq-100 / Nasdaq Next Generation 100 Index outside of a reconstitution are removed from the Nasdaq-100 ESG Index / Nasdaq Next Generation 100 ESG Index and are not replaced.

NDXESG / NGXESG Weighting Scheme

- The Nasdaq-100 ESG Index / Nasdaq Next Generation 100 ESG Index are modified market capitalization-weighted indexes that consider a company's ESG Risk Rating Score as an adjustment factor.
- Two factors play into the index weight of an issuer:
 - The Nasdaq-100 / Nasdaq Next Generation 100 Market Value, and
 - The ESG Risk Rating Score.
- In general, for each issuer:
 - Everything else equal, the higher the weight in the Nasdaq-100 and/or the better ESG risk rating, the higher the weight in the NDXESG Index, and vice versa. Same for Nasdaq Next Generation 100 and NGXESG.

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NDXESG™ ESG Exclusions: 7

Symbol	Company Name	ICB Industry	Nasdaq-100 ESG: Reason for Exclusion	Nasdaq-100® Weight (%)
HON	Honeywell International	Industrials	Revenue from military contracting weapons. Involvement in Controversial Weapons: Tailor-made and essential.	1.10
ADI	Analog Devices	Technology	Revenue from military contracting weapon-related products and/or services.	0.78
AEP	American Electric Power	Utilities	Revenue from thermal coal power generation, nuclear production, and oil & gas generation.	0.34
CEG	Constellation Energy	Utilities	Revenue from nuclear production and oil & gas generation.	0.30
BKR	Baker Hughes	Energy	Revenue from oil & gas supporting products/services.	0.27
XEL	Xcel Energy	Utilities	Revenue from thermal coal power generation, nuclear production, oil & gas production, and oil & gas generation.	0.27
FANG	Diamondback Energy	Energy	Revenue from oil & gas production. Involvement in shale energy extraction and/or production.	0.22

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NGXESG™ ESG Exclusions: 13

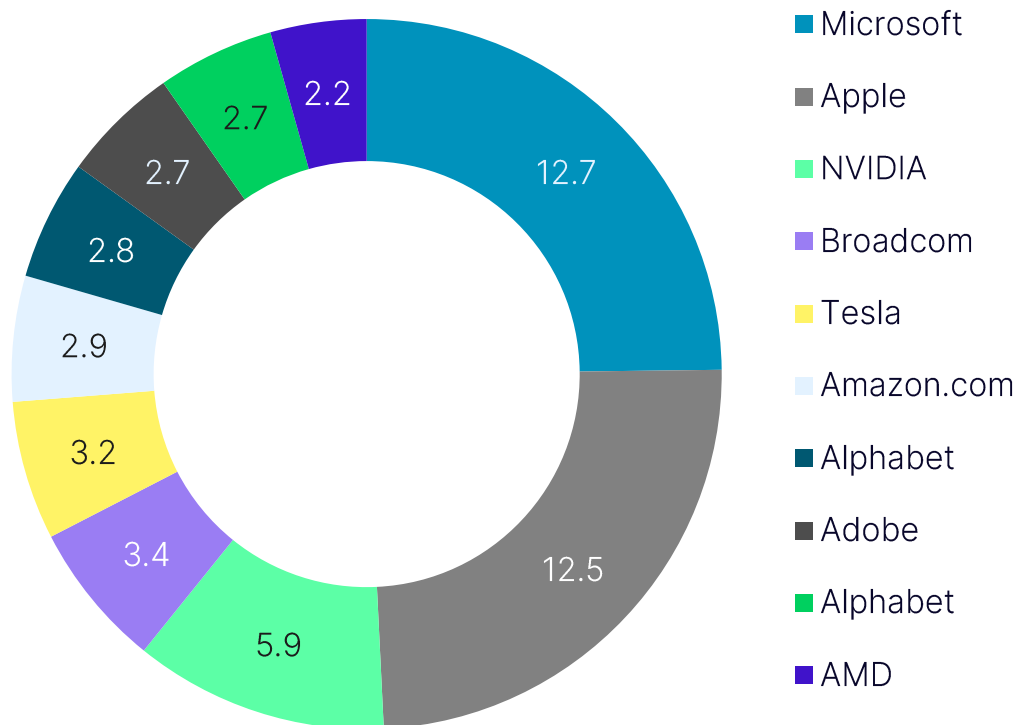
Symbol	Company Name	ICB Industry	Nasdaq Next Generation 100 ESG: Reason for Exclusion	Nasdaq Next Generation 100® Weight (%)
AXON	Axon Enterprise	Industrials	ESG Risk Rating Score is greater than 40. Manufacture riot control protection equipment and riot control weapons.	1.36
BIDU	Baidu	Technology	Global Standards Screening non-compliance.	1.13
DKNG	DraftKings	Consumer Discretionary	ESG Risk Rating Score has not yet been determined. Revenue from gambling operations.	1.16
LNT	Alliant Energy	Utilities	Revenue from oil & gas generation and thermal coal power generation.	0.92
APA	APA	Energy	ESG Risk Rating Score is greater than 40. Revenue from oil & gas production. Involvement in shale energy extraction and/or production.	0.77
EVRG	Evergy	Utilities	Revenue from nuclear production and thermal coal power generation.	0.84
CHK	Chesapeake Energy	Energy	ESG Risk Rating Score is greater than 40. Revenue from oil & gas production. Involvement in shale energy extraction and/or production.	0.71
CASY	Casey's General Stores	Consumer Staples	Revenue from tobacco products – retail.	0.72
WYNN	Wynn Resorts	Consumer Discretionary	Revenue from gambling operations.	0.72
CZR	Caesars Entertainment	Consumer Discretionary	Revenue from gambling operations.	0.71
CHDN	Churchill Downs	Consumer Discretionary	Revenue from gambling operations.	0.71
WWD	Woodward	Industrials	Revenue from military contracting weapon-related products and/or services, and oil & gas supporting products/services.	0.58
LLYVK	Liberty Media	Consumer Discretionary	ESG Risk Rating Score has not yet been determined.	0.17



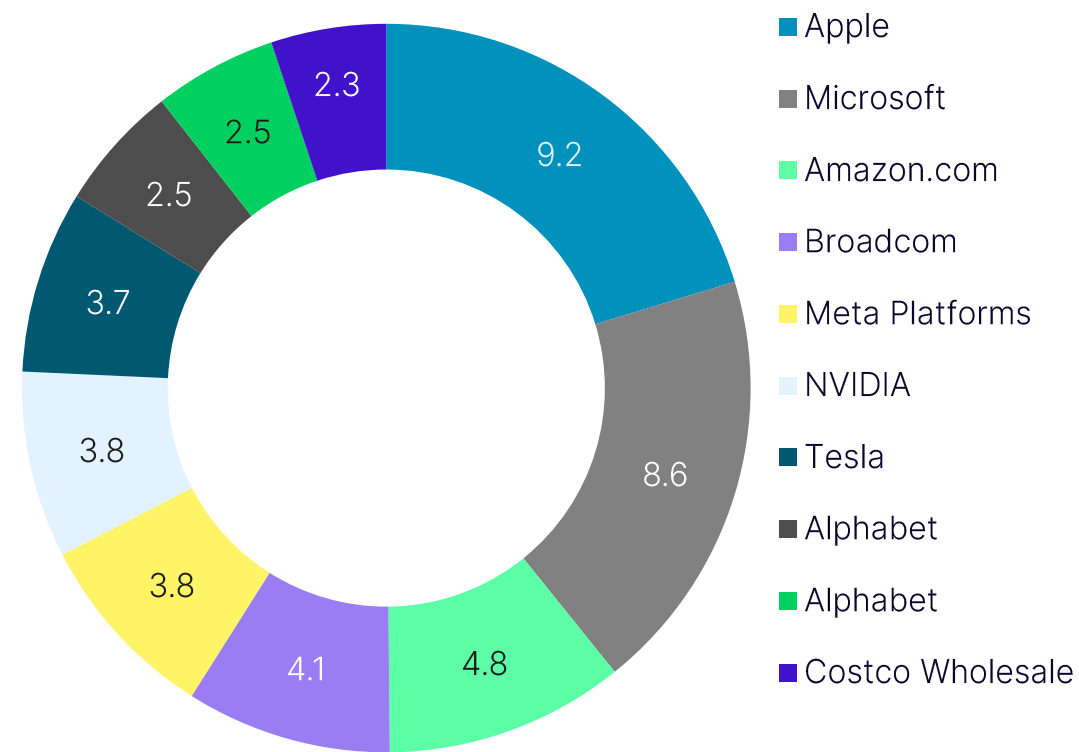
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Top 10 Constituents by Index Weight (%)

NDXESG
Top 10 Weight = 51.1%

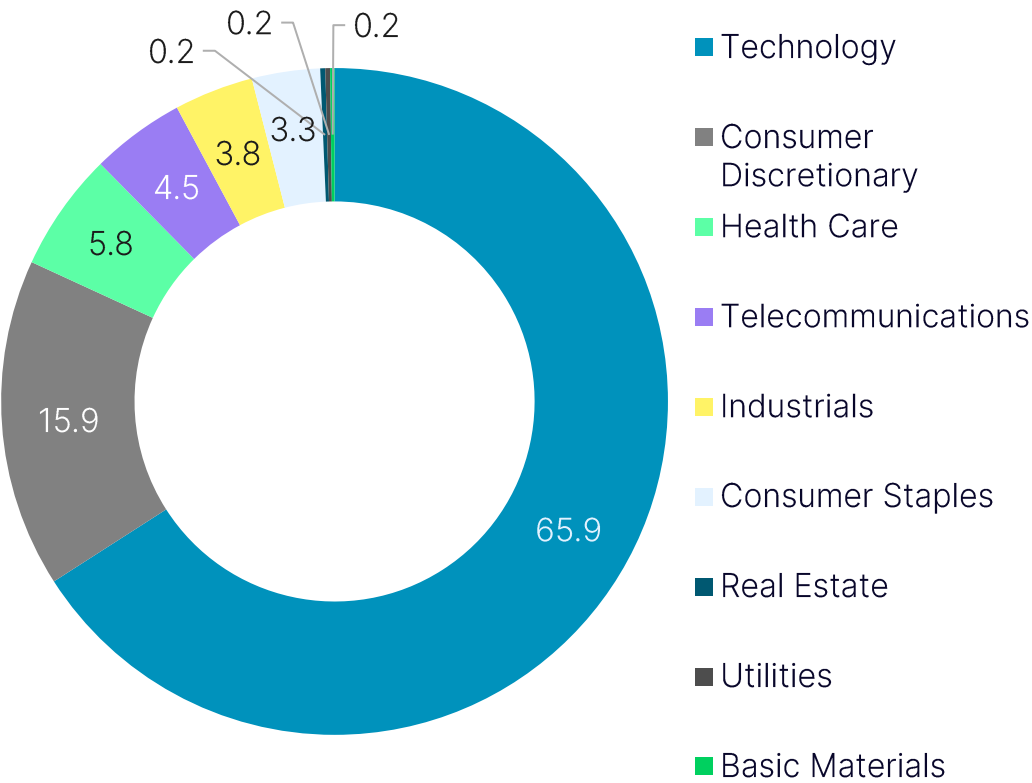


NDX
Top 10 Weight = 45.5%

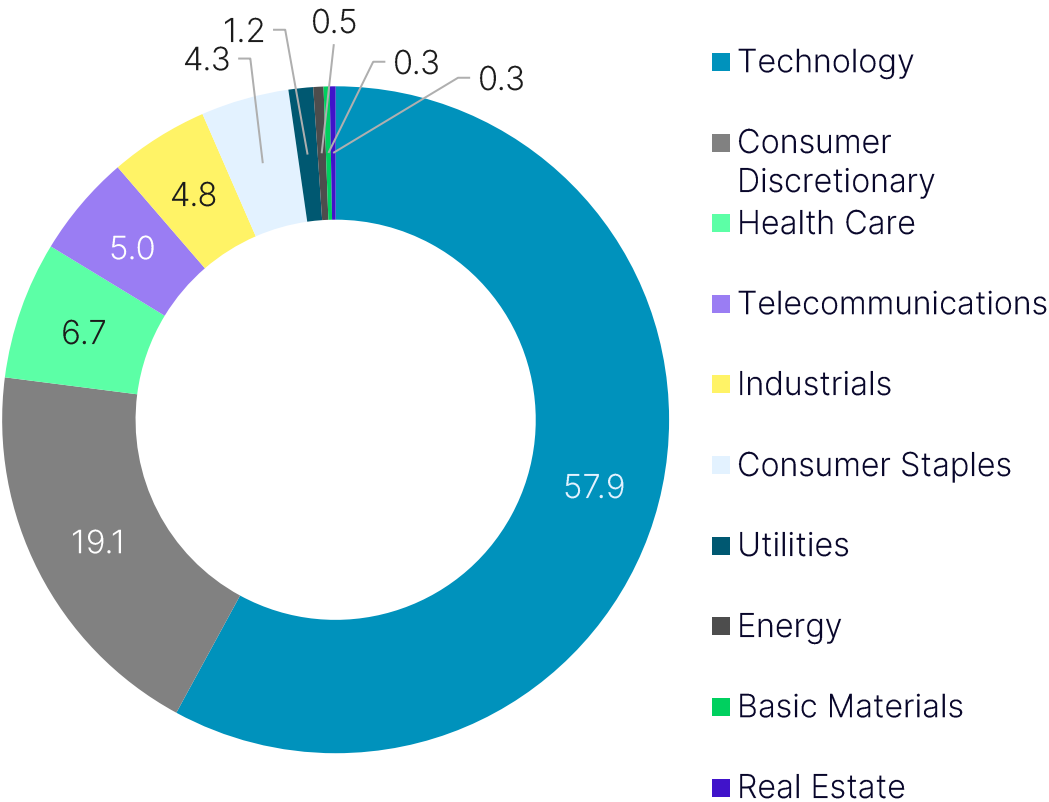


Sector Exposure by Index Weight (%)

NDXESG Index Weight by ICB Industry

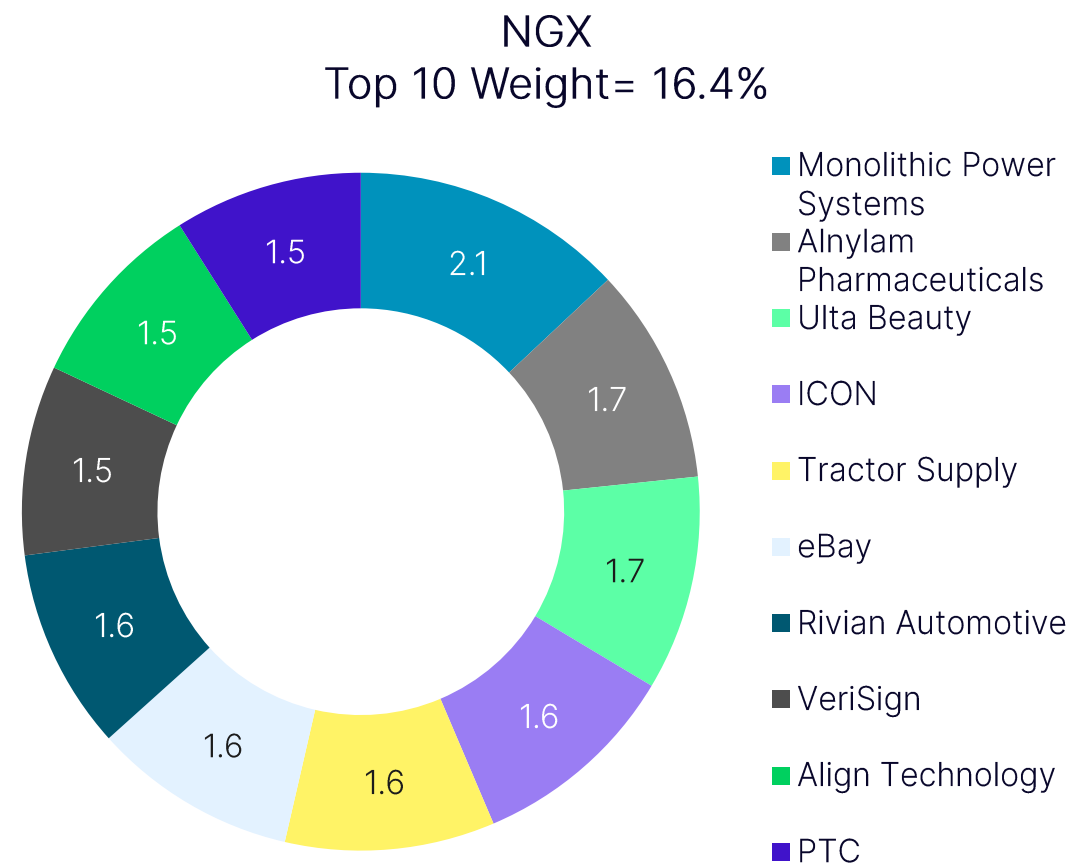
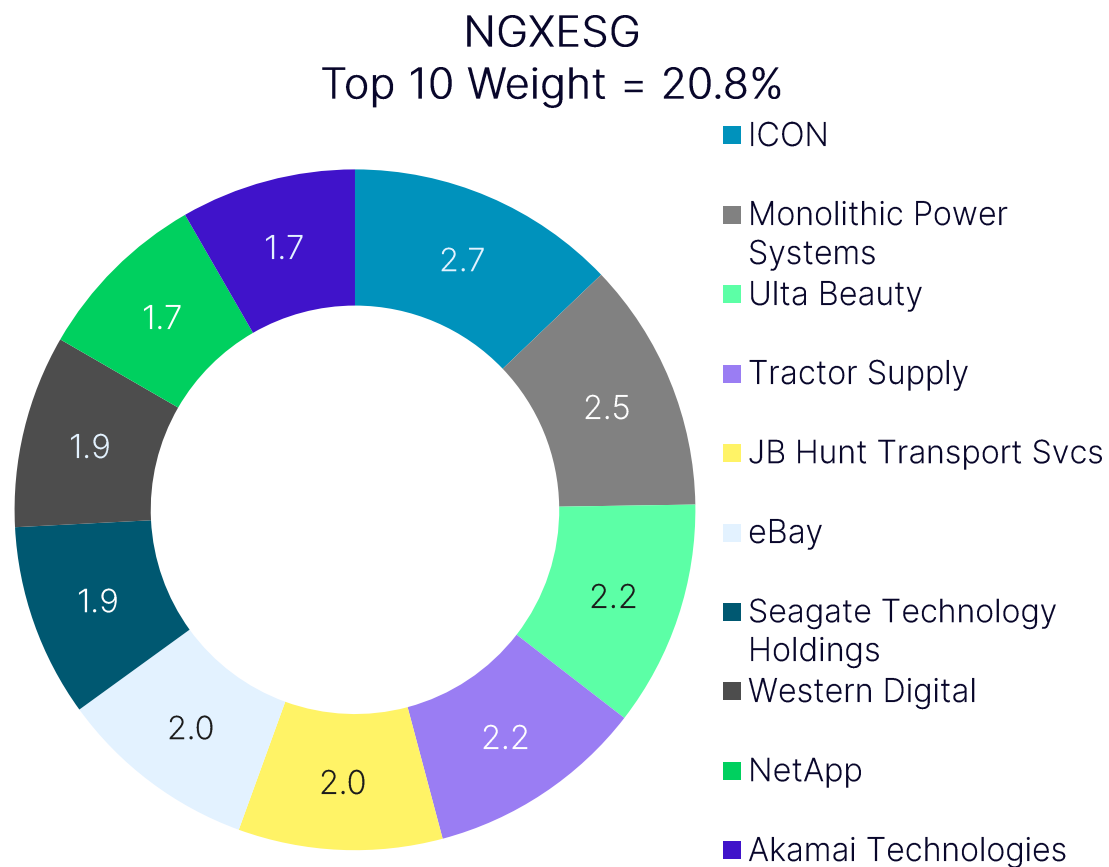


NDX Index Weight by ICB Industry



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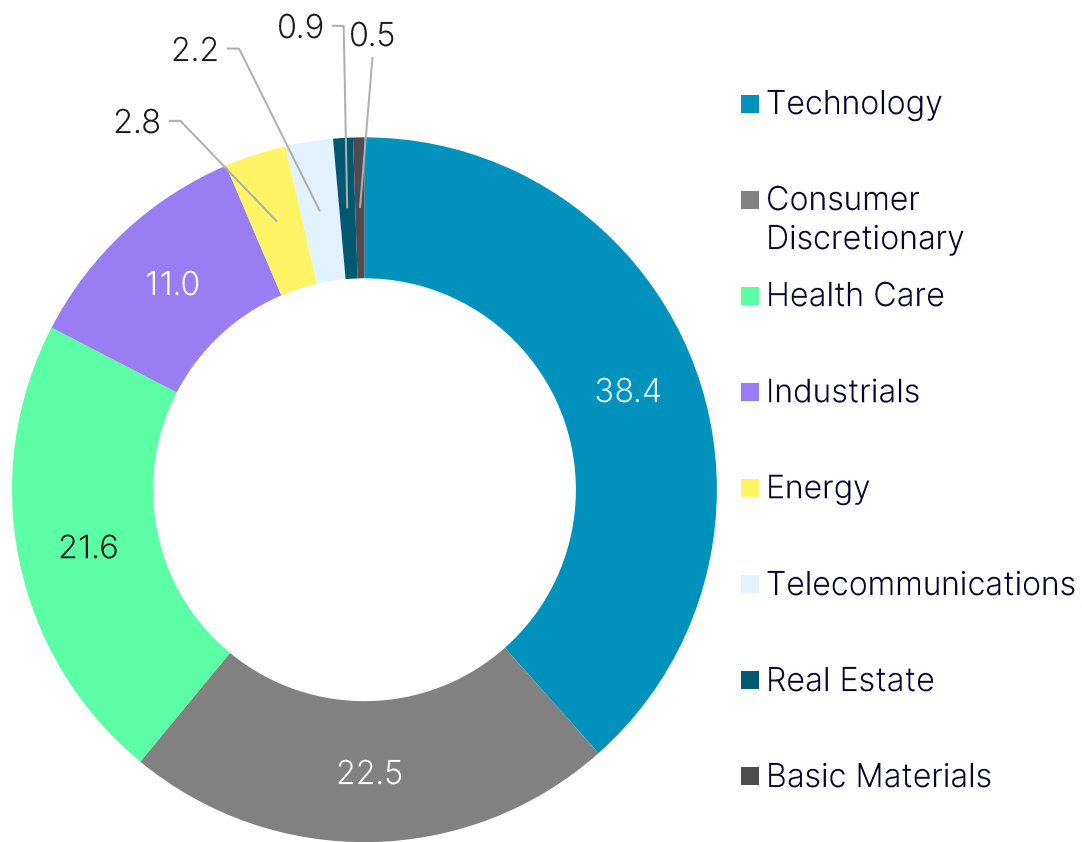
Top 10 Constituents by Index Weight (%)



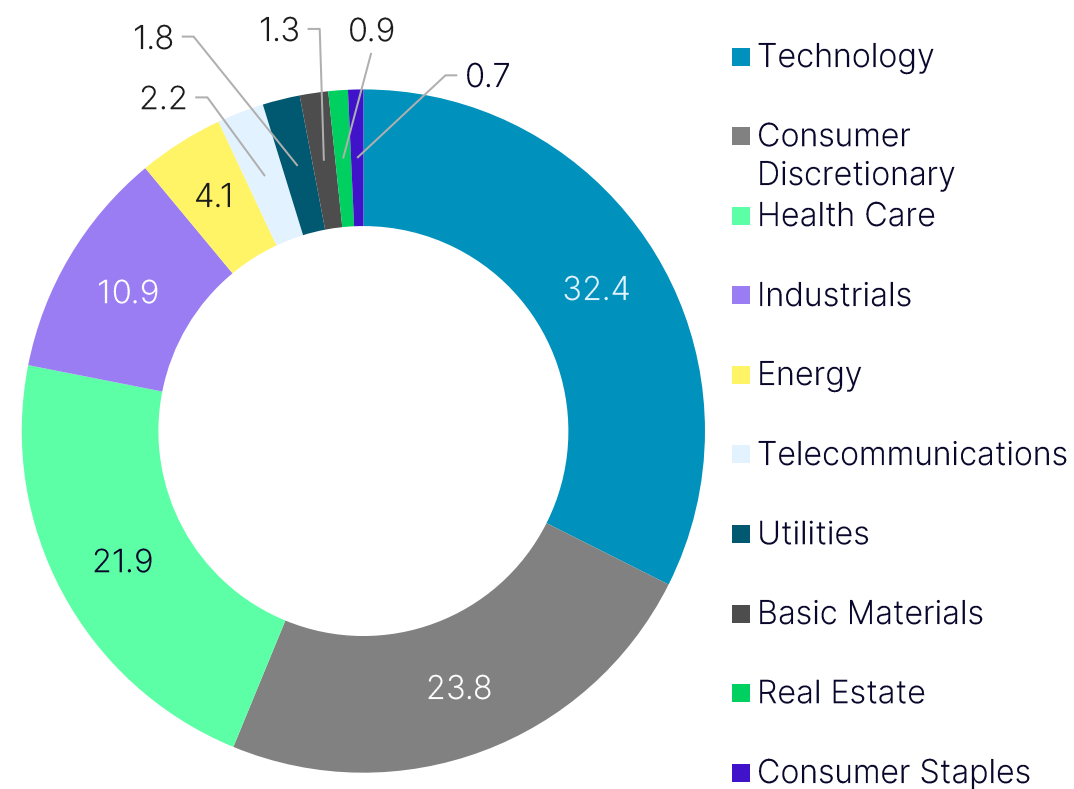
December 2023 Reconstitution

Sector Exposure by Index Weight (%)

NGXESG Index Weight by ICB Industry



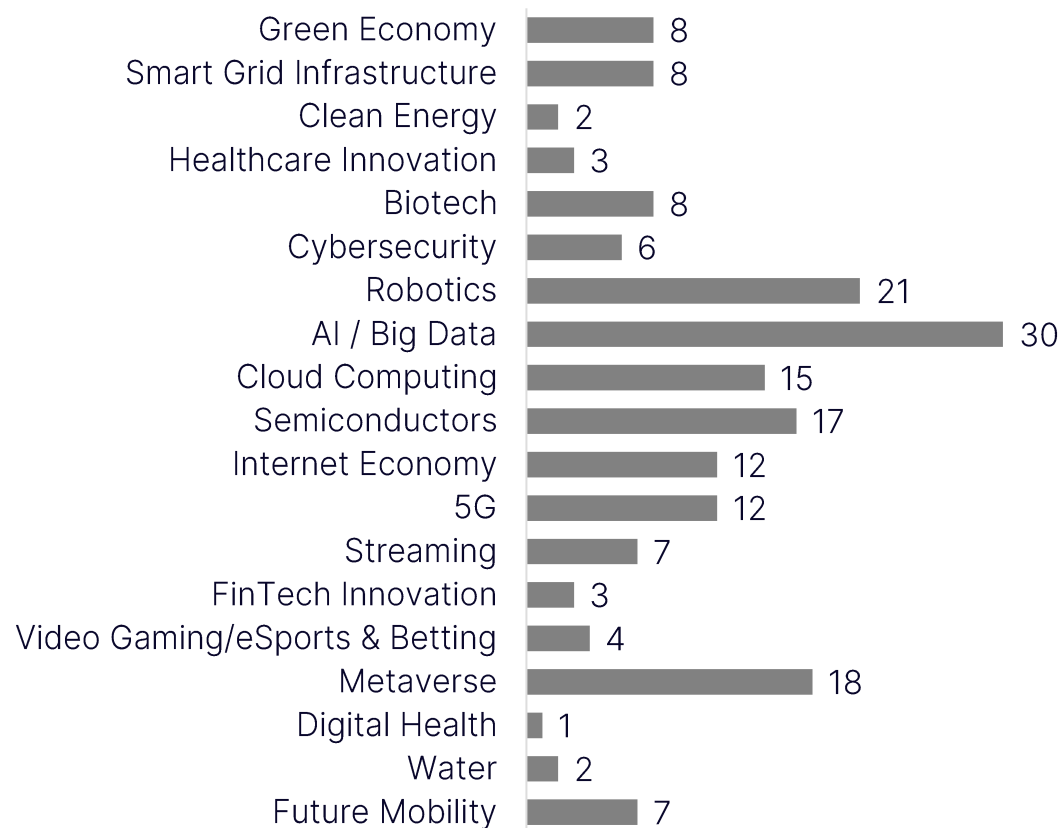
NGX Index Weight by ICB Industry



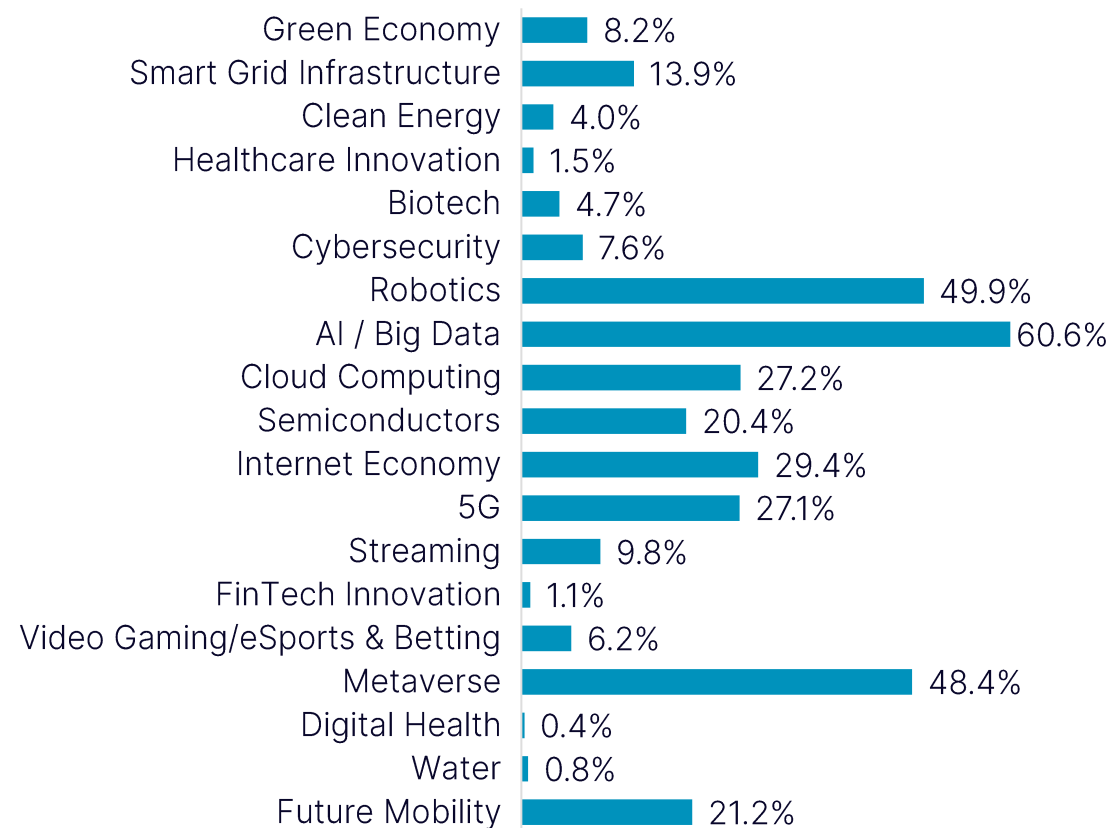
December 2023 Reconstitution

Nasdaq-100 by Thematic Exposure

of Constituents per Theme



Index Weight per Theme



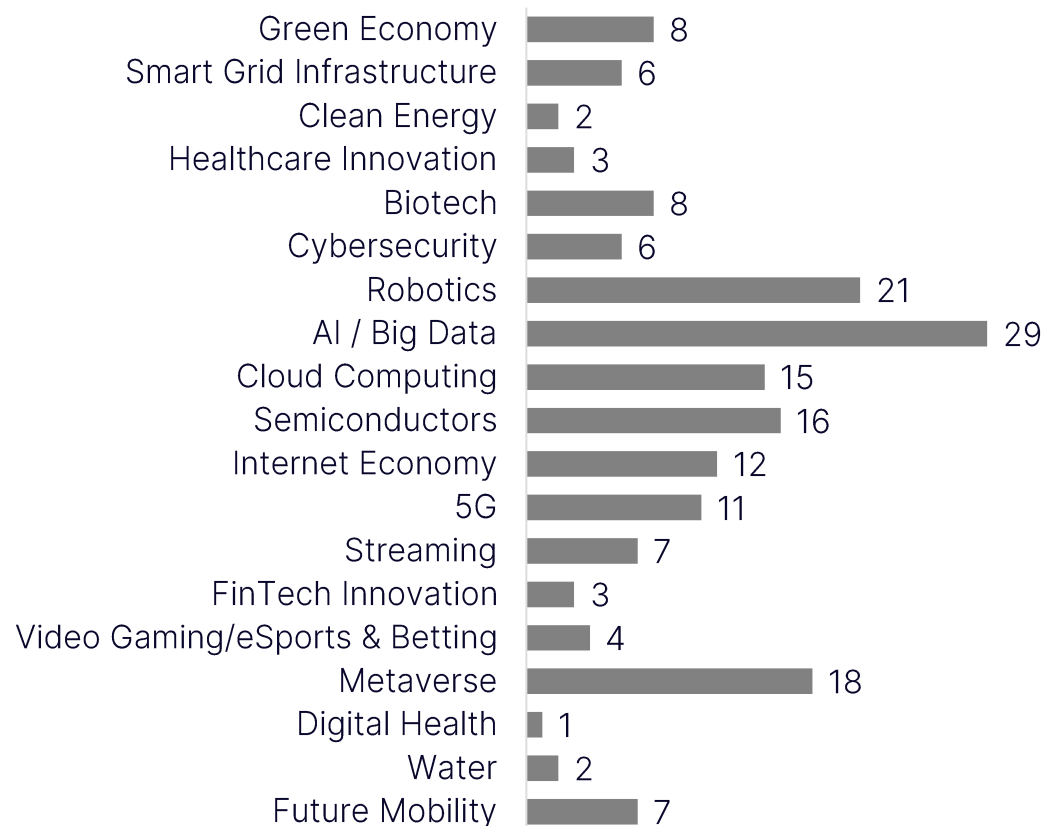
Source: Nasdaq, FactSet. Data as of 12/29/2023.

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

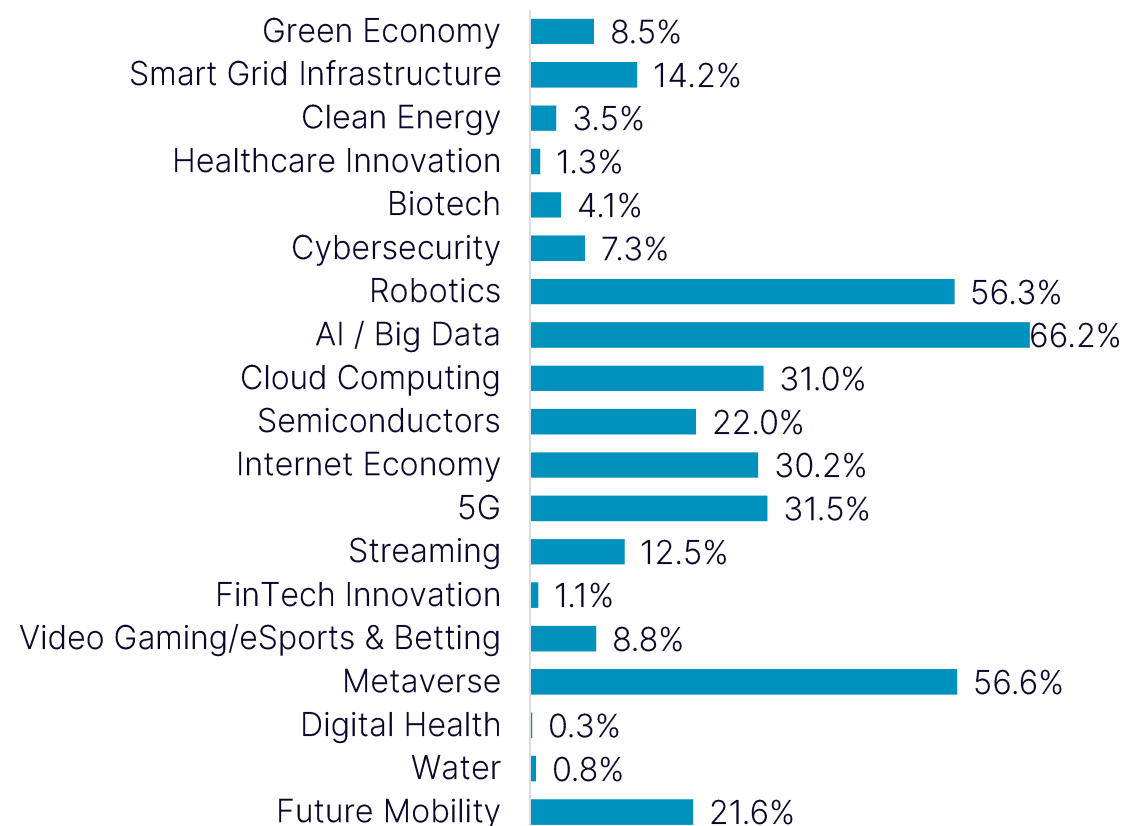
December 2023 Reconstitution

Nasdaq-100 ESG by Thematic Exposure

of Constituents per Theme



Index Weight per Theme



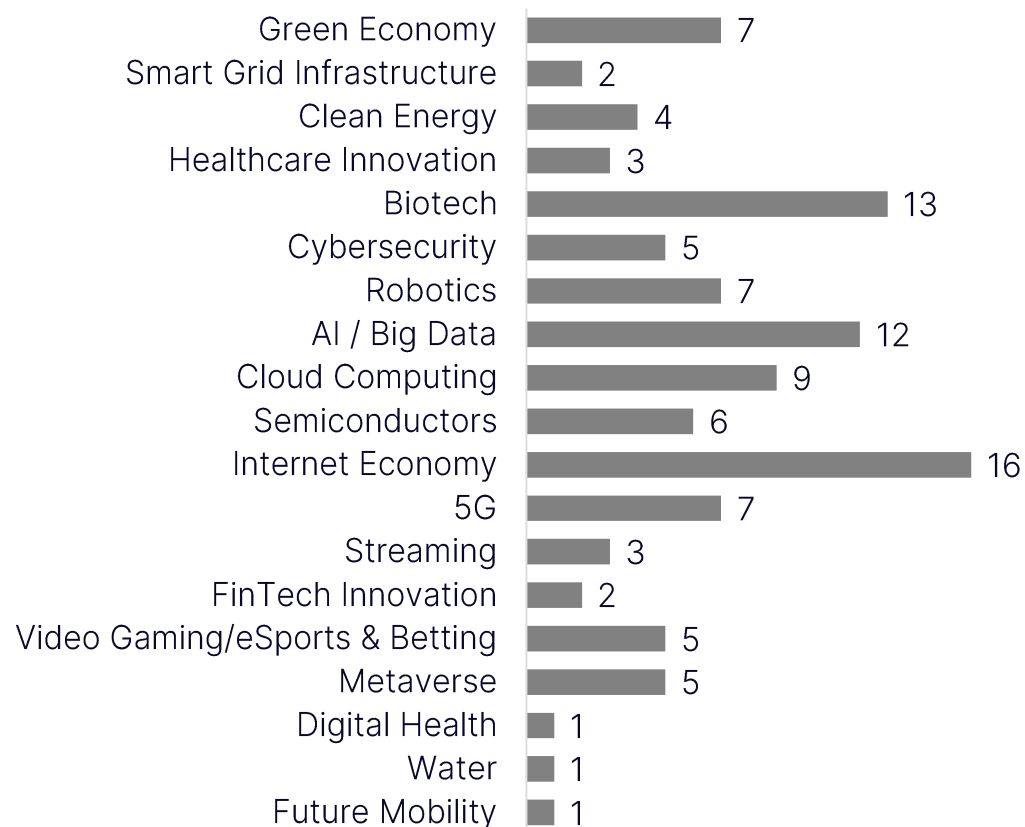
Source: Nasdaq, FactSet. Data as of 12/29/2023.

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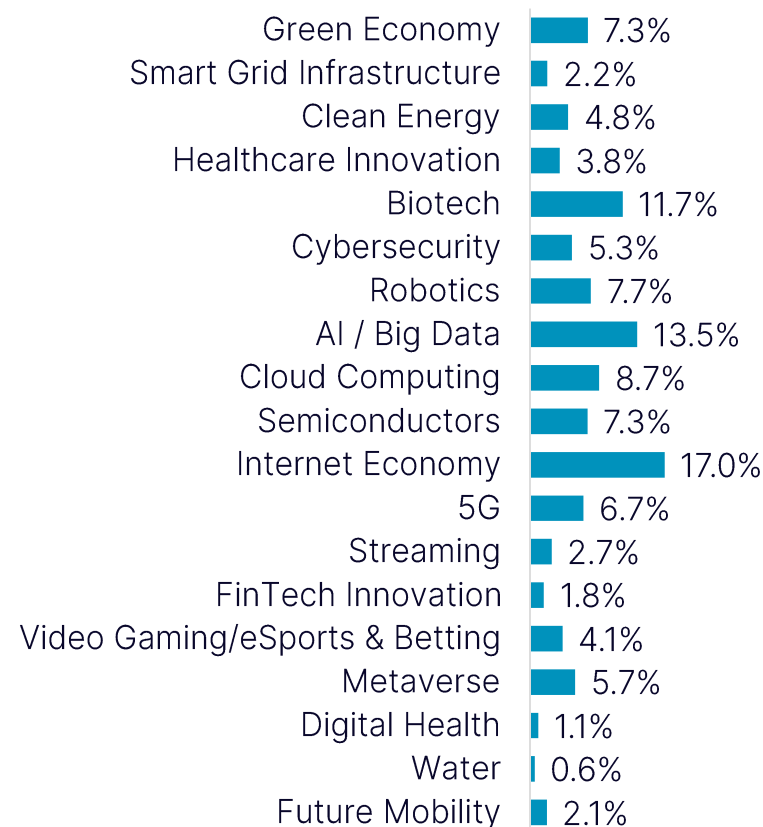
December 2023 Reconstitution

Nasdaq Next Generation 100 by Thematic Exposure

of Constituents per Theme



Index Weight per Theme



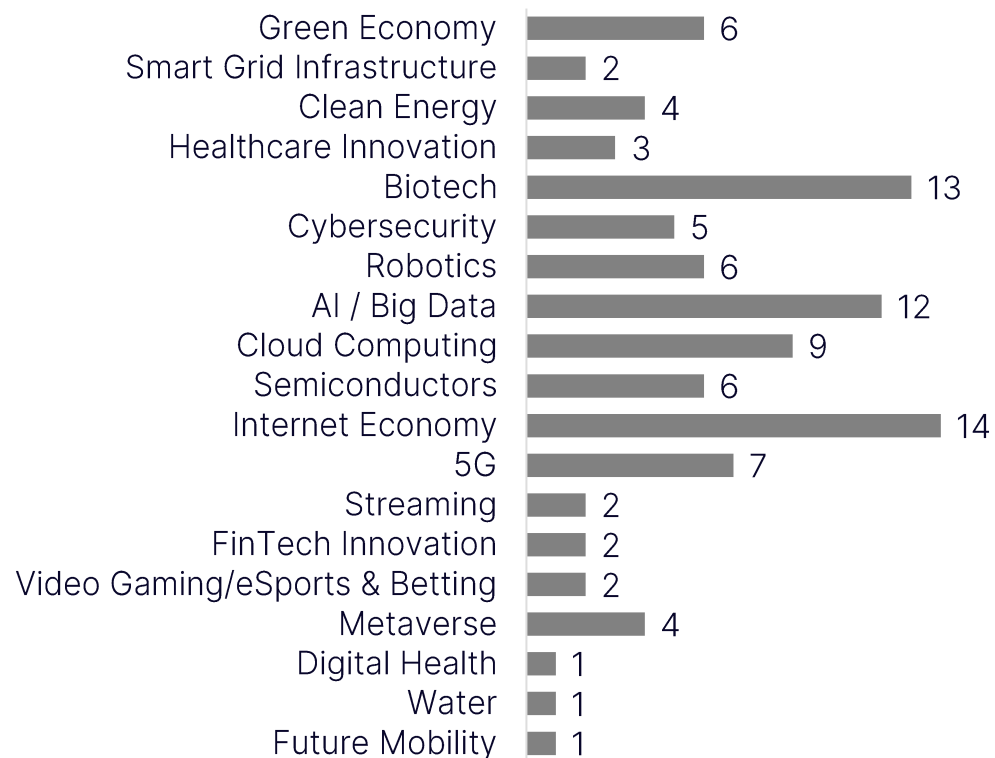
Source: Nasdaq, FactSet. Data as of 12/29/2023.

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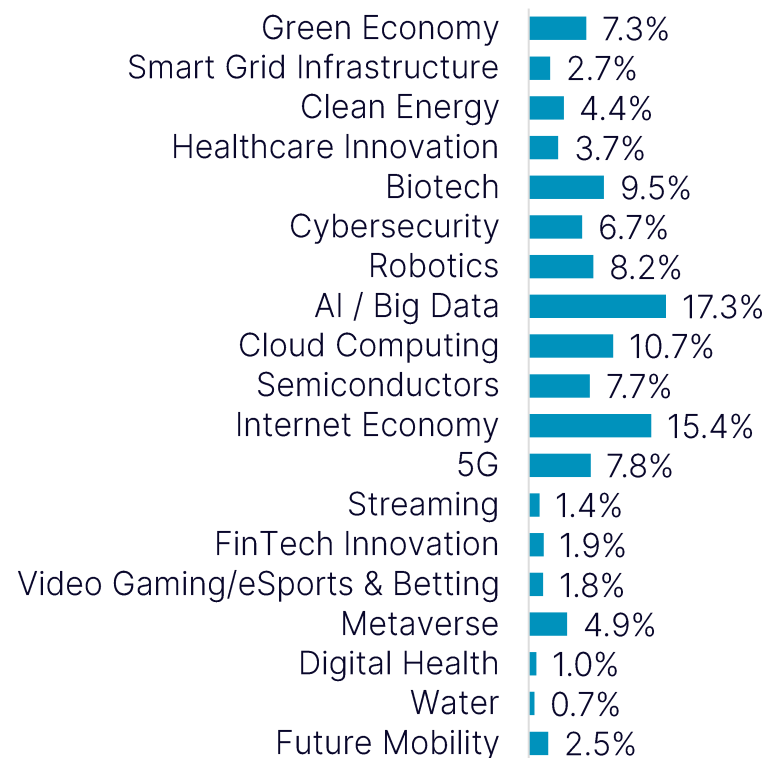
December 2023 Reconstitution

Nasdaq Next Generation 100 ESG by Thematic Exposure

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.

December 2023 Reconstitution

Top 10 Largest Overweights: NDXESG vs NDX

Symbol	Company Name	ICB Industry	Nasdaq-100 ESG Weight (%)	Nasdaq-100 Weight (%)	Difference Weight (%)
MSFT	Microsoft	Technology	12.7	8.6	4.1
AAPL	Apple	Technology	12.5	9.2	3.3
NVDA	NVIDIA	Technology	5.9	3.8	2.1
ADBE	Adobe	Technology	2.7	2.2	0.6
CSCO	Cisco Systems	Telecommunications	2.0	1.6	0.4
AMD	AMD	Technology	2.2	1.9	0.3
AMAT	Applied Materials	Technology	1.4	1.1	0.3
GOOGL	Alphabet	Technology	2.8	2.5	0.2
GOOG	Alphabet	Technology	2.7	2.5	0.2
ASML	ASML Holding	Technology	0.8	0.5	0.2

December 2023 Reconstitution

Top 10 Largest Underweights: NDXESG vs NDX

Symbol	Company Name	ICB Industry	Nasdaq-100 ESG Weight (%)	Nasdaq-100 Weight (%)	Difference Weight (%)
META	Meta Platforms	Technology	1.6	3.8	-2.3
AMZN	Amazon.com	Consumer Discretionary	2.9	4.8	-1.9
COST	Costco Wholesale	Consumer Discretionary	1.5	2.3	-0.8
AVGO	Broadcom	Technology	3.4	4.1	-0.8
TSLA	Tesla	Consumer Discretionary	3.2	3.7	-0.4
TMUS	T-Mobile US	Telecommunications	1.1	1.5	-0.4
PDD	PDD Holdings	Technology	0.4	0.8	-0.4
MNST	Monster Beverage	Consumer Staples	0.2	0.5	-0.3
PEP	PepsiCo	Consumer Staples	1.6	1.9	-0.3
CMCSA	Comcast	Telecommunications	1.1	1.4	-0.3

December 2023 Reconstitution

Top 10 Largest Overweights: NGXESG vs NGX

Symbol	Company Name	ICB Industry	NGXESG Weight (%)	NGX Weight (%)	Difference Weight (%)
ICLR	ICON	Health Care	2.7	1.6	1.0
FLEX	Flex Ltd	Technology	1.7	0.9	0.8
WDC	Western Digital	Technology	1.9	1.2	0.7
STX	Seagate Technology Holdings	Technology	1.9	1.3	0.6
POOL	Pool	Consumer Discretionary	1.7	1.1	0.6
JBHT	JB Hunt Transport Svcs	Industrials	2.0	1.5	0.6
ULTA	Ulta Beauty	Consumer Discretionary	2.2	1.7	0.6
LKQ	LKQ	Consumer Discretionary	1.4	0.9	0.5
ZBRA	Zebra Technologies	Industrials	1.5	1.0	0.5
LOGI	Logitech International	Technology	1.6	1.0	0.5

December 2023 Reconstitution

Top 10 Largest Underweights: NGXESG vs NGX

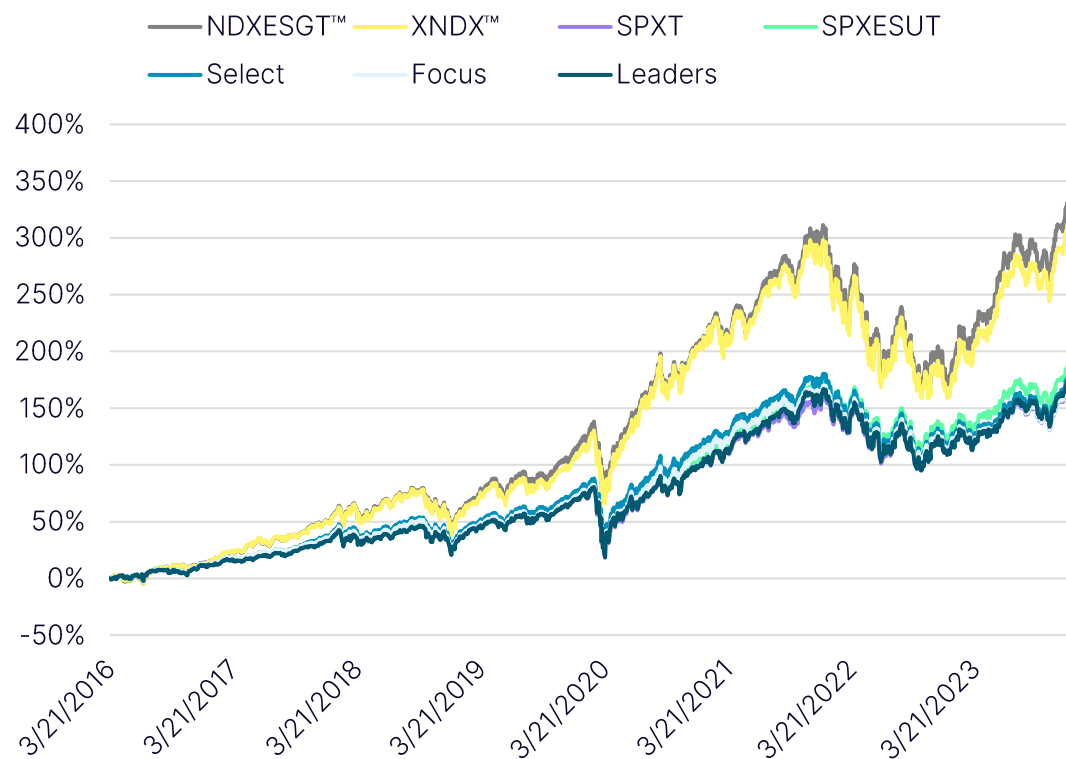
Symbol	Company Name	ICB Industry	NGXESG Weight (%)	NGX Weight (%)	Difference Weight (%)
STLD	Steel Dynamics	Basic Materials	0.5	1.3	-0.8
ALNY	Alnylam Pharmaceuticals	Health Care	1.1	1.7	-0.6
RIVN	Rivian Automotive	Consumer Discretionary	1.0	1.6	-0.5
EXPE	Expedia Group	Consumer Discretionary	1.0	1.4	-0.4
SWKS	Skyworks Solutions	Technology	0.8	1.3	-0.4
VTRS	Viatis	Health Care	0.5	0.9	-0.4
ROKU	Roku	Telecommunications	0.4	0.8	-0.4
UAL	United Airlines Holdings	Consumer Discretionary	0.6	1.0	-0.4
RPRX	Royalty Pharma	Health Care	0.5	0.9	-0.4
ARGX	argenx	Health Care	0.6	0.9	-0.3

December 2023 Reconstitution

Performance – NDXESG vs. NDX

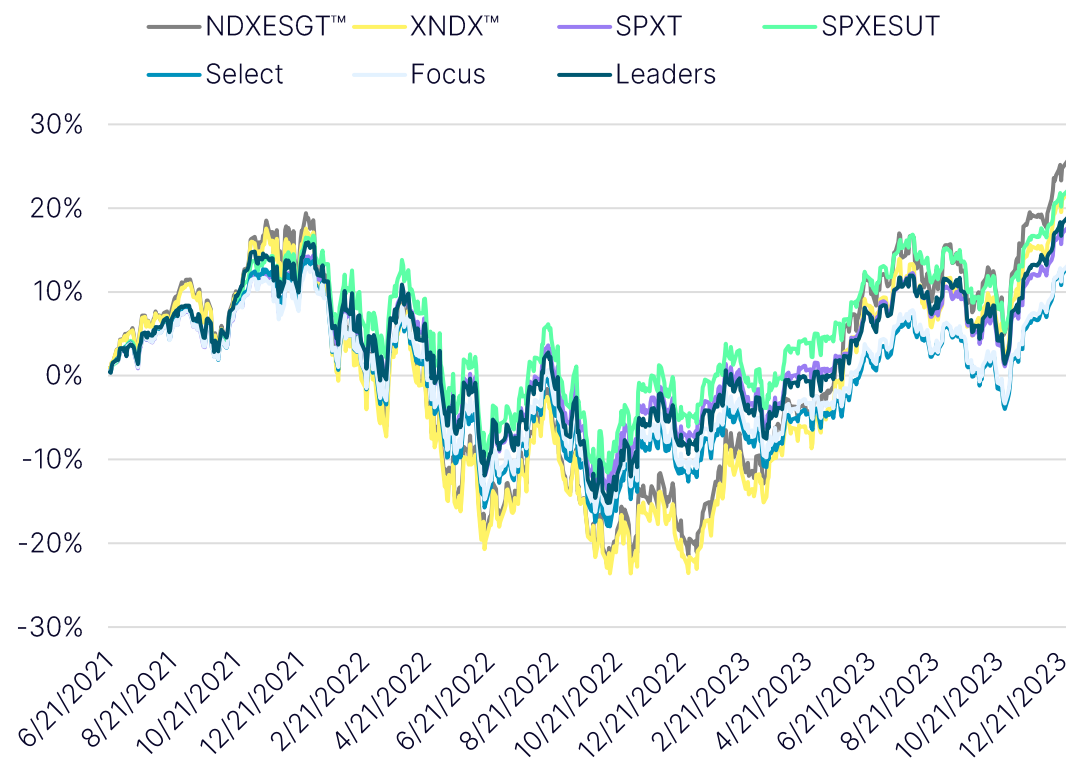
Since Beginning of NDXESG Backtest

3/21/2016 – 12/29/2023



Since NDXESG Inception

6/21/2021 – 12/29/2023



Total Return Data* as of 12/29/2023.
Source: Nasdaq Global Indexes, FactSet, Bloomberg.

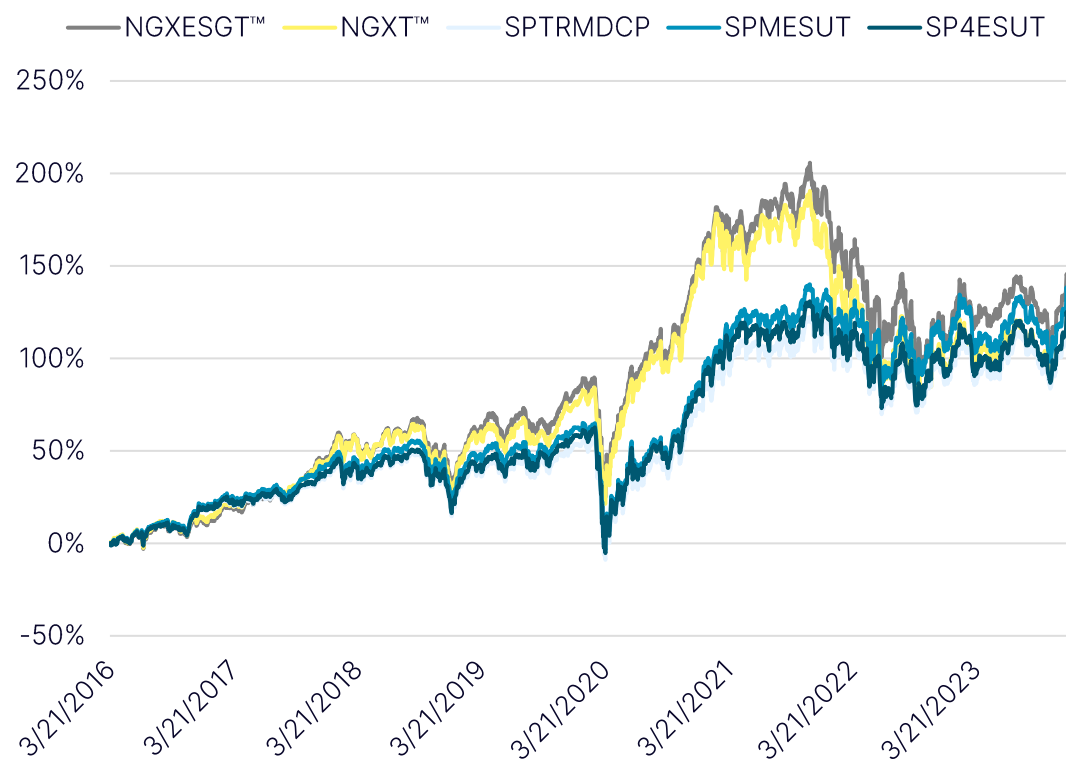
*XNDX: Nasdaq-100® Total Return™; NDXESGT: Nasdaq-100 ESG Total Return™; SPXESUT: S&P 500 ESG Index TR; SPXT: S&P 500 TR; Select: MSCI USA ESG Universal Sel Business Screens TR; ; Focus: MSCI USA Extended ESG Focus TR; Leaders: MSCI USA Extended ESG Leaders TR

December 2023 Reconstitution

Performance – NGXESG vs. NGX

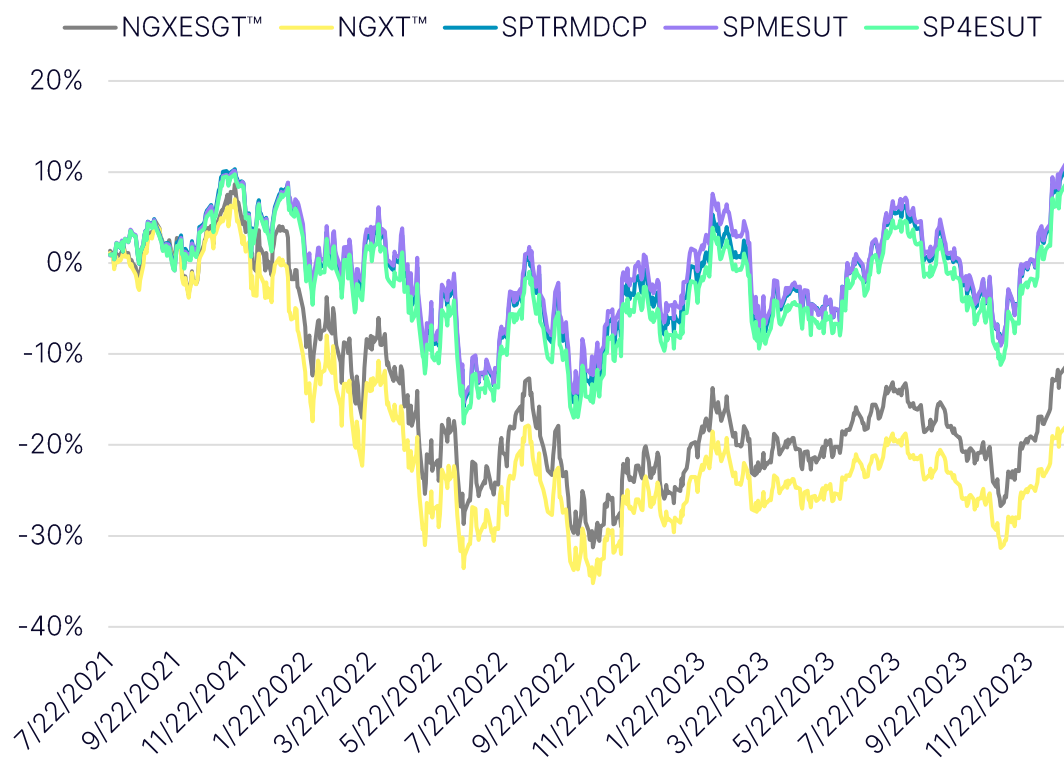
Since Beginning of NGXESG Backtest

3/21/2016 – 12/29/2023



Since NGXESG Inception

7/22/2021 – 12/29/2023



Total Return Data* as of 12/29/2023.
Source: Nasdaq Global Indexes, FactSet, Bloomberg.

*NGXT: Nasdaq Next Generation 100 Total Return™; NGXESGT: Nasdaq Next Generation 100 ESG Total Return™; SP4ESUT: S&P Sustainability Screened TR; SPTRMDCP: S&P MidCap 400 TR ; SP4ESUT: S&P MidCap 400 ESG TR

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ESG Comparisons – NDXESG/NDX

Index Name	Benchmark	# of Securities	% Exclusion from the Benchmark	Sustainalytics ESG Risk Score	
				Weighted Average	Simple Average
Nasdaq-100 Index®	--	101	--	20.4	20.2
Nasdaq-100 ESG™ Index	Nasdaq-100®	94	7%	18.7	19.7
MSCI USA Index	--	609	--	21.4	21.7
MSCI USA Extended ESG Focus Index	MSCI USA	286	53%	20.6	20.7
MSCI USA Extended ESG Leaders Index	MSCI USA	283	54%	19.2	20.0
MSCI USA ESG Universal Select Business Screens Index	MSCI USA	568	7%	19.8	21.1
S&P 500 Index	--	503	--	21.5	21.6
S&P 500 ESG Index	S&P 500	316	37%	20.4	20.6



Data as of 12/29/2023.

Source: Nasdaq Global Indexes, Sustainalytics, FactSet, Bloomberg.

December 2023 Reconstitution

ESG Comparisons – NGXESG/NGX

Index Name	Benchmark Index	# of Securities	% Exclusion from the Benchmark	Sustainalytics ESG Risk Score	
				Weighted Average	Simple Average
Nasdaq Next Generation 100™ Index	--	104	--	20.7	21.0
Nasdaq Next Generation ESG 100™ Index	Nasdaq Next Generation 100™	91	13%	18.3	19.7
S&P MidCap 400 Index	--	401	--	22.9	23.1
S&P MidCap 400 Sustainability Screened Index	S&P MidCap 400	361	10%	22.0	22.2
S&P MidCap 400 ESG Index	S&P MidCap 400	252	37%	22.0	22.1



Data as of 12/29/2023.

Source: Nasdaq Global Indexes, Sustainalytics, FactSet, Bloomberg.

RESOURCES

RESOURCES

Nasdaq-100 ESG Index (NDXESG)

- Overview
 - <https://indexes.nasdaqomx.com/Index/Overview/NDXESG>
- Methodology
 - https://indexes.nasdaqomx.com/docs/methodology_NDXESG.pdf
- Research
 - https://indexes.nasdaqomx.com/docs/NDXESG_Research.pdf
- Fact Sheet
 - https://indexes.nasdaqomx.com/docs/FS_NDXESGT.pdf
- Carbon Credit Report
 - NDXESG: <https://indexes.nasdaqomx.com/docs/Carbon%20Footprint%20Report%20-%20NDXESG.pdf>
 - NDX: <https://indexes.nasdaqomx.com/docs/Carbon%20Footprint%20Report%20-%20NDX.pdf>

RESOURCES

Nasdaq Next Generation 100 ESG Index (NGXESG)

- Overview
 - <https://indexes.nasdaqomx.com/Index/Overview/NGXESG>
- Methodology
 - https://indexes.nasdaqomx.com/docs/methodology_NGXESG.pdf
- Research
 - https://indexes.nasdaqomx.com/docs/NGXESG_Research.pdf
- Fact Sheet
 - https://indexes.nasdaqomx.com/docs/FS_NGXESGT.pdf
- Carbon Credit Report
 - NGXESG: <https://indexes.nasdaqomx.com/docs/Carbon%20Footprint%20Report%20-%20NGXESG.pdf>
 - NGX: <https://indexes.nasdaqomx.com/docs/Carbon%20Footprint%20Report%20-%20NGX.pdf>

APPENDIX

APPENDIX

NDXESG / NGXESG Exclusions Based on ESG risk

Companies with a “Severe” ESG Risk Rating are automatically disqualified from inclusion.

- A rating of greater than 40 is considered “Severe”; 30-40 is considered “High”; 20-30 is “Medium”; 10-20 is “Low”; and 0-10 is “Negligible”.

Exclude any company that has not been researched yet.

APPENDIX

NDXESG / NGXESG Exclusions Based on ESG risk – continued

- Exclude any company that has a controversy score equal to 5:
 - The controversy rating reflects:
 - Incidents with negative Environmental, Social, and Governance (ESG) implications.
 - A company's level of involvement in and how it manages these issues.
 - Categorical scores are on a scale of 1 to 5.

APPENDIX

NDXESG / NGXESG Exclusions Based on International Norms

- A company must not violate the *United Nations Global Compact*:
 - 10 principles around human rights, labor, environment, and anti-corruption.
 - <https://www.unglobalcompact.org/what-is-gc/mission/principles>
- Securities are excluded from NDXESG/NGXESG that are classified as non-compliant.
 - Each company in the index is therefore classified as either compliant or on the watch-list with the UN Global Compact framework for following international norms.

APPENDIX

NDXESG / NGXESG Exclusions Based on Business Involvements

Business Involvements Considered*:

1. Energy (Arctic Oil & Gas; Nuclear Power; Oil & Gas; Oil Sands; Shale Energy; Thermal Coal)
2. Health & Life (Alcohol; Recreational Cannabis; Tobacco)
3. Defense & Military (Controversial weapons; Military Contracting; Riot Control; Small Arms)
4. Values-Based (Adult Entertainment; Gambling)

APPENDIX

NDXESG / NGXESG Weighting Scheme

$$ESG\ Risk - Adjusted\ NDX\ Market\ Value = \frac{40 - ESG\ Risk\ Rating\ Score}{40} \times NDX\ Market\ Value$$

- Initial security weights are calculated by dividing a security's ESG Risk-Adjusted NDX Market Value by the sum of the ESG Risk-Adjusted NDX Market Values of all Index Securities.
- Afterwards, the same four-stage weight adjustment process as exists for NDX at its annual reconstitution is applied to produce final weights on a quarterly basis for NDXESG.
- (All the above applies for NGX and NGXESG, as well.)

APPENDIX

NDXESG / NGXESG Weighting Scheme – continued

*For Illustrative
Purposes Only.*

*The information
included on this
slide is not based on
actual data.*

Security	Parent Index Market Value	ESG Risk Rating Score	(40-ESG Risk Rating Score)/40	ESG Adjusted Market Value	Weight in ESG Index (before capping)	Weight in Parent Index	ESG Excess Weight
Company A	157,440,900.96	9.669091	0.76	119,383,139.64	5%	2%	3%
Company B	408,425,550.79	10.14988	0.75	304,788,747.93	12%	5%	7%
Company C	466,765,510.49	10.33926	0.74	346,115,277.80	14%	6%	8%
Company D	337,399,212.20	10.56613	0.74	248,274,134.49	10%	4%	6%
Company E	36,052,270.56	12.02819	0.70	25,211,182.25	1%	0%	1%
Company F	590,398,129.57	16.18527	0.60	351,504,303.67	14%	7%	7%
Company G	268,545,835.16	19.19268	0.52	139,692,956.82	6%	3%	2%
Company H	311,917,708.29	20.84302	0.48	149,385,045.36	6%	4%	2%
Company I	547,470,308.53	22.79236	0.43	235,516,830.87	10%	7%	3%
Company J	24,733,442.74	24.69826	0.38	9,461,619.64	0%	0%	0%
Company K	435,838,825.61	27.38121	0.32	137,493,977.85	6%	5%	0%
Company L	118,577,295.32	27.73561	0.31	36,356,957.07	1%	1%	0%
Company M	307,719,744.86	28.36004	0.29	89,546,103.32	4%	4%	0%
Company N	441,090,355.41	33.1488	0.17	75,549,938.88	3%	6%	-2%
Company O	834,726,757.15	35.35263	0.12	96,982,201.14	4%	10%	-7%
Company P	550,834,597.82	37.24048	0.07	38,001,025.35	2%	7%	-5%
Company Q	269,359,777.85	37.4192	0.06	17,379,073.33	1%	3%	-3%
Company R	844,981,656.98	38.72938	0.03	26,841,302.95	1%	11%	-10%
Company S	359,845,558.64	39.02818	0.02	8,742,612.50	0%	5%	-4%
Company T	646,652,051.08	39.70698	0.01	4,736,994.67	0%	8%	-8%

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