

Next Economy Index

December 31, 2019

Green Alpha[®]

Contents

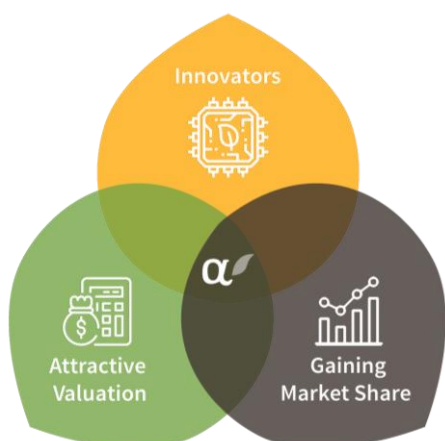
Portfolio Characteristics	2
Largest Positions	3
Sector, Geographic, and Market Cap Allocations	4
Performance and Manager Commentary	5
Disclosures	7

Investment Philosophy

We believe companies that create or enable innovative solutions to climate change, resource degradation and scarcity, and widening inequality are the greatest growth drivers of the twenty-first century. The idea is to invest in the best, growing industries that are building an extremely efficient, sustainable economy – that’s what we call the Next Economy.[™]

Green Alpha’s investment philosophy is straightforward: don’t invest in companies that cause global systemic risks; instead, invest in the most innovative, rapidly evolving solutions.

We believe these companies will gain market share from their legacy economy counterparts – today and into the future. That makes investing in them our best chance at helping clients preserve and grow their purchasing power.



Why Invest in the Next Economy Index?

- Active research and stock selection
- Passively managed through an annual rebalance
- Demonstrates the diversity, growth, breadth, and depth of the already-emerging Next Economy
- ~120 global, market-leading companies developing solutions to core economic and environmental risks
- Fossil fuel free since inception

Inception Date: December 30, 2008

Style: All-Cap Global Growth Equities

Vehicle: Separately Managed Accounts

Portfolio Construction

The Next Economy Index utilizes both active stock selection and passive management to reflect and benchmark the Next Economy – the innovation-driven, highly efficient, solutions-oriented sustainable economy that is already unfolding. All companies that pass both our top-down and bottom-up research processes with sufficiently high scores are included in the portfolio during the annual rebalancing process. We seek investments:

- whose products and/or services lower the economy’s risk profile by creating solutions to our most pressing economic and environmental risks
- committing more capital to R&D, and owning more intellectual property than their peers
- run by effective, diverse leadership teams and boards of directors with consistent track records of increasing revenue, and expanding margins, leading to earnings growth and potential dividend increases
- trading at compelling valuations for proven and expected growth, within acceptable levels of risk

Like all Green Alpha portfolios, Next Economy Index investments seek to de-risk the global economy while reducing our clients’ long term portfolio risks.

The Next Economy Index

How the portfolio compares to the MSCI All Country World Investible Market Index (MSCI ACWI IMI) and other Green Alpha portfolios

Characteristics

- **Largest Next Economy basket** – by definition, the Index is the most diversified Green Alpha portfolio by number of stocks; all stocks that pass Green Alpha's top-down and bottom-up investment processes enter the Index
- **Fundamentals-driven** – the underlying quality of the companies you invest in and the price you pay for them matter
 - ✓ **High growth** – indicated by Sales Growth, drop in Current P/E to Forward P/E as revenue and earnings grow
 - ✓ **Compelling valuation** – demonstrated by Price/Sales, Price/Book metrics
 - ✓ **Strong balance sheet, solid management execution** – expressed by LT Debt/Equity, Current Ratio
- **Fossil fuel free since inception** – we have never invested in companies that prospect, extract, refine, or transport fossil fuels, nor fossil-fired utilities or internal combustion engine manufacturers
- **Diversified – we look for solutions wherever we can find them** – across the globe, companies of all sizes, in every industry
- **Public equities, long-only** – largest asset class, largest opportunity for impact

Characteristics	Green Alpha Next Economy Index	Benchmark: MSCI ACWI IMI (SPGM)	Green Alpha Next Economy Social Index	Green Alpha Next Economy Select	Green Alpha Growth & Income	Sierra Club Green Alpha
# of Securities	120	1,322	92	53	31	42
Sales Growth, Trailing 1-Yr	14.19%	9.20%	19.05%	20.82%	15.33%	11.41%
P/E, Current	26.34	18.24	25.93	21.70	22.78	25.23
P/E, 1-Year Forward [†]	20.83	15.85	22.16	17.72	20.33	20.57
Price/Sales	1.61	1.60	1.01	1.64	2.47	1.81
Price/Book	3.24	2.37	3.89	2.78	2.57	2.86
LT Debt/Equity	0.78	0.86	1.17	0.87	1.26	0.79
Current Ratio	2.75	1.71	2.76	2.93	1.95	2.76
Dividend Yield	2.30%	2.72%	2.46%	2.70%	4.20%	2.63%
Market Capitalization Weighted Avg (US\$B)	\$77.96	\$181.72	\$78.50	\$54.21	\$34.74	\$72.75
Market Capitalization, Median (US\$B)	\$7.41	Not Available	\$9.68	\$5.24	\$15.63	\$4.93
Turnover, Trailing 1-Yr	24%	-	31%	16%	13%	5%
Beta, Trailing 2-Yrs	1.09	0.99	1.11	1.09	0.86	0.99
Active Share	94%	-	94%	97%	98%	97%

[†] Bloomberg consensus estimates. Please see the final page of this document for important disclosures about portfolio, benchmark and characteristic information

Largest Positions

How The Next Economy Index is driving progress toward the Next Economy

Alphabet (Communications, Media)

- All global operations run 100% on renewable energies
- Innovation-driven venture capital structure with dozens of subsidiaries and Next Economy™ “moonshots” (e.g., “Project Loon – the balloon-powered internet for everyone,” Deepmind AI, fiber bandwidth for everyone, a spoon that helps Parkinson's patients eat, and much more). All extremely well capitalized by the most profitable ad-serving machine
- First to actualize a programmable superconducting processor to effect quantum computing. Google's quantum machine is said to have solved a calculation that would take the world's fastest supercomputer 10,000 years to crack. Innovation with unknowable, innumerable use cases

Tesla (Consumer Cyclical, Automotive)

- Tesla markets electric vehicles under its ‘Tesla Motors’ brand and stationary battery packs for homes, commercial properties, and utility-scale power via its ‘Tesla Energy’ division
- Both divisions are growing rapidly and quickly gaining market share in their niches
- Tesla's innovations, represented by their impressive patent portfolio and world-leading products, have given the company first-mover advantage in the electric vehicle space, and a tech advantage in the stationary storage space. Tesla is capitalizing on these leads via continual reinvestment and expanding production capacity
- Collaborations with sister firm SpaceX gives Tesla unique access to advanced science

NVIDIA (Technology, Semiconductors)

- NVIDIA's GPUs and other processors are dominant in datacenters and AI, and the company's core gaming business is experiencing long-term, secular growth. Their strong software ecosystem presents wide moat for competitors
- In 2019 the firm entered the edge computing space with T4, which has become a leading seller
- With the pending acquisition of Mellanox, NVIDIA will have the leading position in Remote Direct Memory Access

IBM (Technology, Technology Services)

- Adroitly managing transition from legacy IT and consulting services to Next Economy™ innovation powerhouse. By dollars, IBM is first in global artificial intelligence research, application, and revenue
- Purchase of Red Hat has made IBM a leader in platform as a service, infrastructure as a service, and software as a service
- Top patent holder across many domains; cloud and cognitive software, quantum computing, enabling distributed ledger; pioneering AI; developing security methods atop lattice cryptography; advancing nanotechnology; developing and applying Watson (AI) across industries, including medicine, water, food safety; and the most accurate weather forecasting tech available
- Female CEO is building a diverse team to maximize the company's ability to innovate, with six women (30%) in Senior Management and five on the Board of Directors (36%), including key Committee Chairs

Micron Technology (Technology, Semiconductors)

- Global leader with the broadest portfolio of memory and storage technologies. Micron's advantages come from their technology and price leadership combined with insatiable demand for digital memory
- With many customers globally, including China, political risk exists for Micron should trade wars escalate, but less so than for more geographically concentrated competitors. Crucially, Micron in December obtained a U.S. Dept of Commerce license to sell DRAM and NAND to Huawei, giving them exemption to policy

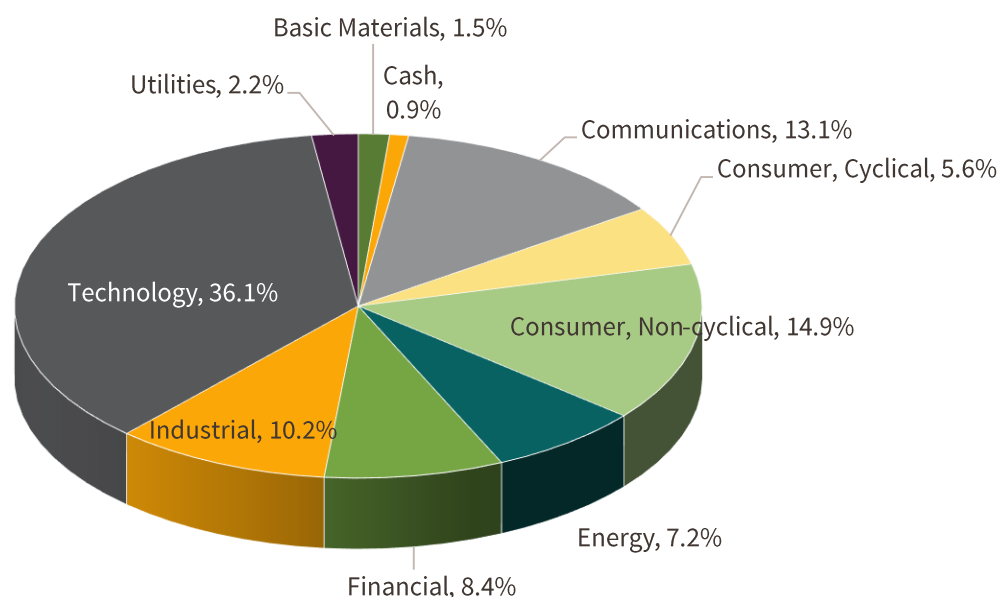
Company Name	Ticker	Weight
Alphabet	GOOG	2.57%
Tesla	TSLA	1.61%
NVIDIA	NVDA	1.36%
Int'l Business Machines	IBM	1.29%
Micron Technology	MU	1.24%
Taiwan Semiconductors	TSM	1.23%
Alibaba Group Holdings	BABA	1.22%
AT&T	T	1.20%
Qualcomm	QCOM	1.19%
Applied Materials	AMAT	1.17%
% of Portfolio		14.07%

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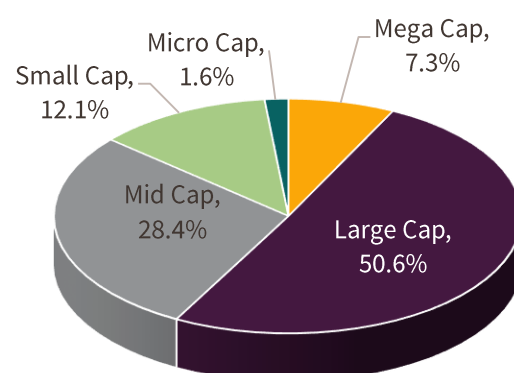
Portfolio Allocations

Our search for Next Economy companies is unconstrained. For the Next Economy Index, we seek solutions to systemic risks wherever they exist – across sectors, market caps, and geographies.

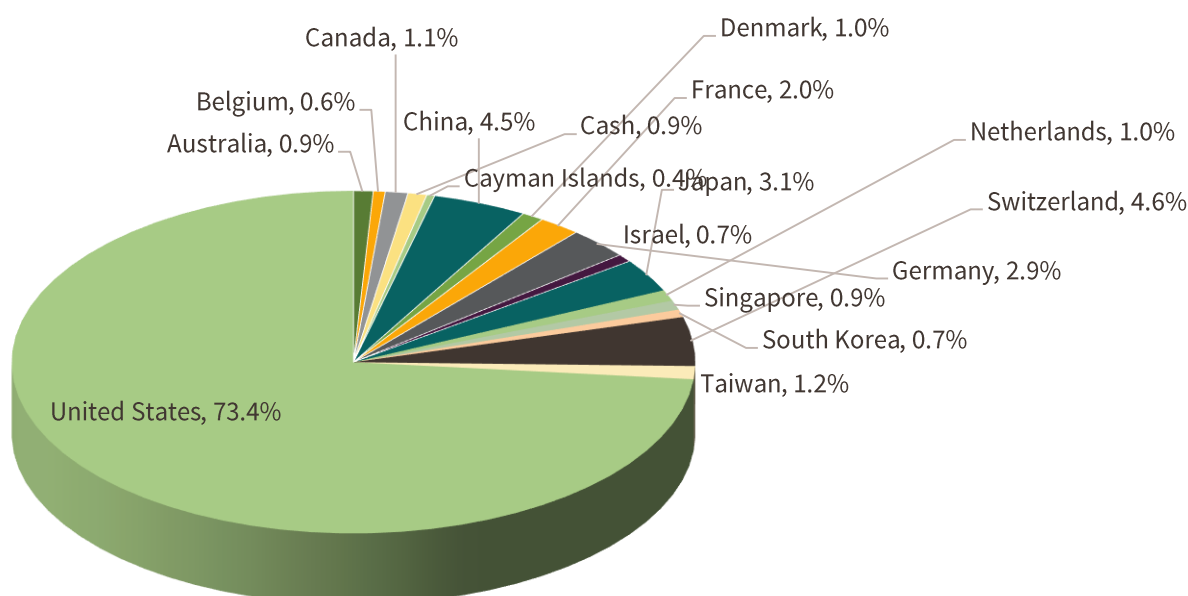
Economic Sectors^{††}



Market Capitalizations



Companies' Main Headquarters



^{††} Bloomberg Industry Classification Standard. Please see the final page of this document for important disclosures about portfolio, benchmark and characteristic information.

Performance & Commentary

Green Alpha's stock selection process flows from the knowledge that the most effective sustainability strategies and the most promising places to look for equity growth both require innovation and ever-accelerating productivity gains.



Across our portfolios, the application of our Next Economics™ thesis continued to work well in 2019, with each Green Alpha portfolio significantly outperforming its benchmark. What are the ideas behind Next Economics? There are two important topics. First, Next Economics is a macroeconomic thesis of how the economy is evolving and needs to evolve to have a chance at indefinite growth that does not destroy the ecosystems that support us. Second, it is a way of investing in equity markets to capitalize on this transition via forward-looking

portfolio construction process that has more in common with private equity analysis than it does with traditional methods of public equity management. Leveraging this thesis, we are aligning investing with the most rapid growth areas in the global economy and thereby preserving and growing our clients' buying power into the future. Which, of course, is the point of investing in the first place.

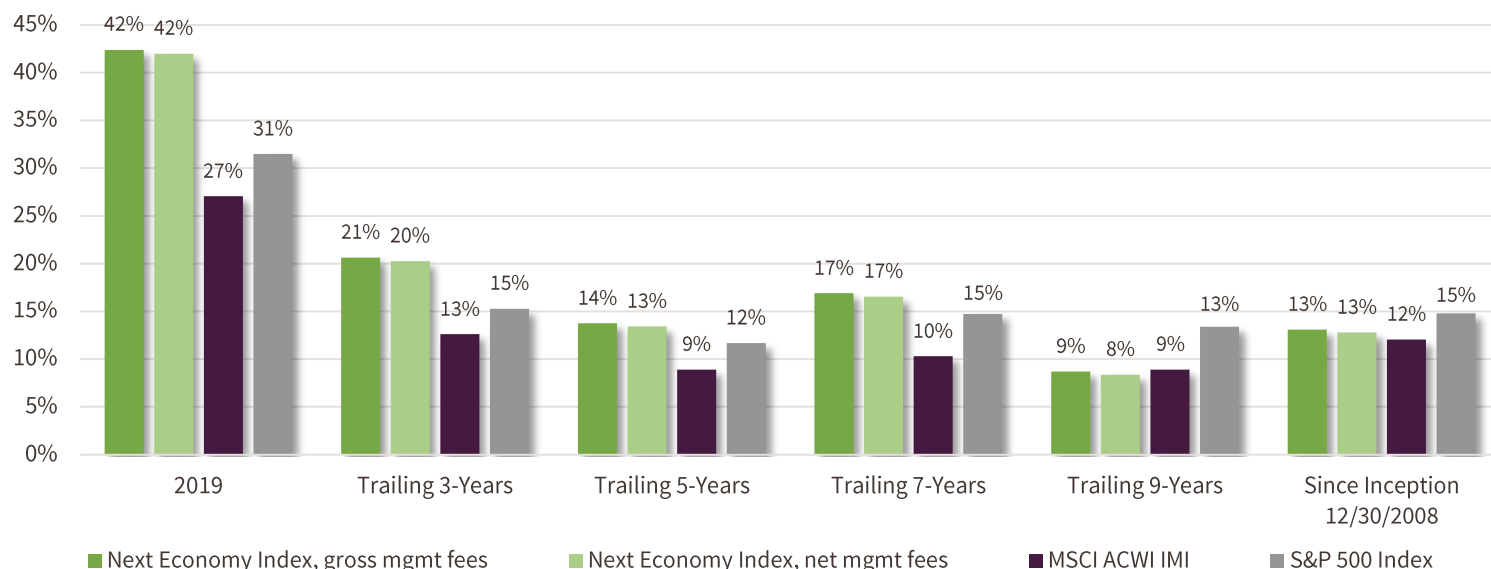
At Green Alpha, we translate our thesis into actual investing by intentionally setting up our portfolio construction processes to identify the right set of investment opportunities. Our processes recognize that in order to achieve a portfolio set of holdings entirely invested in what's next, as opposed to what was, we must properly prioritize research topics. First and foremost, we need to know if a company is improving the economy – if its revenues come from lowering the overall risk profile of the global economy – and if it can function indefinitely without raising more risk than it solves.

For example, looking back at 19th and 20th century technologies like fossil fuels and internal combustion engines is no longer an interesting way to seek growth. It is rather in new means of production that are economically and functionally superior to their predecessors where one can find value looking forward. In the modern knowledge economy, much if not most value accrues to the owners of the intellectual property that defines these new means of production, so it is largely in these owners that we seek to invest. This requires thinking anew about public equity markets and requires us to carefully evaluate each prospective investment on its merits, without respect to market cap, nation of domicile, or membership in any particular index.

Traditional methods of sector allocation and blind indexing without evaluation of individual company contribution to the global economy cannot access these analyses or methods of portfolio construction. Our approach makes Green Alpha different, and we firmly believe this difference confers an ability to realize very competitive absolute performance over time.

Please read the following page for the performance results we have achieved for clients invested in the Next Economy Index.

Performance & Commentary *(continued)*



In 2019, Green Alpha's Next Economy Index returned 42.0%, net of management fees, vs the MSCI All Country World Investible Market Index (ACWI IMI) return of 27.0%.

The sectors contributing the most to returns were Technology, adding 18.2%, Industrials with 5.2%, and Energy at 4.1%.

- In the Technology sector, each company in the entire semiconductor value chain in Green Alpha's universe was a positive contributor. In particular, upstream original equipment manufacturers and some of the world's leading IP owners and chip makers provided the lion's share of the sector's return in the portfolio. Other contributors in Technology included leading software around data and design, as well as innovation leaders in AI, machine learning, digital security, and blockchain. These firms are enabling productivity gains via 5G, IoT, autonomy, robotics, communications, smart cities, and more.
- Within the Industrials sector, advanced electronics that are enabling the electrification of the economy were the best performers. IP for advanced displays was one of Green alpha's top names for the year across strategies. Also in Industrials, waste-to-value building materials did well, and water infrastructure made a meaningful contribution.
- The Energy sector, which Green Alpha defines as a diversified group of renewables, was led by high-tech inverters, global solar manufacturing capacity, and leading wind energy companies encompassing wind utilities and wind turbine manufacture and service.

No sectors detracted from performance in the Next Economy Index for 2019. The lowest performing sectors were Basic Materials, which contributed 0.7%, Utilities also at 0.7%, and Consumer Cyclical, which added 1.4% to returns.

- Basic Materials exposure includes recycled steel, which had a volatile but slightly positive year, and is highly dependent on the global commodity price, and as such is exposed to trade conflict concerns. Solar-grade raw silicon weighting in the portfolio was small, so it did not contribute much to returns, but had an outstanding year in absolute terms.
- Both water and electric utilities were positive in the strategy in 2019, with a geothermal baseload electric utility, and a desalinization-based water utility returning the most to the sector.
- The returns from Consumer Cyclical came mostly from providers of sustainably sourced furniture, with electric vehicle makers and suppliers contributing as well.

All returns presented above that are greater than 1 year in length have been annualized. Performance data quoted represent past performance. Past performance does not guarantee future results and current performance may be lower or higher than the data quoted. Please see the final page of this document for important disclosures about portfolio, benchmark and characteristic information.

Important Disclosures

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- MSCI ACWI IMI: The MSCI All Country World Investable Market Index (ACWI IMI) captures large, mid and small cap representation across 23 developed markets and 24 emerging markets countries. With over 8,700 constituents, the index is comprehensive, covering approximately 99% of the global equity investment opportunity set. Investors cannot invest directly in this index.
- The SPDR MSCI Global Stock Market ETF (ticker: SPGM) seeks to provide investment results that, before expenses, correspond generally to the price and yield performance of the MSCI ACWI IMI. Investors can invest directly in SPGM.
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