

Next Economy Social Index

December 31, 2019

Green Alpha[®]

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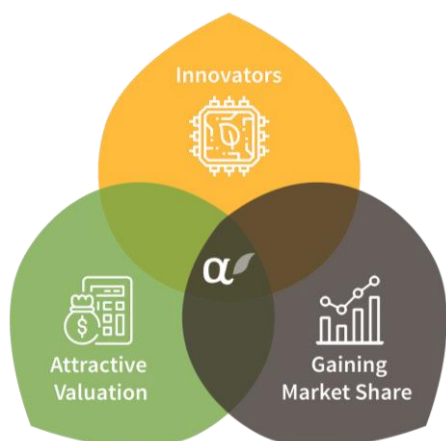
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Investment Philosophy

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 Social Index?

- Active research and stock selection
- Passively managed through an annual rebalance
- Applies unique gender and social inclusion criteria to create a portfolio with a powerful one-two punch of innovative companies led by diverse, empowered teams
- ~92 global, market-leading companies developing solutions to core economic and environmental risks
- Fossil fuel free since inception

Inception Date: December 31, 2015

Style: All-Cap Global Growth Equities

Vehicle: Separately Managed Accounts

Portfolio Construction

The Social Index construction is based on the premise that the cognitive power, execution and risk management abilities of groups exceeds that of individuals, and the more diverse the group the greater potential.

To manage the portfolio, we start by seeking 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

We select weights based on market cap size, then assign additional weighting to companies where women hold positions of significant decision making authority, have especially strong representation in leadership, and/or corporate policies are eminently inclusive.

Next Economy Social Index

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

Characteristics

- **Next Economy innovators, diversity leaders** – harnessing the performance enhancing and risk reducing potential offered by diverse teams, we apply rigorous gender and social inclusion criteria to the Next Economy universe
- **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 Social Index	Benchmark: MSCI ACWI IMI (SPGM)	Green Alpha Next Economy Index	Green Alpha Next Economy Select	Green Alpha Growth & Income	Sierra Club Green Alpha
# of Securities	92	1,322	120	53	31	42
Sales Growth, Trailing 1-Yr	19.05%	9.20%	14.19%	20.82%	15.33%	11.41%
P/E, Current	25.93	18.24	26.34	21.70	22.78	25.23
P/E, 1-Year Forward [†]	22.16	15.85	20.83	17.72	20.33	20.57
Price/Sales	1.01	1.60	1.61	1.64	2.47	1.81
Price/Book	3.89	2.37	3.24	2.78	2.57	2.86
LT Debt/Equity	1.17	0.86	0.78	0.87	1.26	0.79
Current Ratio	2.76	1.71	2.75	2.93	1.95	2.76
Dividend Yield	2.46%	2.72%	2.30%	2.70%	4.20%	2.63%
Market Capitalization Weighted Avg (US\$B)	\$78.50	\$181.72	\$77.96	\$54.21	\$34.74	\$72.75
Market Capitalization, Median (US\$B)	\$9.68	Not Available	\$7.41	\$5.24	\$15.63	\$4.93
Turnover, Trailing 1-Yr	31%	-	24%	16%	13%	5%
Beta, Trailing 2-Yrs	1.11	0.99	1.09	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 Social Index is driving progress toward the Next Economy

IBM (Technology, Technology Services)

- Adroitly managing transition from legacy IT and consulting services to Next EconomyTM innovation powerhouse. By dollars
- 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

Alibaba (Consumer, e-Commerce)

- Alibaba provides technology infrastructure and marketing reach to help businesses leverage new technology to engage with users and customers and operate in a more efficient way. Mission is "to make it easy to do business anywhere."
- Alibaba wants to offer global reach to small- and medium-sized businesses with a particular focus on manufacturers, wholesalers, and distributors
- Alibaba enjoys a wide moat because of its dominant ecosystem and its strong network effect. Despite a slowdown in the Chinese economic growth, the company has continued to grow revenues above expectations

Autodesk (Technology, Software)

- Leading design software provider with tools spanning architecture, engineering and construction, platform solutions and emerging business, manufacturing, media and entertainment. Their software has revolutionized design and engineering times from idea to finished product, and is a recognized global leader among product lifecycle management (PLM) software providers
- Designing the new wave of efficient products requires effective, data-driven tools to create them. Recurring revenues constitute 93% of total revenue. Successfully growing subscription revenue. They also offer and enable 3D printing, which is instrumental in growing waste-to-value product lifecycles
- Women make up 27% of Senior Management and 44% of the Board of Directors, including two Committee Chair positions

Apple (Technology, Hardware)

- Innovative design leaders, now incorporating edge AI and other innovations to maintain leadership
- Became 100% powered by renewable energies while the world's largest company by market cap, showing real leadership and proving that RE100 is achievable at any scale, and striving for 100% waste-to-value in all products
- Transition to services as a key revenue driver in addition to hardware has gained traction surprisingly fast. Apple's suite of services is large, diverse, has something for almost everyone and provide recurring revenues, as most are by subscription.

Vertex Pharmaceutical (Health care, Biotech & Pharmaceuticals)

- Vertex is a global provider of treatments of cystic fibrosis, cancer, inflammatory bowel, autoimmune disease, and neurological disorders. The firm is distinguished from competitors by its focus on disruptive innovation, and its interdisciplinary approach
- The company collaborates with advanced gene-therapy firms CRISPR Therapeutics and Moderna Therapeutics, which potentially means that Vertex will have an exclusive license to any successful therapies those leaders create
- Vertex's workforce is 51% female overall, and has four women in the C-Suite, including the CEO

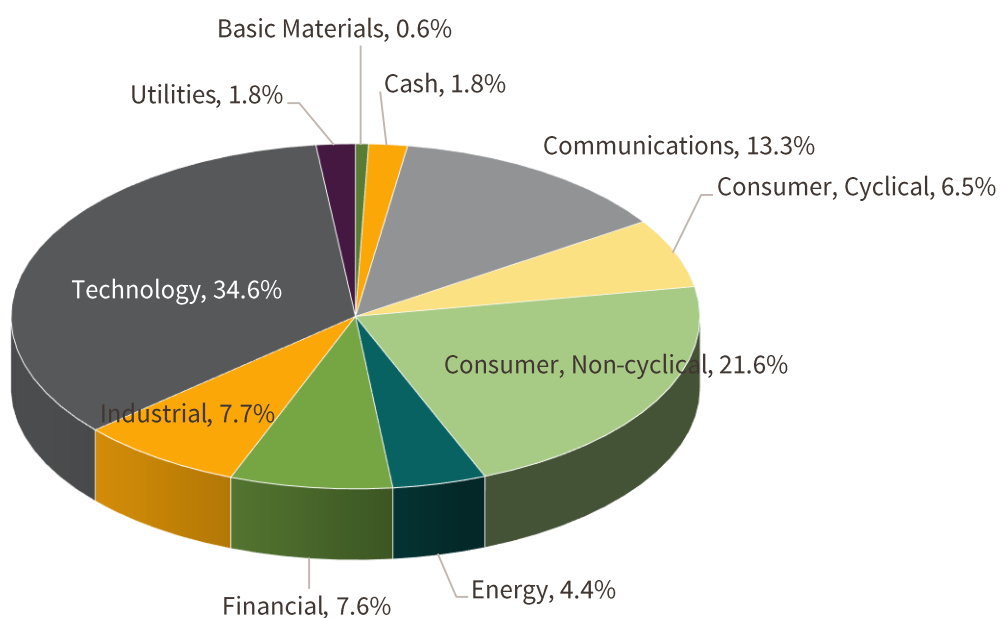
Company Name	Ticker	Weight
Int'l Business Machines	IBM	2.03%
Alibaba Group Holdings	BABA	1.80%
Autodesk	ADSK	1.65%
Apple	AAPL	1.64%
Vertex Pharmaceuticals	VRTX	1.62%
Gilead Sciences	GILD	1.61%
Danone	DANOY	1.60%
Splunk	SPLK	1.56%
Alphabet	GOOG	1.55%
NVIDIA	NVDA	1.53%
% of Portfolio		16.59%

Please see the final page of this document for important disclosures about portfolio, benchmark and characteristic information.

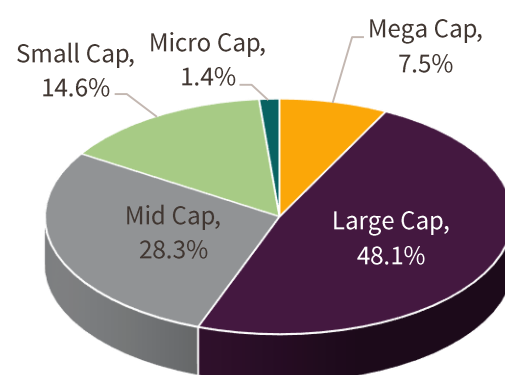
Portfolio Allocations

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

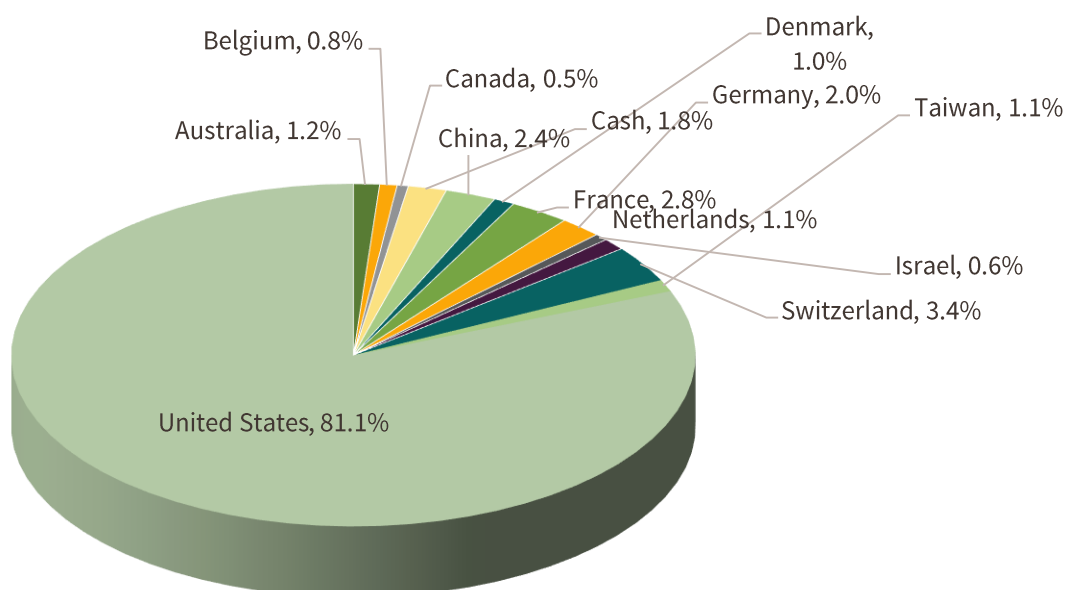
Economic Sectors^{††}



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.

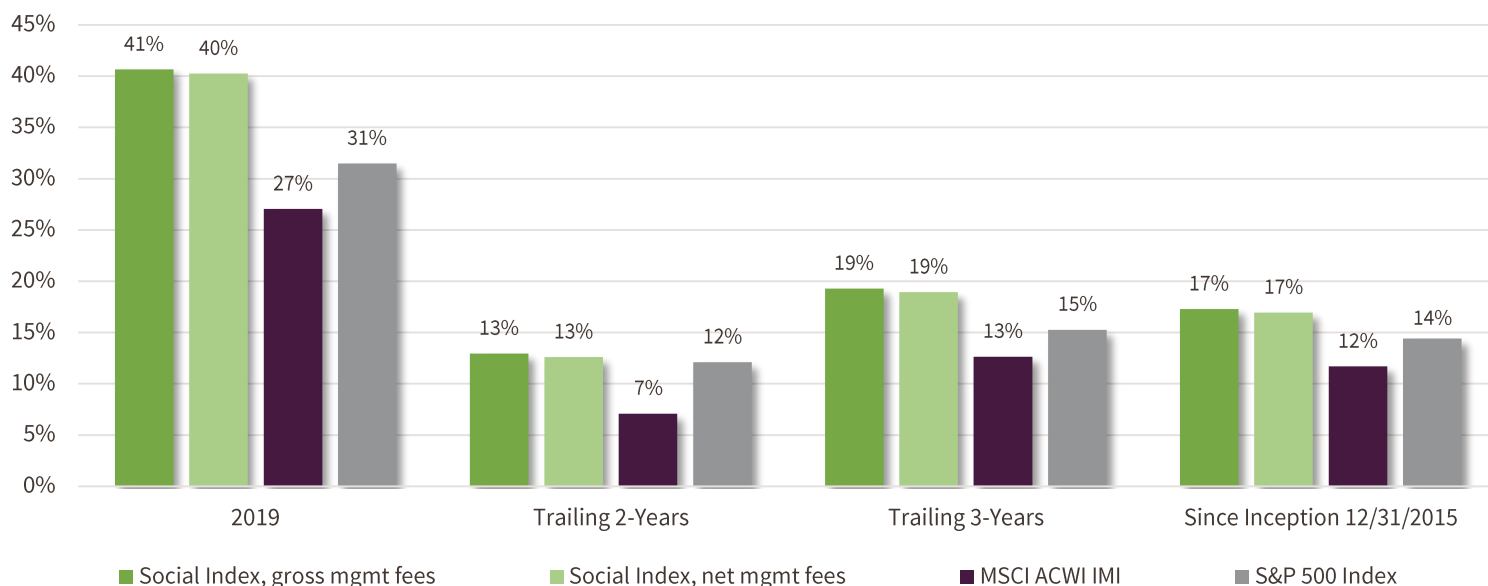
At Green Alpha, we translate our thesis into actual investing by intentionally setting up our portfolio construction processes to identify the right set of investment opportunities. Our processes recognize that in order to achieve a portfolio set of holdings entirely invested in what's next, as opposed 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 performance results we've achieved for clients invested in the Next Economy Social Index.

Performance & Commentary *(continued)*



In 2019, Green Alpha's Social Index returned 40.3%, 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 17.6%, Consumer Non-cyclicals with 5.1%, and Communications at 4.4%.

- In the Technology sector, each company in the entire semiconductor value chain in Green Alpha's universe was a 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 strategy. 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, smart cities, and more.
- Over half of the returns from the Consumer Non-cyclicals sector came from biotech, as firms working on transformative therapeutics made progress and gained market notice as their potential became more evident to the world. Service providers to these innovative biotech companies also did well.
- Within the Communications sector, returns came from a U.S.-based group of data centers that are simultaneously 100% powered by renewable energies. As the world of data quickly becomes home to critical infrastructure, other performers included a fiber optic transmission network, two wireless communications networks, and a digital security firm.

No sectors detracted from performance in the Social Index for 2019. The lowest performing sectors were Basic Materials, which contributed 0.03%, Utilities at 0.7%, and Consumer Cyclicals added 1.4% to the portfolio's 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.
- Within the Utilities sector, both water and geothermal baseload electric utilities posted positive gains in the portfolio.
- The returns from the Consumer Cyclicals sector came mostly from providers of sustainably sourced office furnishings, with electric vehicle suppliers and manufacturers 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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- The S&P 500 Index is an unmanaged index of 500 common stocks chosen for market size, liquidity and industry group representation. It is a market-value weighted index. The S&P 500 Index figures do not reflect any fees expenses or taxes. Investors cannot invest directly in this index.
- 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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