

# Next Economy Index

September 30, 2019

## Green Alpha<sup>®</sup>

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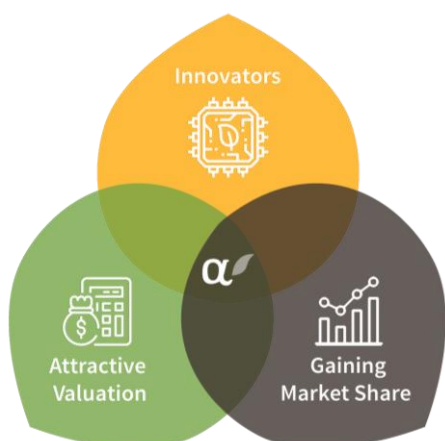
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### Investment Philosophy

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.<sup>™</sup>

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
- 115 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 investment process to 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	115	1,221	95	56	31	42
*Sales Growth, Trailing 1-Yr	10.43%	9.59%	12.31%	65.10%	12.98%	14.32%
**P/E, Current	50.67	27.74	57.79	41.36	36.71	50.64
P/E, 1-Year Forward <sup>†</sup>	24.35	15.42	27.34	23.12	21.17	20.12
Price/Sales	1.70	1.46	1.84	1.45	2.33	1.64
Price/Book	2.92	2.27	3.47	2.40	2.41	2.60
LT Debt/Equity	0.74	0.90	0.88	0.82	1.17	0.77
Current Ratio	2.62	1.66	2.59	2.86	1.99	2.75
Dividend Yield	1.43%	2.57%	1.48%	1.67%	4.32%	1.52%
Market Capitalization Weighted Avg (US\$B)	\$66.68	\$157.37	\$63.16	\$43.95	\$33.08	\$60.01
Turnover, Trailing 1-Yr	24%	-	28%	11%	13%	5%
Beta, Trailing 2-Yrs	1.05	0.98	1.06	1.04	0.84	0.97
Active Share	94.82%	-	94.73%	97.91%	98.27%	97.41%

\*Sales Growth is abnormally higher in the Next Economy Select strategy this quarter due to one holding that experienced abnormally higher sales growth during the period. We expect the growth rate to normalize as revenues increase.

\*\*P/E, Current is abnormally higher in Green Alpha portfolios this quarter due to one holding, which has a material weighting, that transitioned from negative earnings to slightly positive, skewing the appearance of the overall portfolio statistic.

<sup>†</sup> 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)

- 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
- All global operations run 100% on renewable energies
- Three women in Senior Management, including award-winning CFO and the CEO of YouTube, and 18% of the Board of Directors

## Atlassian Corp (Technology, Software)

- Software development tools company empowering teams through open work, and rapid communication tools. Deeper and more rapid collaboration means greater productivity, which is key at the macroeconomic level for innovation and sustainability
- Substantial investments in R&D and smart acquisitions demonstrate strategic growth and represent good probabilities of maintaining tech leadership in the key software development space
- Women make up 22% of the Board, including the Chair of the Board, and Chair of the Compensation Committee

## Lam Research (Technology, Semiconductors)

- Upstream to the entire integrated circuit industry, Lam provides world class processing equipment used in the fabrication of semiconductors, as well as for microelectromechanical systems (MEMS). As such, they are indispensable to today's increasingly digital economy
- Lam's solar PV equipment includes: film deposition, plasma etch, photoresist strip, and wafer cleaning
- In fiscal year 2019, Lam spent \$1.19 billion on new R&D, which was approximately 12% of annual revenues. Ownership of IP related to new means or production is key to growth and returns (more than is the production itself)
- Lam's Senior Management team consists of 18% women, and the Board boasts 36%, including Compensation Committee Chair

## Qualcomm (Technology, Semiconductors)

- Multinational company that designs and markets wireless telecommunications products and services
- Global leader in 5G technology, at least a year ahead of the next closest competitor for device-level 5G-enabled tech; major R&D expenditures signal that they likely to remain global leaders
- Connectivity—swift data exchange and use between devices—is key to an efficient/sustainable economy, and Qualcomm enables this across applications: auto, health care, IoT, mobile computing and networking
- Women make up 25% of the Board of Directors, including the Chair of the Compensation Committee

## 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
- If every large company operated like Apple, we might be able to limit warming to 2° C, thus avoiding large-scale economic risks

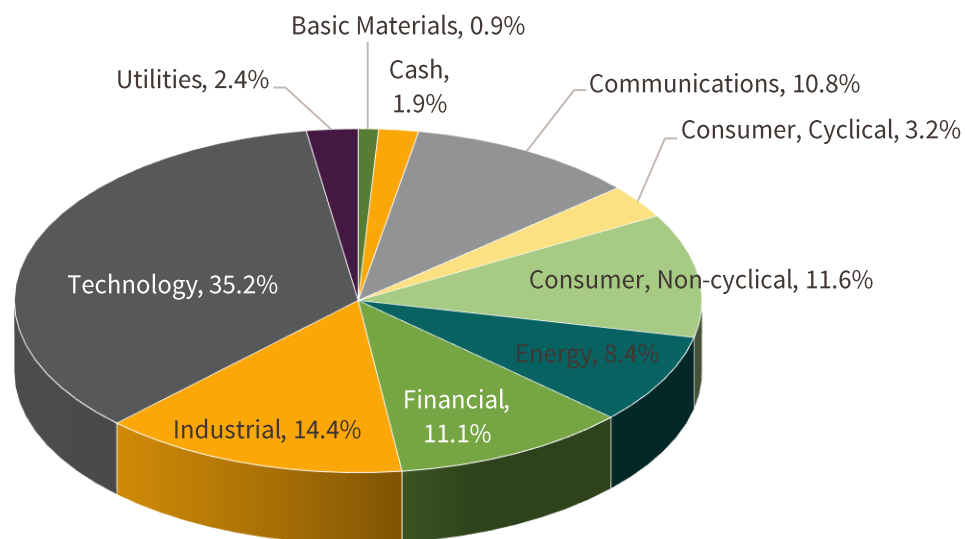
Company Name	Ticker	Weight
Alphabet	GOOG	2.59%
Atlassian	TEAM	1.60%
Lam Research	LRCX	1.47%
Qualcomm	QCOM	1.46%
Apple	AAPL	1.43%
Universal Display	OLED	1.42%
Applied Materials	AMAT	1.38%
AT&T	T	1.36%
Tokyo Electron	TOELY	1.32%
Palo Alto Networks	PANW	1.30%
% of Portfolio		15.33%

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

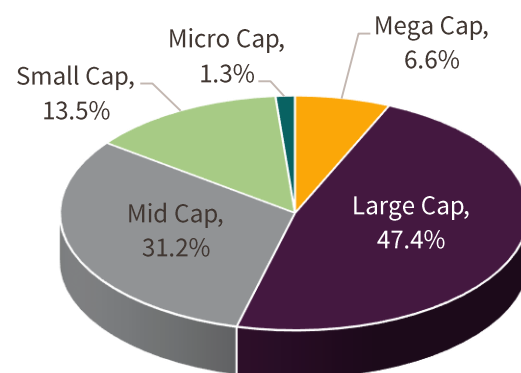
# Portfolio Allocations

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

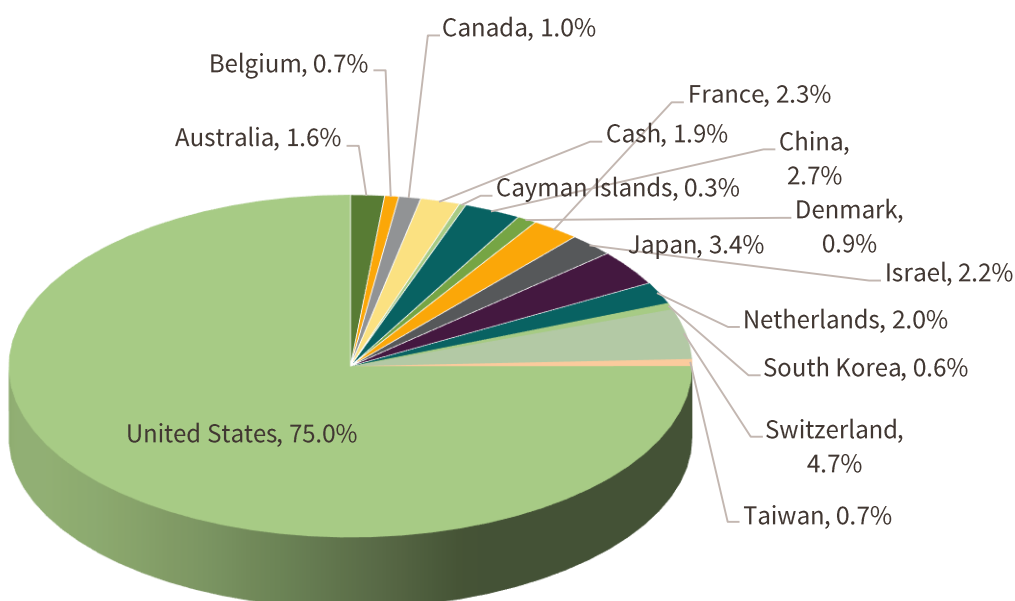
## Economic Sectors<sup>††</sup>



## Market Capitalizations



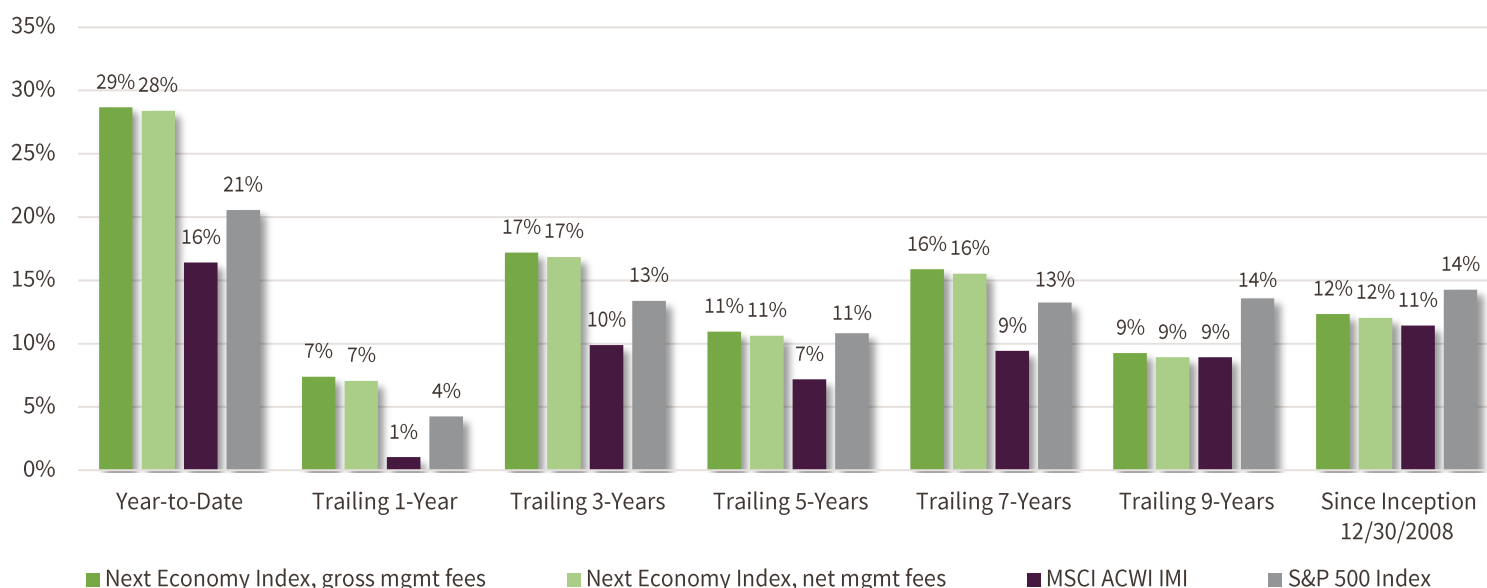
## Companies' Main Headquarters



<sup>††</sup> Bloomberg Industry Classification Standard. Please see the final page of this document for important disclosures about portfolio, benchmark and characteristic information.



# Performance & Commentary



Markets experienced a mixed third quarter of 2019. The US-China trade friction seemed to get more complicated, and more signs emerged that global growth is slowing (although not stalling or reversing in Q3); however, central banks remained accommodative, and corporate earnings, while uneven, were often better than markets had previously priced into expectations.

Next Economy™ companies fared well, as many of our holdings, particularly in technology, financials, communications and renewable energies-based utilities, continued their rallies from the first and second quarters of this year. Biotech and pharmaceuticals were generally down for the period, along with consumer stocks. Overall, four of Green Alpha's five portfolio strategies outperformed their benchmarks during the third quarter, adding to their 2019 gains.

For the third quarter of 2019, Green Alpha's Next Economy Index returned 1.83%, net of management fees, compared to the MSCI All Country World Investible Market Index (MSCI ACWI IMI) return of -0.06%.

Performance was led by the Financials sector, which contributed 1.08% of the portfolio's return, particularly Next Economy infrastructure REITs, especially datacenter and bandwidth providers, as well as by sustainable real estate REITs located in some of America's key innovation hubs.

The Technology sector also added meaningfully to returns, contributing 1.00%, with semiconductors contributing the most within the sector, driven mostly by the world's premier semiconductor production equipment providers, followed by chip makers for various Next Economy areas, including Artificial Intelligence ("AI"), machine learning, autonomous driving, and system-on-chip makers.

The biggest negative performance in the portfolio was driven by the Consumer Non-cyclical sector, with detracted 0.79% from overall returns, specifically biotech and pharma, as gene sequencing and editing firms faced selling pressure. While we see prospects for strong long-term returns from the leaders in genomic therapies and diagnostics, we understand that innovators and disruptors will often face volatility over short periods of time.

Also experiencing headwinds during the quarter were high-efficiency display technology and renewable energy equipment providers, both of which were hamstrung by slowing global trade amidst tariff escalation.

*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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