Investment Philosophy

We consider the greatest growth drivers of the twenty-first century to be high-functioning, inventive companies generating and accelerating solutions to system-level risks like the climate crisis, resource degradation, worsening inequality, and human disease burdens. Consequently, those companies are our chief opportunity for investments that preserve and grow clients’ purchasing power.

Green Alpha’s investment philosophy is straightforward: seek enterprises creating smart, scalable and rapidly evolving, economically-competitive solutions. Don’t invest in companies causing global systemic risks.

Why Invest in the Social Index?

• Active research and stock selection; passively managed through an annual rebalance
• Uniquely rigorous gender and social inclusion criteria applied to the Next Economy thesis creates a powerful combination of innovative companies led by diverse, empowered teams
• ~100 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 Equities
Vehicle: Separately Managed Accounts

Portfolio Construction

The Social Index construction is based on the science that the cognitive capacity, execution abilities, and risk management skills of groups exceeds that of individuals, and the more diverse the group, the greater the potential. Diverse teams make better long-term decisions. To manage the portfolio, we start by seeking companies:

• with products and/or services lowering the global 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 executive teams and boards with track records of increasing revenues and expanding margins, leading to earnings growth
• that trade at compelling valuations relative to proven and expected growth, within acceptable levels of risk

We set initial weights by market cap., then assign additional weighting to companies where women hold significant decision-making authority, have especially strong representation, and/or those companies with policies that are eminently inclusive of all demographics.
American Water Works (Sector: Utilities)

- American Water provides water and wastewater services to 14 million people in 24 states. They are the most geographically diverse and largest investor-owned U.S. publicly traded water and wastewater utility company.
- They are investing $28-$32 billion over the next decade ($13-14 billion by 2026) in America’s critical, aging, failing infrastructure that puts communities at risk. In Q1 2022 alone, they invested $430 million.
- Their sustainability projects include constructing a net-zero operations center at Hill Air Force Base in Utah, providing zero-emissions water and 585 kWh of clean energy to the grid. Overall, American Water Works’ goal is to reduce their GHG emissions 40% by 2025; they are currently at 37%.
- The company’s leadership team is 56% women. Top-level C-Suite execs are 63% women, including the CEO, CAO, and COO, continuing the company’s history of female CEOs. The board boasts 56% women as well, including the chair of the Nominating and Compensation Committee. Importantly, 58% of transfers and promotions in the organization are filled by diverse individuals.

Vertex Pharmaceuticals (Sector: Health Care)

- Vertex is a biopharmaceutical company pursuing rational drug design, a type of structure-based design wherein organic small molecules are identified and developed to either activate or inhibit the function of a biomolecule that is a specific biological target in the causal pathway of disease. Vertex has four treatments for Cystic Fibrosis already approved and four more in different phases. Vertex boasts 22% year-over-year revenue growth.
- 44% of Vertex’s executive team are women, including the CEO. 36% of the board is women, including Corporate Governance, and the Scientific and Technology Committees.

GSK (Sector: Health Care)

- GSK is focused on vaccine and drug discovery for infectious diseases, renewing their focus by divesting of the consumer healthcare business (as of July 2022) to advance their mission focused “on the science of the immune system, human genetics and advanced technologies.” Leading innovations include recent development of a Malaria vaccine—the first of its kind and the first anti-parasitic vaccine ever developed. GSK has dozens of other vaccines and therapeutics in use and in development, spanning the areas of infectious diseases including HIV, oncology, immunology, and respiratory.
- 33% of Execs are women, including the CEO & CTO; 31% of the Board are women, including Corp. Responsibility Committee Chair.

Twist Bioscience (Sector: Health Care)

- Twist manufactures synthetic DNA and DNA products for customers across industries by writing DNA directly onto silicon chips. Twist Bioscience is advancing drug discovery, human genetics, cancer research, agbio and animal health, and antibody discovery for infectious diseases. Their next generation sequencing platform are for comprehensive biopharma research, discovery, and product development. The ability to create synthetic DNA encompassing any code and write it on silicon wafers enables research across domains and empowers disruptive innovation for decades.
- 43% of Twist’s executive team are women, including the CEO/founder, and 20% of their board of directors are women.

Sunrun (Sector: Energy)

- Sunrun is America’s largest installer of residential solar panels, which can be bundled with optional battery energy storage. Their business model focuses on power purchase agreements wherein the company installs solar systems and then sells the generated power back to the homeowner in a ‘pay-as-you-save’ relationship; Sunrun sells excess power to local offtakers.
- Sunrun has a broad distribution network including their own sales team as well as partnerships with partners such as Costco, Home Depot, and Ford. Re Ford: Sunrun is the official installer of bidirectional charging stations for the Ford F150 Lighting truck.
- Sunrun’s market-leading position has resulted in a 39% increase in customer orders in 2022 and their revenue in Q1 was up 48% year-over-year. Sunrun’s market share is 14% of the U.S. residential solar market, well ahead of their closest competitor at 5%.
- Sunrun’s exec team is 50% women, including the CEO, Co-Executive Chair, Chief Legal Officer, and Chief People Officer; the board of directors is 67% female and includes chairs of the Compensation and Nominating, Governance, and Sustainability Committees.

Largest Positions
How the Social Index is driving progress toward the Next Economy

<table>
<thead>
<tr>
<th>Company Name</th>
<th>Ticker</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>American Water Works</td>
<td>AWK</td>
<td>1.90%</td>
</tr>
<tr>
<td>Vertex Pharmaceuticals</td>
<td>VRTX</td>
<td>1.85%</td>
</tr>
<tr>
<td>GSK PLC</td>
<td>GSK</td>
<td>1.78%</td>
</tr>
<tr>
<td>Twist Bioscience</td>
<td>TWST</td>
<td>1.76%</td>
</tr>
<tr>
<td>Sunrun</td>
<td>RUN</td>
<td>1.73%</td>
</tr>
<tr>
<td>Beam Therapeutics</td>
<td>BEAM</td>
<td>1.73%</td>
</tr>
<tr>
<td>Cisco Systems</td>
<td>CSCO</td>
<td>1.71%</td>
</tr>
<tr>
<td>AbCellera Biologics</td>
<td>ABCL</td>
<td>1.58%</td>
</tr>
<tr>
<td>Moderna</td>
<td>MRNA</td>
<td>1.58%</td>
</tr>
<tr>
<td>Brookfield Renewable</td>
<td>BEPC</td>
<td>1.57%</td>
</tr>
</tbody>
</table>

% of Portfolio 17.19%

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

info@greenalphaadvisors.com  303.993.7856  www.greenalphaadvisors.com
Macroeconomic Commentary

Though not inevitable, the probability of a U.S. recession increased in Q2 with the Fed significantly increasing interest rates to tame rising inflation. Although inflation hurts the economy, so does fighting it, and a slowdown in some sectors is already visible. At the end of Q2, the Commerce Department confirmed that the U.S. economy shrank 1.6% in the first quarter, downgrading their previous prediction. Commerce’s report also showed that consumer spending rose at a much reduced 0.2% rate from April to May, and May to June it shrank outright, seemingly in response to inflation, but also possibly in response to the nonstop news narrative of an impending recession. Reductions in spending have led to retailers reporting they are experiencing inventory buildups, and some have planned price reductions as a result. In this we see the first inklings of inflation moderation.

On the growth side, rebounding sectors like hospitality and travel have had a hard time hiring employees fast enough as people return to restaurants, airports, and hotels. Evidently, the spending increases in May were for experiences rather than material goods, and amid the May-to-June spending slowdown, travel and leisure continued to grow. Unemployment is still at record lows and wage growth has doubled from 2019, which one would expect with two job openings currently available for every unemployed person. In addition, the end of Q2 saw data indicating that manufacturing supply chains are getting back on track in key industries like semiconductor manufacturing—another potential deflationary influence. The economic picture is far more complex than a ‘looming recession,’ and the next 12 months could turn out to be very surprising in any number of ways, no doubt both boosting and detracting from stock market valuations.

In energy, the recent spike in oil and other fossil fuel prices has pushed a more rapid increase in renewable and clean energy development. Data shows that investment in global energy—mostly in clean energy—is projected to increase by 8%, reaching $2.4 trillion in 2022 alone. Although these trends are encouraging, they are nevertheless insufficient to fix either the current energy crisis in Europe (and elsewhere) or the climate crisis. The IPCC report released on April 4th made special effort to warn the world that the transition to renewables has been underfunded—to the extent that the COP26 agreements will be difficult to meet. The gap between written pledges and financial investments to meet those pledges is significant and ultimately must be addressed. As awareness of this disconnect advances, we expect the emergence of further catalysts in the energy sector.

During the first half of 2022, most major global indexes, including the MSCI ACWI IMI and the S&P 500 Index, benefitted from exposure to fossil fuels suppliers and producers, which rallied for most of the period. Green Alpha believes that fossil fuels are in the throes of a long-term pattern of demand (therefore price) destruction, and that their current rebound is a temporary condition that will be repeated less often, as the economic transition to sustainable energies and transportation is further established.

What all this signifies is that we can and should continue to expect the unexpected. For Green Alpha, that means remaining fully invested in our long-term thesis of transition from existing economics to Next Economics™. In the face of all the complexity occurring amid and contributing to the current bear market in equities, Green Alpha strategies as a group held up relatively well during Q2. Although our portfolios underperformed our own stated benchmark, the IMI, we did realize outperformance versus leading growth indexes, which generally share our lack of exposure to fossil fuels.

continued on the next page…
Likely due in part to the interest rate pressure here in the States, U.S. companies generally underperformed foreign-domiciled companies year-to-date. All Green Alpha portfolios have greater exposure to U.S. companies compared to the MSCI ACWI IMI. Furthermore, our exposure tends to consist of companies exhibiting high growth characteristics; meaning that year-to-date, most of our portfolios experienced the dual negative impact of exposure to more U.S. companies, as well as ones that are growthy and thus out of favor in the market. In the Social Index, the U.S. exposure detracted a whopping 9.5% from returns relative to the MSCI ACWI IMI.

For the first half of 2022, Green Alpha’s Social Index strategy returned -30.4% net of management fees vs. its benchmark, the MSCI All Country World Investible Market Index (MSCI ACWI IMI), which returned -20.2%.

The Technology and Health Care Sectors were the portfolio’s largest performance detractors during the period.

- Technology was down across subsectors, as the secular rotation away from growth and toward perceived value and “safety” continued its pattern from Q1. Losses were led by the portfolio’s exposure to leading companies in the semiconductor value chain, including the world’s most productive and advanced foundries, chip designers, and vertically down to packaging and device fabrication. Software and hardware leaders added to declines.
- In Health Care, losses were primarily from exposure to the Biotech and Pharma industry, followed by the Medical Equipment and Devices industry. Here again, broad rotation away from growth played a meaningful role in the pullbacks.

The best performing sectors within the Social Index this period were Communications and Materials.

- In Communications, the portfolio benefitted from gains in a leading green data center builder and manager, and from a wireless telecommunications infrastructure provider.
- In Materials, losses from leading sustainable building material and recycled steel companies were catalyzed by fears of a global slowdown in infrastructure and construction spending.

*Portfolio Inception: December 31, 2015. All returns presented above that are greater than 1 year in length have been annualized. Performance data quoted represents 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.
# 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 our Next Economy universe
- **Fundamentals-driven**: the underlying quality of companies and the price paid for their shares are key drivers of LT returns
  - **High growth**: indicated by Sales Growth, and a decrease from Current P/E to Forward P/E as revenue and earnings grow
  - **Compelling valuation**: demonstrated by Price/Sales and Price/Book metrics relative to growth expectations
  - **Strong balance sheet and management execution**: conveyed by capital stewardship, LT Debt/Equity, and Current Ratio
- **Fossil fuel free since inception**: we have never invested in companies that prospect, extract, refine, or transport fossil fuels, nor in fossil-fired utilities or internal combustion engine manufacturers
- **Diversified – we seek solutions wherever we can find them**: across the globe, in companies of all sizes, and every industry
- **Public equities, long-only**: most investors’ largest asset class; largest opportunity for impact

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Green Alpha Next Economy Social Index</th>
<th>Benchmark: MSCI ACWI IMI (SPGM)</th>
<th>Green Alpha Next Economy Index</th>
<th>Green Alpha Next Economy Select</th>
<th>Green Alpha Growth &amp; Income</th>
<th>Sierra Club Green Alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td># of Securities</td>
<td>100</td>
<td>2,413</td>
<td>145</td>
<td>59</td>
<td>35</td>
<td>47</td>
</tr>
<tr>
<td>Active Share</td>
<td>95%</td>
<td>-</td>
<td>93%</td>
<td>96%</td>
<td>97%</td>
<td>96%</td>
</tr>
<tr>
<td>Sales Growth, Trailing 1-Yr</td>
<td>5,302%</td>
<td>43%</td>
<td>3,037%</td>
<td>3,186%</td>
<td>1,402%</td>
<td>1,940%</td>
</tr>
<tr>
<td>P/E, Current</td>
<td>16.46</td>
<td>14.50</td>
<td>16.11</td>
<td>15.89</td>
<td>14.01</td>
<td>18.35</td>
</tr>
<tr>
<td>P/E, 1-Year Forward(^1)</td>
<td>16.92</td>
<td>13.25</td>
<td>16.28</td>
<td>17.24</td>
<td>15.59</td>
<td>19.91</td>
</tr>
<tr>
<td>Price/Sales</td>
<td>1.91</td>
<td>1.55</td>
<td>2.10</td>
<td>1.44</td>
<td>1.47</td>
<td>1.30</td>
</tr>
<tr>
<td>Price/Book</td>
<td>2.23</td>
<td>2.27</td>
<td>2.57</td>
<td>2.40</td>
<td>2.01</td>
<td>2.75</td>
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<tr>
<td>LT Debt/Equity</td>
<td>0.67</td>
<td>0.84</td>
<td>0.70</td>
<td>0.87</td>
<td>1.25</td>
<td>0.86</td>
</tr>
<tr>
<td>Current Ratio</td>
<td>3.37</td>
<td>1.79</td>
<td>3.46</td>
<td>3.13</td>
<td>1.80</td>
<td>2.54</td>
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<tr>
<td>Dividend Yield</td>
<td>2.57%</td>
<td>2.82%</td>
<td>2.64%</td>
<td>2.93%</td>
<td>4.31%</td>
<td>2.43%</td>
</tr>
<tr>
<td>Market Capitalization, Weighted Avg (US$B)</td>
<td>$62.13</td>
<td>$289.82</td>
<td>$65.40</td>
<td>$95.13</td>
<td>$58.41</td>
<td>$87.90</td>
</tr>
<tr>
<td>Market Capitalization, Median (US$B)</td>
<td>$6.94</td>
<td>Not Available</td>
<td>$7.85</td>
<td>$6.11</td>
<td>$26.61</td>
<td>$15.16</td>
</tr>
<tr>
<td>Turnover, Trailing 2-Yr Avg Annual</td>
<td>39%</td>
<td>-</td>
<td>31%</td>
<td>5%</td>
<td>23%</td>
<td>18%</td>
</tr>
<tr>
<td>Beta, Trailing 2-Yrs</td>
<td>1.15</td>
<td>1.00</td>
<td>1.14</td>
<td>1.16</td>
<td>0.93</td>
<td>1.16</td>
</tr>
</tbody>
</table>

\(^1\) Bloomberg consensus estimates. 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 Social Index portfolio, we seek solutions to systemic risks wherever they exist – across sectors, market caps, and geographies.

Economic Sectors††

- Technology 34.2%
- Health Care 22.8%
- Consumer Discretionary 6.4%
- Energy 8.1%
- Consumer Staples 4.4%
- Industrials 7.4%
- Materials 2.3%
- Real Estate 6.4%
- Communications 1.4%
- Utilities 5.6%
- Cash 1.1%

Market Capitalizations

- Large Cap 44.9%
- Mid Cap 32.3%
- Small Cap 17.5%
- Micro Cap 2.2%
- Mega Cap 3.1%

Companies’ Main Headquarters

- United States 86.2%
- United Kingdom 1.8%
- Switzerland 1.3%
- Singapore 0.6%
- Taiwan 0.6%
- Israel 1.1%
- Israel 1.1%
- Germany 3.0%
- France 1.1%
- Denmark 0.8%
- Cash 1.1%
- Australia 0.9%
- Canada 1.6%

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

- Green Alpha Advisors, LLC is a registered investment advisor. Registration as an investment advisor does not imply any certain level of skill or training.
- Green Alpha Investments is a trade name of Green Alpha Advisors, LLC. Green Alpha is a registered trademark of Green Alpha Advisors, LLC. Green Alpha Advisors also owns the trademarks to “Next Economy,” “Next Economics,” “Next Economy Portfolio Theory,” “Investing in the Next Economy,” and “Investing for the Next Economy.”
- Performance quoted throughout this document represent past performance. Past performance does not guarantee future results, and current performance may be lower or higher than the data quoted. Investment returns and principal will fluctuate with market and economic conditions, and investors may have a gain or loss when shares are sold.
- Beginning July 31, 2021, the Next Economy Social Index performance results are a composite of discretionary client accounts invested in the strategy on specific custodial platforms. Green Alpha’s discretionary client accounts that are not included in the composite are those custodied at Folio Institutional due to operational limitations of Folio’s data feeds to Green Alpha’s portfolio accounting system Advent AXP. The Next Economy Social Index composite performance results reflect actual performance for a composite of discretionary client accounts, net of actual management fees and transaction costs. Some assets managed in the Next Economy Social Index strategy within the composite receive a reduced fee from the standard management fee schedule. Actual client returns experienced will vary from the composite returns based on a variety of factors, and we encourage you to ask about specific factors. Accounts are included in the composite for full-month periods under management with Green Alpha Investments. Next Economy Social Index performance results do not reflect the reinvestment of dividends and interest.
- Actual advisory fees may vary among clients with the same investment strategy. Green Alpha’s standard fee schedules are available within Form ADV Part 2. For those details and additional legal information, please see information and files here: http://greenalphaadvisors.com/about-us/legal-disclaimers/.
- From the strategy’s inception through July 31, 2021, Next Economy Social Index performance results reflect performance of a model portfolio. The Next Economy Social Index model performance does not reflect any transaction costs. The Next Economy Social Index model performance results do reflect the reinvestment of dividends and interest. Model performance has inherent limitations. The returns shown during that time period are model results only, and do not represent the results of actual trading of client assets. The model performance shown does not reflect the impact that material economic and market factors had, or might have had, on decision making if the account held actual client capital. Actual client accounts in this strategy are managed by Green Alpha based on the model portfolio, but the actual composition and performance of these accounts may differ from those of the model portfolio due to differences in the timing and prices of trades, and the identity and weightings of securities holdings.
- The Next Economy Social Index strategy contains stocks that are managed with a view towards capital appreciation. Extreme periods of underperformance or outperformance are due to the concentrated nature of the strategy, and the impact of specific security selection. Such results may not be repeatable.
- Regardless of time frame, all characteristics data are sourced from Bloomberg Finance L.P. based on a model Next Economy Social Index portfolio that may or may not be exactly what is delivered and available on each custodial or wrap account platform.
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- The holdings identified throughout this document do not represent all the securities purchased, sold, or recommended for advisory clients. You may request a list of all recommendations made by Green Alpha in the past year by emailing a request to info@greenalphaadvisors.com. It should not be assumed that the recommendations made in the past or future were or will be profitable or will equal the performance of the securities cited as examples in this document.
- The MSCI All Country World Investable Market Index (ACWI IMI) captures large, mid, and small cap representation across 23 developed markets and 27 emerging markets countries. With more than 8,750 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.
- The S&P 500 Index is an unmanaged index of 500 common stocks chosen for market size, liquidity, and industry group representation. It is market-value weighted. The S&P 500 Index figures do not reflect any fees, expenses, or taxes. Investors cannot invest directly in this index.
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