

# Social Index

September 30, 2022

## Green Alpha<sup>®</sup>

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### Investment Philosophy

The greatest growth drivers of today's economy are high-functioning, inventive companies creating and accelerating solutions to system-level risks—the climate crisis, resource degradation, widening inequality, and human disease burdens. Those companies are our best investment opportunity to preserve and grow clients' capital.

Green Alpha's philosophy is simple: seek enterprises creating scalable and rapidly evolving, economically-competitive solutions, rigorously evaluate their fundamentals, and acquire them at reasonable valuations.

Our investments seek to de-risk the global economy (which in turn reduces clients' long-term investment risks) while striving to grow faster than underlying GDP.



### 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
- ~101 global, market-leading companies

**Inception Date:** December 31, 2015

**Vehicle:** Separately Managed Accounts

### Research

Across our portfolios, we seek 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 of directors with consistent track records of increasing revenues and expanding margins, leading to earnings growth and potential dividend increases
- that trade at compelling valuations relative to proven and anticipated growth, within acceptable levels of risk

### 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 have stronger long-term potential.

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.

# Largest Positions

How the Social Index is driving progress toward the Next Economy

## First Solar (Sector: Energy)

- First Solar manufactures solar panels and provides utility-scale PV power plants and supporting services, including finance, construction, maintenance, and end-of-life panel recycling. FSLR uses rigid thin-film modules for its solar panels and cadmium telluride (CdTe) as a panel semiconductor.
- Unique among large solar manufacturers, First Solar is a U.S.-headquartered company and does not use crystalline silicon (c-Si) semiconductors. That means FSLR has fewer supply chain dependencies than traditional c-Si solar PV makers, and avoids dependencies on China, which dominates the c-Si industry.
- The company plans to grow revenues by investing \$1 billion in a new, 3.5 GW module factory in the Southeast, while an additional \$185 million will add 1 GW of new manufacturing to the company's facility in Ohio.
- Under the recently passed Inflation Reduction Act, First Solar could earn as much as 17 cents per watt in subsidies—the highest in the industry, and more than half of their reported production cost per watt.
- First Solar has a vertically integrated manufacturing process providing the lowest carbon footprint and fastest energy payback time available.
- The board of directors is 25% women and includes the Lead Independent Director and Audit Committee Chair. The Chief People and Communications Officer is also female. Importantly, the executive team boasts an above-average age spread of 32 years.

## Beam Therapeutics (Sector: Health Care)

- Beam Therapeutics is a biotechnology company working in the field of genome editing. Beam uses base editing, an incredibly precise form of gene editing designed to alter a single DNA letter which causes a single strand break as opposed to a double strand break used in other types of genome editing.
- Beam has a robust therapeutics pipeline with 10 in-house programs in research and early clinical development. Beam's pipeline is directed at hematology and oncology, liver disease, and ocular and CNS disease, using different delivery methods for each. The company has research, IP, and distribution agreements with Pfizer and Verve Therapeutics.
- Beam recently presented the first in vivo data demonstrating the potential of their multiplex base editing approach to both reduce viral markers—including hepatitis B surface antigen expression—and prevent viral rebound of hepatitis B virus in in vivo models.
- Females comprise 55% of the leadership team, including the CFO, CMO, Chief Business Officer, Chief Human Resources Officer, Chief Legal Officer, and Chief Accounting Officer. The team also boasts an impressive age spread of 32 years.

## Sunrun (Sector: Energy)

- Sunrun is America's largest installer of residential solar panels, which can be bundled with optional battery energy storage. Its business model focuses on power purchase agreements wherein the company installs solar systems and sells the generated power back to the homeowner using a pay as you save model. Excess power is sold to local offtakers.

**Sunrun's** Next Economy attributes, as well as those for **Pacific Biosciences** and **SunPower**, are continued on the following page.

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

| Company Name           | Ticker | Weight        |
|------------------------|--------|---------------|
| First Solar            | FSLR   | 2.50%         |
| Beam Therapeutics      | BEAM   | 2.18%         |
| Sunrun                 | RUN    | 2.10%         |
| Pacific Biosciences    | PACB   | 2.05%         |
| SunPower               | SPWR   | 2.00%         |
| Vertex Pharmaceuticals | VRTX   | 1.94%         |
| Caribou Biosciences    | CRBU   | 1.94%         |
| Twist Bioscience       | TWST   | 1.82%         |
| Commercial Metals      | CMC    | 1.71%         |
| American Water Works   | AWK    | 1.71%         |
| <b>% of Portfolio</b>  |        | <b>19.95%</b> |

# Largest positions *continued*

## **Sunrun** *continued*

- Sunrun has a broad distribution network comprised of their own sales team, as well as partnerships with companies such as Costco, Home Depot, and Ford. Re Ford: Sunrun is the official installer of bidirectional charging stations for the Ford F150 Lighting truck.
- In Q2 2022, Sunrun's new installations grew 33% year-on-year, set a record for new customer orders, and reiterated 2022 full year guidance to grow new installed solar energy capacity by >25%. 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, with an age spread among exec team members at a high 38 years. The board of directors is 67% female, including chairs of the Compensation and Nominating, Governance, and Sustainability Committees, and the age spread among directors is an impressive 32 years.

## **Pacific Biosciences** (Sector: Health Care)

- Pacific Biosciences designs, develops, and manufactures the world's most advanced sequencing systems to address solutions across a broad set of applications including human germline sequencing, plant and animal sciences, infectious disease and microbiology, oncology, and other emerging applications.
- The Company offers Single Molecule and Real-Time (SMRT) technology enabling real-time analysis of biomolecules with single molecule resolution. Their third-generation DNA sequencing technology can map an organism's genome in minutes, and their proprietary technology performs fast and inexpensive DNA sequencing. The technology performs highly accurate reads of ultra-long sequences with the ability to simultaneously detect epigenetic changes. PacBio's sequencing machines are designed for use by clinical, commercial, and institutional research laboratories.
- Females comprise 29% of their leadership team, including the CFO, Chief Accounting Officer, Chief People Officer, and Senior VP of Research. Importantly, the leadership team is highly age diverse, with an age spread significantly above average at 35 years, and the board is similarly high at 30 years.

## **SunPower** (Sector: Energy)

- SunPower is an all-in-one residential solutions provider of PV solar energy systems and battery energy storage. They provide home based solar, storage, EV charging, and grid services.
- The company's Q2 2022 revenues rose 63% year-on-year, and they added a record number (51%) of new customers.
- The leadership team is 25% women, including the CMO, Corporate Controller, and Accounting Officer, and the total workforce is 33% women.
- With locations in 47 states and service to all 50, SunPower possesses over 427,000 residential customers with 528MW deployed.
- In an industry not known for considerable female inclusion, SunPower's executive team is relatively impressive at 38% women and 33% on the board of directors, including the Audit Committee Chair. Both the executive team and board are highly diverse by age, with a spread on the leadership team of 30 years and 29 years on the board.

# Macroeconomic Commentary



The third quarter of 2022 was characterized generally by market declines in major indices, both domestically and globally. In the U.S., the primary reasons for negative market sentiment were the specter of rising (*or at least unabating*) inflation, and the Federal Reserve's aggressive response of large interest rate hikes in an attempt to control it. Interest rates have been the markets' focus for most of the year, but with the Fed signaling in Q3 that it was willing and able to intentionally create a recession if required to tame inflation, markets began to perceive the possibility of a shrinking economy. The Fed moved twice in the quarter, raising the Fed Funds rate a total of 1.5%, the highest since 2008. This significantly increases the cost of capital for all companies; more expensive capital means narrower margins, and the threat of recession raises the potential for less business activity.

The result for markets was a scenario leaving little place to hide. Economywide, all but two sectors (via the Global Industry Classification Standard) finished down, and the two positives, energy (up 0.01%) and consumer discretionary (up 0.36%), each increased anemic amounts. The MSCI All Country World Investable Market Index (MSCI ACWI IMI) had no positive sector returns for the quarter, bonds were down (Bloomberg U.S. Agg Total Return was down 4.75% for the quarter), most commodities declined, and cash was still losing value to inflation.

Geopolitical events continued to unnerve economies as well, and there is no question that we have entered a period of uncertainty with respect to the equity markets. Consequently, careful stock selection and active management are becoming more and more important.

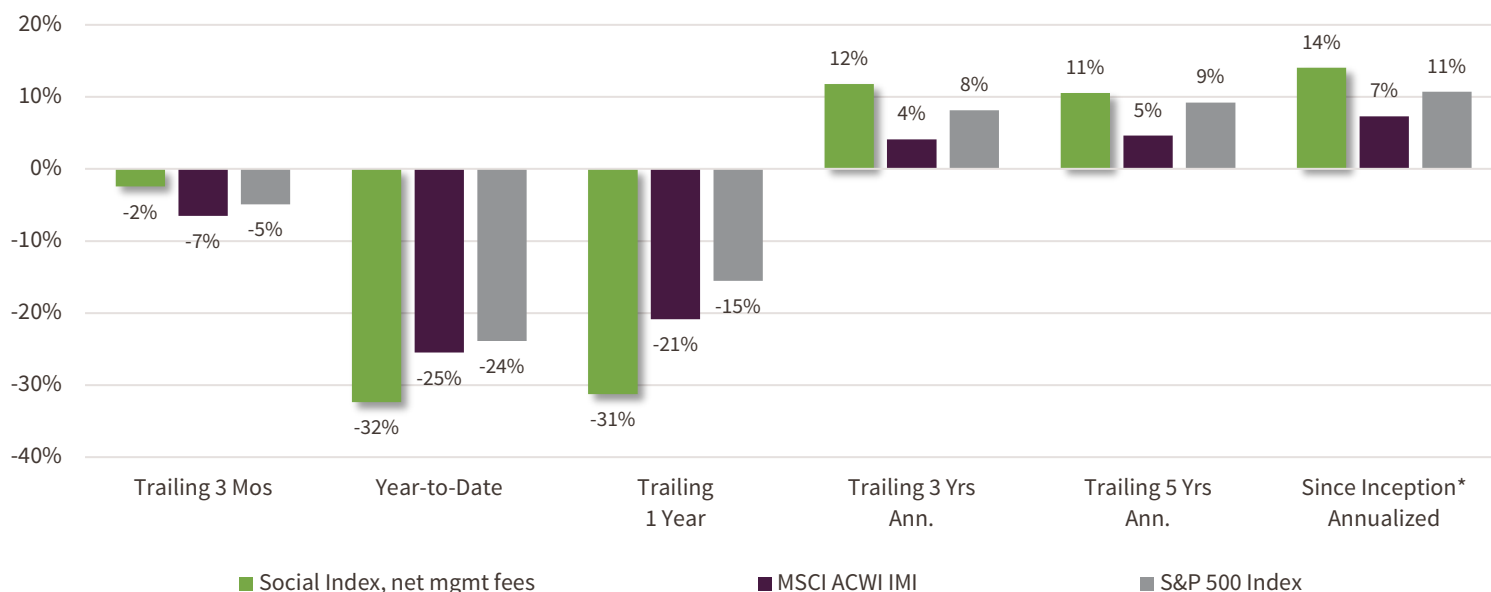
All the above economic factors illustrate the need for careful consideration of every holding in a portfolio: companies with strong balance sheets, earnings, and cash flows will become increasingly important as volatility continues into the immediately foreseeable future. Equally important is the need to understand risk vs. forward opportunity and real growth potential, while grasping the dynamics of market leadership, defensibility of market position—including intellectual property moats, capital allocation priorities, ability to access capital, balance sheet strength, and careful analysis of current valuations vs. expected growth.

These are all key attributes of Green Alpha's research process. For the firm, building portfolios that reflect the sustainable economy is not a matter of using ESG scores to filter an index list. Rather, it is a labor-intensive process of purposely selecting and evaluating each holding in terms of the above factors, as well as the business's net contribution to stabilizing the economy. Green Alpha's approach is to behave like private equity portfolio managers, evaluating each company meticulously as there is no index or benchmark to fall back on.

Amid a tough quarter, July was a bright spot for the Next Economy™ strategies. Each of the portfolios demonstrated meaningful relative and absolute performance, much of which can be attributed to the passage of the Investment Reduction Act (IRA). The IRA will, beginning in 2023, provide significant tax benefits, subsidies, and alternative incentives to renewable energies, zero emissions transportation, and other Next Economy areas of interest. Green Alpha does not consider potential policy tailwinds when making investments, preferring to rely solely on holdings' competitiveness and fundamentals, as well as on market context provided by the macro environment. That said, if policy does provide catalysts for share price appreciation, Green Alpha is happy for its clients to benefit.

*Portfolio-specific commentary is on the following page.*

# Portfolio Performance & Commentary



For the three quarters ending September 30th, Green Alpha's Social Index portfolio returned -32.35% net of management fees, versus its benchmark, the MSCI All Country World Investable Market Index (MSCI ACWI IMI), which returned -25.44%.

The sectors detracting the most from returns were Technology and Health Care.

- In Technology, declines were largely precipitated by a rotation to safety as interest rates climbed and recession fears grew. Losses were led by the technology hardware & semiconductors industry, including semiconductor manufacturing, foundry services, and front-end capital equipment. The software & technology services industry also detracted, largely in the areas of application, infrastructure, and engineering software.
- Health Care also saw declines mostly brought on by a move to safety in response to climbing interest rates and growing recession fears. Losses came from many industries, including medical equipment & devices manufacturing, biotech & pharma, and health care facilities & services. Losses within the biotech & pharma industry came as genomic therapeutics and diagnostics companies suffered as growth went out of favor. Modest losses within health care facilities & services came from contract research and telemedicine companies.

The top performing sectors were Energy and Communications.

- Within Energy—which for Green Alpha is exclusively the various parts of the renewable energy value chain—stocks enjoyed a large rally in July with the passage of the Inflation Reduction Act (IRA); however, those gains were later moderated with the broad market declines in August and September. The strategy's best performers in Energy year-to-date include the world's leading thin film solar manufacturing company, a chief maker of smart solar inverters, and a C-Si solar PV module maker. Gains were partially offset by losses in wind energy equipment manufacturing.
- In Communications, the telecommunications subsector provided positive returns due to the private equity purchase of the world's most sustainably-powered data center company. In addition, Europe's largest wireless service provider contributed positive returns.

*\*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 additional important disclosures.*

# Social Index

How our portfolios compare to their benchmark, the MSCI All Country World Investible Market Index

## 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

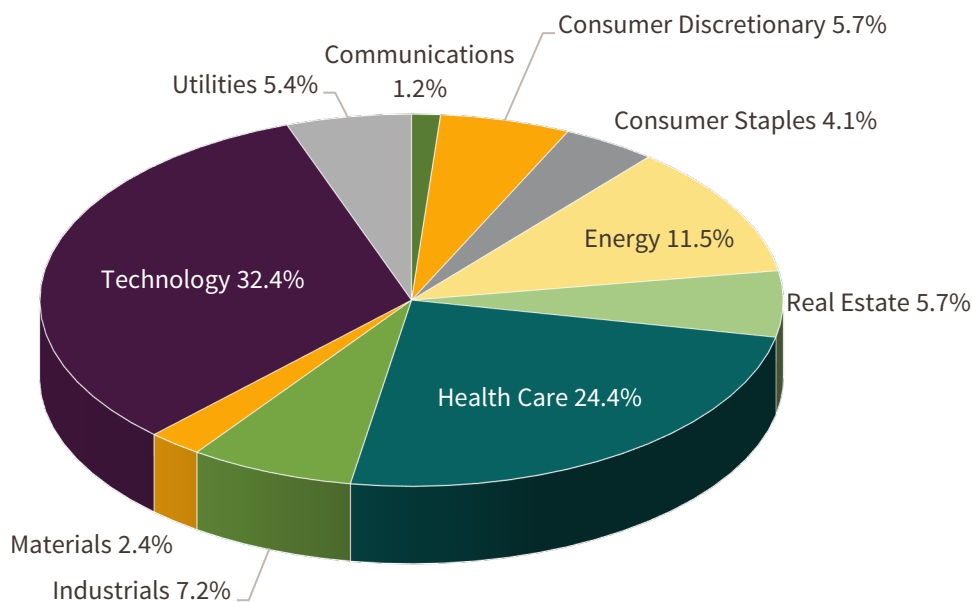
| Characteristics             | Social Index | Benchmark: MSCI ACWI IMI (SPGM) | Next Economy Index | Next Economy Select | Growth & Income | Sierra Club Green Alpha | DiversiTerra |
|-----------------------------|--------------|---------------------------------|--------------------|---------------------|-----------------|-------------------------|--------------|
| # of Securities             | 101          | 2,502                           | 144                | 57                  | 36              | 47                      | 57           |
| Active Share                | 95%          | -                               | 93%                | 96%                 | 97%             | 96%                     | 96%          |
| Sales Growth, Trailing 3-Yr | 28%          | 10%                             | 35%                | 39%                 | 23%             | 39%                     | 33%          |
| P/E, Current                | 15.5         | 13.5                            | 14.6               | 13.4                | 12.0            | 17.0                    | 16.5         |
| P/E, 1-Year Forward         | 15.8         | 13.0                            | 15.6               | 13.5                | 11.5            | 18.0                    | 16.0         |
| Price/Sales                 | 2.0          | 1.6                             | 2.1                | 1.8                 | 1.4             | 1.4                     | 2.0          |
| Price/Book                  | 2.5          | 2.2                             | 2.7                | 2.3                 | 1.7             | 2.8                     | 2.8          |
| LT Debt/Equity              | 108%         | 461%                            | 121%               | 55%                 | 91%             | 70%                     | 133%         |
| Current Ratio               | 3.8          | 2.2                             | 4.1                | 5.7                 | 4.4             | 3.1                     | 4.1          |
| Dividend Yield              | 1.23%        | 2.48%                           | 1.28%              | 1.89%               | 5.14%           | 1.24%                   | 1.42%        |
| Market Cap., Wtd Avg (\$B)  | \$56.89      | \$289.99                        | \$63.96            | \$85.48             | \$55.62         | \$92.58                 | \$78.62      |
| Market Cap., Median (\$B)   | \$8.18       | \$1.87                          | \$7.97             | \$5.08              | \$26.08         | \$14.10                 | \$7.17       |
| Turnover, Trailing 2-Yr Avg | 34%          | -                               | 24%                | 1%                  | 9%              | 11%                     | 30%          |
| Beta, Trailing 2-Yrs        | 1.22         | 1.00                            | 1.20               | 1.19                | 0.96            | 1.17                    | 1.16         |
| U.S.-Domiciled Companies    | 86%          | 59%                             | 78%                | 70%                 | 71%             | 70%                     | 83%          |
| % Revenue Derived in U.S.   | 56%          | 44%                             | 50%                | 50%                 | 50%             | 48%                     | 60%          |

All characteristics are sourced from FactSet and are based on a representative account, including cash. Beta is the exception, being sourced from Bloomberg while we are converting platforms, and it is based on a model portfolio's returns. Please see the final page of this document for additional important disclosures.

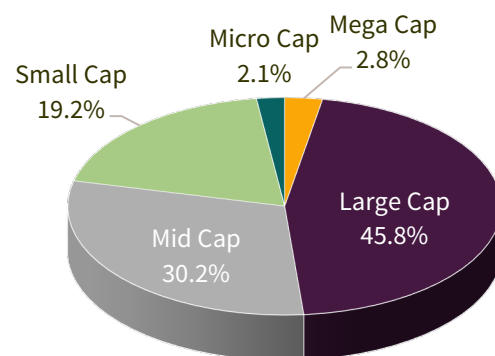
# Portfolio Allocations

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.

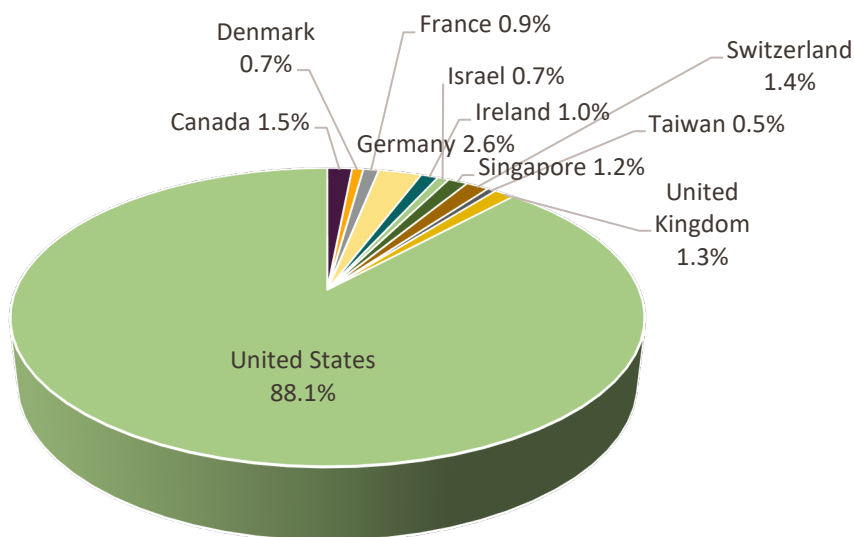
## Economic Sectors



## Market Capitalizations



## Companies' Main Headquarters



Allocation data is sourced from FactSet and is based on a representative account. The exception is the sector chart, which utilizes the Bloomberg Industry Classification Standard from Bloomberg, and is based on a model portfolio. All charts on this page are shown as percent of equity. Please see the final page of this document for additional important disclosures.

# 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 Social Index performance results are a composite of discretionary client accounts invested in the Social Index 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 APX. The Social Index composite performance results reflect actual performance for a composite of discretionary client accounts. Net-of-fee returns reflect the deduction of actual management fees and transaction costs. Some assets managed in the Social Index strategy within the composite receive a reduced fee from the standard management fee schedule. Actual client returns experienced will vary from the returns presented 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. Social Index composite performance results do not reflect the reinvestment of dividends and interest.
- Prior to July 31, 2021, the Social Index performance results represent a single account managed to the strategy. The performance results shown are not materially higher than if all related accounts were included prior to August 2021. Please contact Green Alpha for information about the representative account selection process.
- 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/>.
- The 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.
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- 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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