

# Growth & Income

June 30, 2022

## Green Alpha<sup>®</sup>

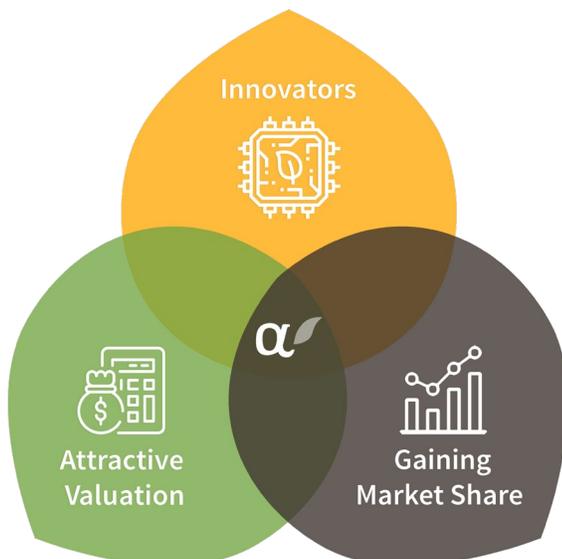
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### Investment Philosophy

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 Growth & Income?

- Active research, stock selection, and portfolio mgmt
- Low volatility portfolio producing above-market dividend income, while seeking long-term capital preservation and growth
- 25-45 global, market-leading companies developing solutions to core economic and environmental risks
- Fossil fuel free since inception

**Inception Date:** October 31, 2012

**Style:** All-Cap Global Equities

**Vehicle:** Separately Managed Accounts

### Portfolio Construction

The Growth & Income portfolio is designed to harness the powerful combination of growth and current income within one portfolio. We seek investments in 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

Growth & Income portfolio holdings are then selected for current or potential dividend yield, coupled with strong revenue growth, and bought at a reasonable price. The strategy typically exhibits lower short-term volatility than other Green Alpha portfolios and broad market indices, while providing a competitive dividend yield. Our investments seek to de-risk the global economy, which in turn reduces clients' long-term investment risks.

# Largest Positions

How the Growth & Income portfolio is driving progress toward the Next Economy

Company Name	Ticker	Weight
IBM	IBM	6.86%
Horizon Tech Finance	HRZN	6.46%
Brookfield Renewable	BEPC	5.65%
Lumen Technologies	LUMN	4.68%
Hannon Armstrong Sustainable	HASI	4.35%
<b>% of Portfolio</b>		<b>28.00%</b>

## IBM (Sector: Technology)

- IBM has led the U.S. in the number of patents received annually for 29 years in a row and is a 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, and food safety; and the most accurate weather forecasting tech.
- Having divested from its legacy managed-infrastructure business, IBM has re-emerged as a Next Economy™ innovation powerhouse. Their primary initiatives include blockchain code and technology, cloud computing, AI and machine learning, and quantum computing. IBM has recognized that these innovations, in their words, “can exponentially alter the speed and scale at which we can uncover solutions to complex problems. We’ve come to call this accelerated discovery.”

## Horizon Technology Finance (Sector: Financials)

- Horizon provides structured debt to innovative companies, primarily in life sciences, healthcare information services, sustainability, and cleantech. Horizon has deployed more than \$5 billion in venture loans, including their ~ \$500 million book, to more than 285 businesses in the underserved venture loan space. The loan portfolio is conservatively managed with transactions usually well below their maximum of \$35 million and terms of 3-5 years backed by security of offering debt on a “first lien” or “first lien behind a bank revolver” basis. They often partner with other institutions to reduce risk.
- Technology, sustainability, life sciences, and healthcare technology companies are attracting record investments on the VC side. This means Horizon enjoys a growing TAM in an underserved debt market and offers the opportunity to invest in a venture loan fund that constitutes a diversified basket of privately-held Next Economy™ companies via a single stock.
- Horizon is investing in growing their venture debt portfolio, announcing in May they are significantly expanding their team to seek more investment opportunities. The company features an implied forward dividend yield of ~10.3%.

## Brookfield Renewable (Sector: Utilities)

- Brookfield (BEPC) is one of the world’s leading zero-carbon, 100% renewables-based energy utilities. The company has grown to own ~21 GW of electricity production capacity with a pipeline of ~69 GW of renewable electricity generation capacity, making the company one of the world’s largest pure-play public renewable companies.
- Financially, Brookfield is conservatively managed, is continually looking for acquisitions at favorable prices and organic development to grow generation capacity, and has revenues largely backed by long-term power purchase agreements.
- BEPC: “Decarbonization will create an unparalleled commercial opportunity requiring \$150+ trillion over the next three decades.” The company’s renewable electricity generation displaces 11 million metric tons of emissions annually.

## Lumen Technologies (Sector: Technology)

- Lumen is a telecom infrastructure company, providing network services, including next-gen fiber networks, security, cloud, and voice. Digital communications infrastructure is key to Next Economics™ as digitalization is required for economic efficiency gains.
- Lumen provides trusted communications infrastructure for leading companies such as Zoom, Cisco, Verizon, T-Mobile, and Microsoft. The company has been striving to strengthen its balance sheet, reducing net debt by approximately \$1.5 billion since Q1 of 2021, and it features an implied forward dividend yield of ~9.15%.

## Hannon Armstrong Sustainable (Sector: Real Estate)

- Hannon Armstrong is a hybrid energy REIT making loans to entities such as universities, government and corporate offices, restaurants, and military bases for renewable energy and efficiency projects. The company focuses on small-scale, onsite power generation like roof-top solar panels and improving heating and lighting systems; and sustainable infrastructure. Their \$8 billion project portfolio with >280 investments across ~10 asset classes reduces risk and increases opportunities through diversification.
- The company features solid fundamentals and is a careful manager of capital. Investments undergo a rigorous ROI analysis apart from its sustainability features, and are written as a senior note, meaning among the first in line to be paid if the underlying project or firm encounters turbulence. They have \$4B in projects at various stages of development.

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

# 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.

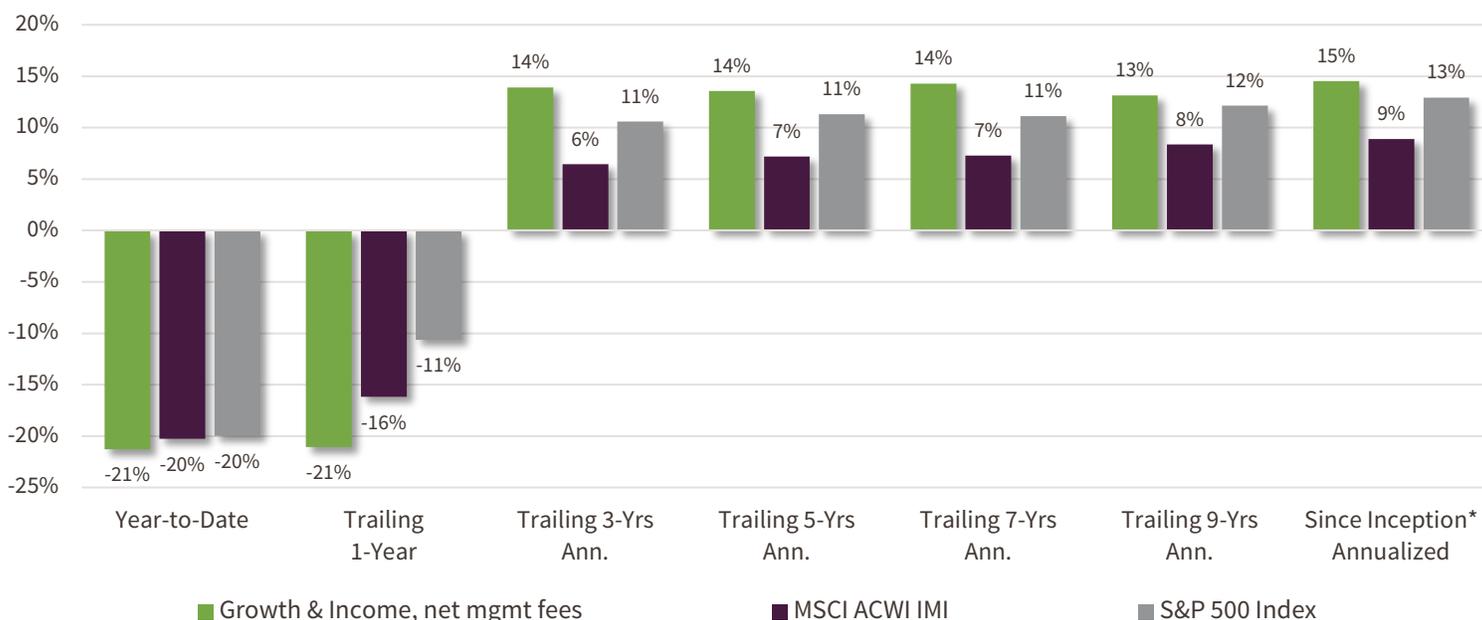
In energy, the recent spike in oil and other fossil fuel prices has pushed a more rapid increase in renewable and clean energy development. Data shows that investment in global energy—mostly in clean energy—is projected to increase by 8%, reaching \$2.4 trillion in 2022 alone. Although these trends are 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.

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# Portfolio Performance & Commentary



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. The Growth & Income portfolio is unique among our strategies as its U.S exposure didn't product a dramatically negative effect in the period, considering income-distributing stocks are typically more stable and less battered by media as other growth stocks.

For the first half of 2022, Green Alpha's Growth & Income portfolio returned -21.3% net of management fees vs. its benchmark, the MSCI All Country World Investible Market Index (MSCI ACWI IMI), which returned -20.2%.

The sectors that detracted the most from the investment strategy's returns were Real Estate and Technology.

- Declines in the Real Estate sector were led by sustainable and green office REITs, as recurring pandemic waves slowed return to office plans at many corporations. The Specialty REITs industry, including a major funder of renewable energy and efficiency projects, also detracted.
- In the Technology sector, 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 companies in the semiconductor value chain, including the world's most productive and advanced foundries, chip designers, and vertically down to device fabrication. Software, including infrastructure and application software, also detracted. These losses were partially offset by gains in the Software and Technology Services industry.

Top-performing sectors in the Growth & Income portfolio were Communications and Consumer Staples.

- The portfolio experienced gains in the Communications sector from a leading green data center builder and manager, and a wireless telecommunications services infrastructure provider.
- In Consumer Staples, gains in retail sales of natural and organic food and beverage were exactly offset by an equivalent decline in natural and organic food production, resulting in flat performance year-to-date for the sector.

*\*Portfolio Inception: October 31, 2012. 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.*

# Growth & Income

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

## Characteristics

- **High Income** – a compelling combination of robust growth and dividend income that is higher than the broad equity market
- **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

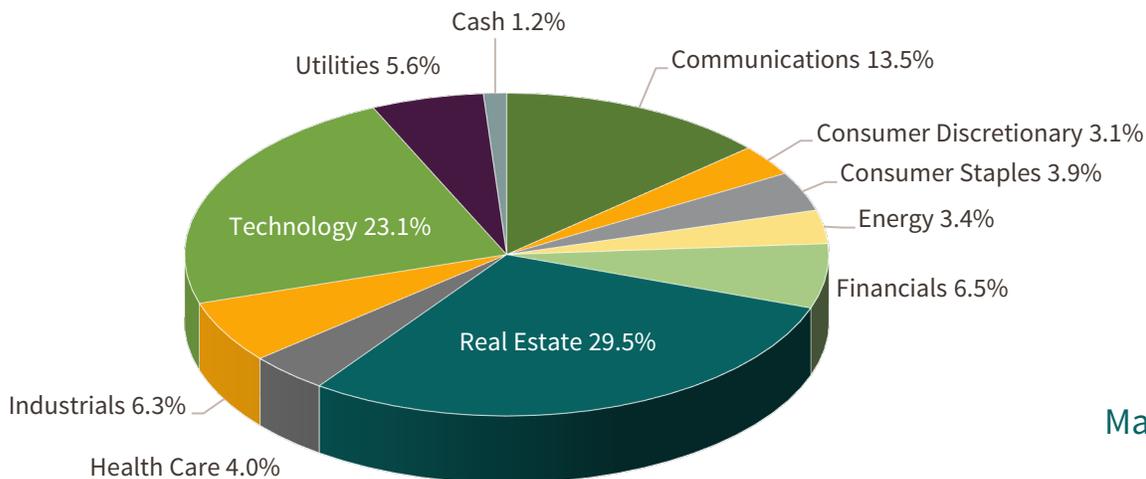
Characteristics	Green Alpha Growth & Income	Benchmark: MSCI ACWI IMI (SPGM)	Green Alpha Next Economy Index	Green Alpha Next Economy Social Index	Green Alpha Next Economy Select	Sierra Club Green Alpha
# of Securities	35	2,413	145	100	59	47
Active Share	97%	-	93%	95%	96%	96%
Sales Growth, Trailing 1-Yr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

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

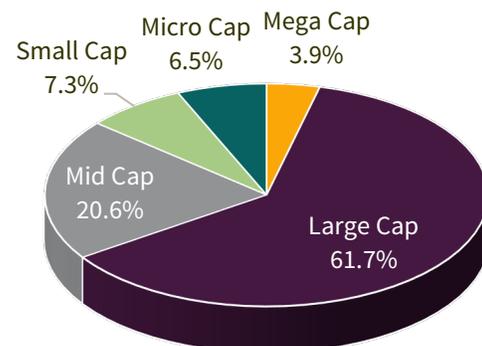
# Portfolio Allocations

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

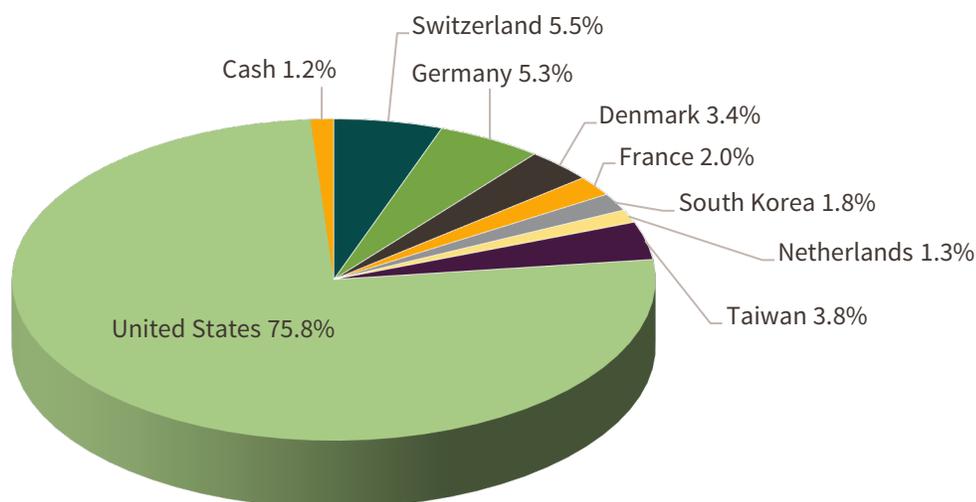
## Economic Sectors ††



## 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.

# 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 Growth & Income 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 APX. The Growth & Income 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 Growth & Income 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. Growth & Income 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, Growth & Income performance results reflect performance of a model portfolio. The Growth & Income model performance does not reflect any transaction costs. Growth & Income 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 Growth & Income strategy contains equity stocks that are managed with a view towards capital appreciation and current income. 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 Growth & Income portfolio that may or may not be exactly what is delivered on each custodial or wrap account platform.
- Green Alpha portfolios may invest in companies with small and medium market capitalizations, which may have more limited product lines, markets, and financial resources than larger companies. In addition, their securities may trade less frequently and in more limited volume than those of larger companies. Small or mid-cap stocks may be more volatile than those of larger companies and, where trading volume is thin, the ability to dispose of such securities may be more limited. Green Alpha portfolios may also invest in foreign domiciled companies. Investing in foreign securities may involve additional risks, including exchange-rate fluctuations, limited liquidity, high levels of volatility, social and political instability, and reduced regulation. Emerging markets are often more volatile than developed markets and investing in emerging markets involves greater risks. International investing may not be suitable for everyone. An investment in Green Alpha portfolios should be considered a long-term investment.
- 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](mailto: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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