

Growth & Income

September 30, 2022

Green Alpha[®]

Largest Positions	2
Performance and Year-to-Date Commentary	4
Portfolio Characteristics	6
Sector, Geographic, and Market Cap Allocations	7
Disclosures	8

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 Growth & Income?

- Active research, stock selection, and portfolio management
- 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

Inception Date: December 31, 2012

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 Growth & Income portfolio is designed to harness the powerful combination of growth and current income within one portfolio. Portfolio holdings are selected for current or potential dividend yield, coupled with strong revenue growth, bought at a reasonable price.

The Growth & Income strategy typically exhibits lower short-term volatility than broad market indices and other Green Alpha portfolios, while providing a competitive dividend yield.

Largest Positions

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

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 ~\$577 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.
- In Q2 2022, Horizon’s portfolio grew 43% year-over-year to a record \$577 million.
- 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.

IBM (Sector: Technology)

- IBM is driving innovation to mitigate global risks. Having divested from its legacy managed-infrastructure business, IBM has re-emerged as a Next Economy™ powerhouse. Their primary initiatives include blockchain code and technology, cloud computing, AI and machine learning, and quantum computing. IBM has said that these innovations “can exponentially alter the speed and scale at which we can uncover solutions to complex problems. We’ve come to call this accelerated discovery.”
- IBM has led the U.S. in patents received annually for 29 straight years and is a large 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.
- Females comprise 33%+ of IBM’s workforce. Women with significant authority include the COO, General Counsel, and CHRO. IBM is a longstanding leader on pay equity for both women and minority populations.

Brookfield Renewable (Sector: Utilities)

- Brookfield is a leading zero-carbon, 100% renewables-based energy utility. They own ~23 GW of electricity production capacity with a pipeline of ~75 GW, making them one of the world’s largest pure-play public renewable companies.
- Brookfield is conservatively managed, 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. Brookfield is inflation resilient and may benefit from an inflationary environment. Their generating costs are fixed, but their PPAs are indexed to inflation.
- Brookfield recently announced the investment of \$2 billion in Scout Clean Energy and Standard Solar to expand their portfolio, following a string of recent clean energy investments. So far, Brookfield has invested or allocated \$3.5 billion for clean energy investments and follow-on capital in North America in 2022.
- Women comprise 25% of their workforce, 33% of directors, and 50% of exec leadership. In addition, the Audit Committee Chair is female. The exec team has a robustly above-average age spread of 48 years, as does the board at 38 years.

Taiwan Semiconductor and Vornado Realty Trust’s Next Economy attributes are described 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
Horizon Tech. Finance	HRZN	6.75%
IBM	IBM	6.04%
Brookfield Renewable	BEPC	5.64%
Taiwan Semiconductor	TSM	4.80%
Vornado Realty Trust	VNO	4.59%
% of Portfolio		27.82%

Largest positions *continued*

Taiwan Semiconductor *(Sector: Technology)*

- TSM is by far the largest semiconductor foundry in the world with 54% market share overall, and 85%+ market share among the most advanced chip makers. It is one of two companies capable of producing advanced 3-nanometer chips, and ahead on the next generation as it prepares to produce 2-nanometer chips in 2023. The company relies solely on internally generated funds to finance organic growth, partially by dedicating funds to production capacity and R&D and never to buybacks.
- The company features strong fundamentals, with a fortress-like balance sheet and the industry's highest credit ratings.
- Their new, strategic Arizona plant will make advanced 5-nanometer transistors. A relentless competitor, TSM aggressively invests to grow capacity and innovate, resulting in a nearly insurmountable lead in advanced semi manufacturing.

Vornado *(Sector: Real Estate)*

- Vornado is a preeminent owner, manager, and developer of office and retail assets. Their portfolio is concentrated in New York City, Chicago, and San Francisco.
- The company is the real estate industry leader in sustainability policy, owning and managing over 27 million square feet of LEED certified buildings—representing 95% of their office portfolio—with over 23 million square feet at LEED Gold level.
- Vornado's sustainability efforts and consistent ranking at the top of various organizations' climate and green ratings has made them an attractive landlord to progressive companies who are willing to pay premium rents and commit to long lease terms, driving revenue growth and visibility for VNO.
- During Q3 2022, Vornado named Lauren Brust Moss Senior Vice President and Chief Sustainability Officer. Prior to her appointment, three women participated on the board, including the Lead Independent Director.

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.

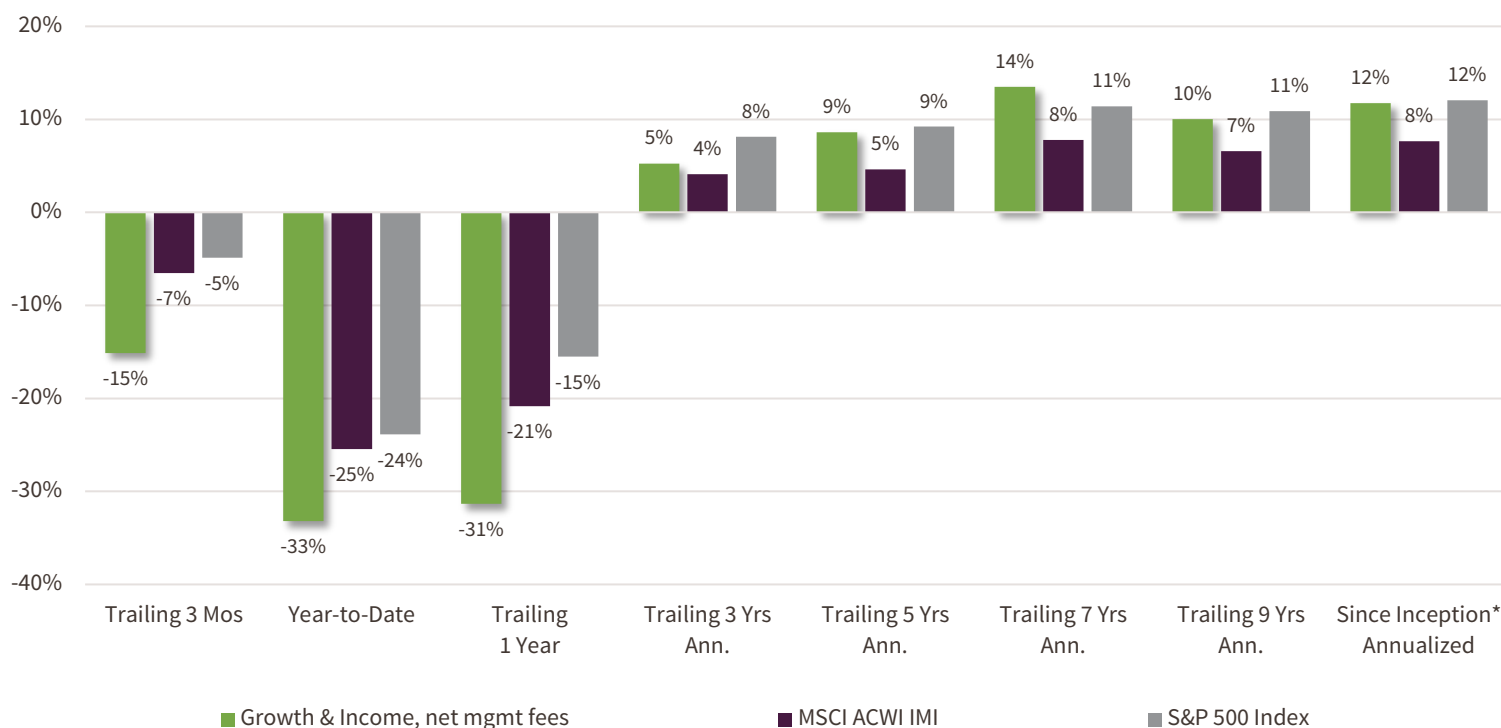
All the above economic factors illustrate the need for careful consideration of every holding in a portfolio: companies with strong balance sheets, earnings, and cash flows will become increasingly important as volatility continues into the immediately foreseeable future. Equally important is the need 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 Growth & Income portfolio returned -33.20% net of management fees, versus its benchmark, the MSCI All Country World Investable Market Index (MSCI ACWI IMI), which returned -25.44%.

The sectors diminishing returns the most were Real Estate and Technology.

- Real Estate has suffered year-to-date due to rising interest rates. Losses in the Growth & Income strategy came from an industrial REIT, an infrastructure REIT, three leading sustainability-focused data center REITs, and most notably, from a basket of four sustainability leaders in the office REIT category.
- Losses in the Technology sector came overwhelmingly from the technology hardware & semiconductors industry. Within that industry, the companies that declined the most were front-end capital equipment manufacturing, foundry services, and semiconductor devices & technology hardware makers.

The strategy's top performing sectors year-to-date, which were nevertheless negative, were Utilities and Consumer Staples.

- Within Utilities, losses came from a leading global provider of renewable electricity generation capacity, which is the strategy's sole utility since quality, pure-play renewables-only electric utilities are difficult to find.
- In Consumer Staples, modest losses came from a leading supplier of natural & organic food & beverages as well as a natural & organic retail grocery distributor. The food and beverage industry is typically characterized by relatively lower volatility. This limits overall potential for providing larger magnitude returns and also provides a measure of downside risk in tough markets.

**Portfolio Inception: December 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 additional important disclosures.*

Growth & Income

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

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

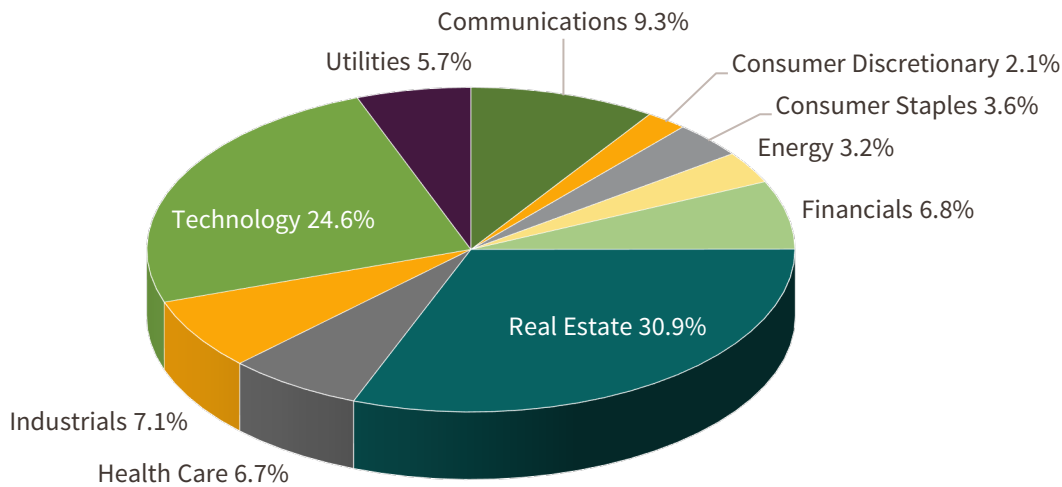
Characteristics	Growth & Income	Benchmark: MSCI ACWI IMI (SPGM)	Next Economy Index	Social Index	Next Economy Select	Sierra Club Green Alpha	DiversiTerra
# of Securities	36	2,502	144	101	57	47	57
Active Share	97%	-	93%	95%	96%	96%	96%
Sales Growth, Trailing 3-Yr	23%	10%	35%	28%	39%	39%	33%
P/E, Current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

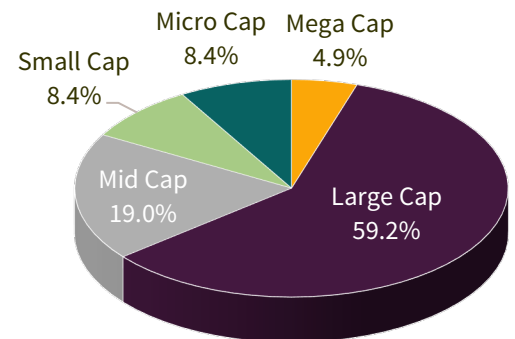
Portfolio Allocations

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

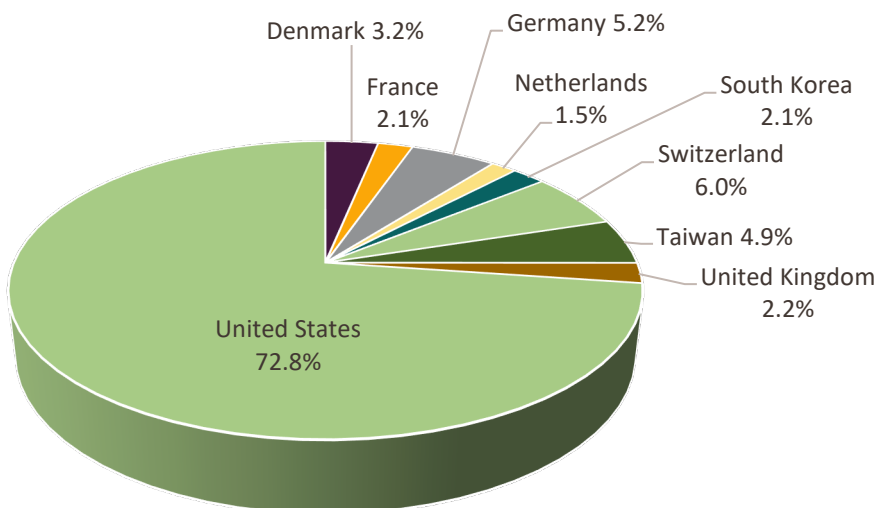
Economic Sectors



Market Capitalizations



Companies' Main Headquarters



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 Growth & Income performance results are a composite of discretionary client accounts invested in the Growth & Income 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-fee returns reflect the deduction 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 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. Growth & Income composite performance results do not reflect the reinvestment of dividends and interest.
- Prior to July 31, 2021, the 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 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.
- 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. 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.
- This presentation is for informational purposes only, and should not be construed as legal, tax, investment, or other advice. This presentation does not constitute an offer to sell, or the solicitation of any offer to buy, any security. Any mention of an individual security is for illustrative purposes only and should not be considered a recommendation to buy or sell any security. The presentation does not purport to contain all of the information that may be required to evaluate Green Alpha Investments and its investment strategies.