

Growth & Income

December 31, 2024

Green Alpha[®]

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Investment Philosophy

The driving forces behind economic growth are:

- companies accelerating productivity, and
- businesses tackling urgent global challenges.

High-performing enterprises can revolutionize efficiency while also developing solutions for critical issues like climate change, resource depletion, social inequality, and public health crises. By doing so, they can create economic expansion and actualize a more sustainable and equitable future. These innovative companies offer the most promising investment opportunities, providing security and growth potential for our clients' capital.

Our strategy is clear: we focus on identifying and investing in businesses that are developing brilliant, scalable, adaptable, and economically viable solutions to global challenges.



Why Invest in Growth & Income?

- Active research, stock selection, and portfolio mgmt
- Access above-market dividend income alongside 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

We select companies for our portfolios based on:

- *Impact:* Businesses offering innovative solutions to critical economic, environmental, and other global challenges.
- *Innovation Leadership:* Companies investing heavily in R&D, intellectual property, and capital expenditures.
- *Strong Management:* Diverse, effective teams aligned with shareholders, demonstrating revenue growth, expanding profit margins, and potential dividend increases.
- *Financial Health:* Businesses with robust balance sheets and smart capital allocation strategies.
- *Value:* Companies whose stock prices offer attractive value relative to proven performance and growth prospects.

These and other factors help us construct portfolios that aim for strong returns and build a more sustainable economy. We concentrate on long-term success in an evolving landscape.

Portfolio Construction

Our Growth & Income portfolio has two key objectives: capital growth and current income. We carefully select holdings for:

1. Current dividend yield
2. Potential for dividend growth
3. Share price appreciation potential

This strategy is constructed to offer above-average dividend yield in a relatively low short-term volatility portfolio.

By combining growth potential with income generation, this portfolio aims to provide a stable and rewarding investment.

Largest Positions

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

Taiwan Semiconductor Manufacturing *(Sector: Technology, Industry: Semiconductors)*

- TSMC is the world's leading semiconductor foundry, providing essential manufacturing services for advanced logic chips. The company's clients include industry giants such as Apple, NVIDIA, and Qualcomm, who rely on TSMC's cutting-edge technology to produce their most sophisticated products. Strengths include:
 - *Technological Leadership:* TSMC currently operates at the 2nm node — the most advanced process technology globally. This leadership is driven by early adoption of innovative techniques like extreme ultraviolet lithography (EUV).
 - *Unmatched Scale and Efficiency:* TSMC's massive scale translates to unparalleled production efficiency, contributing to lower costs for electronic devices worldwide.
 - *Strategic Importance:* TSMC plays a critical role in the global technology ecosystem. Its ability to translate leading-edge chip designs into reality makes it an indispensable partner for companies driving innovation.
 - *Market Dominance:* With over 90% market share in advanced foundry services, TSMC's operational excellence and consistent delivery of new process nodes have solidified its position as the "state of the art" in the industry.
- TSMC's location in Taiwan places it at the center of US-China strategic competition in the technology sector. This geopolitical reality has significant implications for supply chain stability and government policies.
- TSMC invests significantly in R&D and capacity expansion to maintain its technological edge and meet growing global

Horizon Technology Finance *(Sector: Financials, Industry: Specialty Finance)*

- Dedicated Venture Debt Provider with Impact: Horizon is focused on lending to and investing in venture-backed companies across technology, life science, healthcare IT, sustainability, and other high-growth sectors. They deliver tailored financing solutions to fuel innovation, with a notable beneficial impact supporting cleantech and healthcare advancements.
 - *Specialized Lending:* Horizon focuses on providing venture debt to high-growth, innovative companies that traditional banks might consider too risky.
 - *Supporting Innovation:* By providing capital to early and growth-stage companies, Horizon plays a crucial role in advancing technological and scientific breakthroughs.
 - *Diverse Portfolio:* They invest in a wide range of cutting-edge fields, including biotechnology, medical devices, software, cleantech, and more.
 - *Alternative to Equity Financing:* Horizon's debt financing allows companies to access capital without diluting their equity, which can be attractive to many startups.
 - *Public Investment Opportunity:* As a publicly traded company, Horizon provides individual investors access to the venture debt market, which is typically reserved for institutional investors.

IBM *(Sector: Technology, Industry: Software & Tech Services)*

- IBM is a global leader delivering solutions to address the world's most pressing challenges. Following strategic divestiture of the legacy IT consulting business (now Kyndryl), IBM is focused on high-growth markets with significant potential:
 - *Hybrid Cloud:* IBM provides comprehensive hybrid cloud solutions, encompassing hardware, software, and services, enabling businesses to effectively manage complex IT environments across public, private, and on-premises clouds.

IBM, SL Green Realty, and Kilroy Realty's Next Economy attributes are described on the following page.

Company Name	Ticker	Weight
Taiwan Semiconductor Manufacturing	TSM	7.75%
Horizon Tech. Finance	HRZN	6.92%
IBM	IBM	5.13%
SL Green Realty	SLG	5.04%
Kilroy Realty	KRC	4.18%
% of Portfolio		29.02%

Largest Positions *continued*

IBM *continued*

- *AI & Automation:* IBM, a recognized leader in AI, offers the Watson platform and a suite of AI-powered solutions that optimize decision-making, enhance customer experiences, and streamline operations across diverse industries.
- *Cybersecurity & Blockchain:* IBM prioritizes data protection with industry-leading cybersecurity offerings. Additionally, they are developing and deploying blockchain solutions to facilitate secure and transparent transactions in multiple industries.
- *Quantum Computing:* IBM is at the forefront of quantum innovation. The IBM Quantum platform and Qiskit open-source SDK democratize access to quantum computing, enabling researchers and businesses to explore and accelerate discoveries in fields like drug discovery, materials science, and financial modeling.
- *Commitment to Progress:* IBM is dedicated to accelerating scientific discovery and business innovation through its advanced technologies and commitment to research and development.
- *Sustainability:* IBM is committed to environmental sustainability and responsible technology use, actively pursuing initiatives to reduce its carbon footprint and develop environmentally friendly solutions.

SL Green Realty (Sector: Real Estate, Industry: REIT)

- SL Green is a fully integrated real estate investment trust (REIT) specializing in the acquisition, management, and development of commercial properties, in New York City's Manhattan borough. SL Green owns and operates an impressive portfolio of iconic and high-quality office buildings in prime locations.
- *Adaptive Strategies:* SL Green has shown adaptability in responding to market changes, including the shift in office use patterns following the COVID-19 pandemic.
- SL Green is committed to sustainability and has implemented numerous green initiatives across its portfolio:
 - *Science-Based Targets:* SLG has committed to emissions reduction targets aligned with the Science Based Targets initiative (SBTi), demonstrating their ambition in combating climate change.
 - *Renewable Energy:* SLG actively pursues renewable energy sources, both through on-site installations and by purchasing renewable energy credits.
 - *Energy Efficiency Upgrades:* SLG extensively invests in energy-efficient retrofits of their buildings. This includes lighting upgrades, HVAC optimization, and building envelope improvements.
 - *Conservation:* They implement water-saving measures in their properties, reducing their environmental footprint.

Kilroy Realty (Sector: Real Estate, Industry: REIT)

- Kilroy Realty Corporation is a real estate investment trust (REIT) that owns, develops, acquires, and manages primarily office and life science properties in prime West Coast U.S markets. This strategic focus on high growth areas allows the company to capitalize on the robust demand for premium office and life science space.
- Kilroy Realty has a long-standing and impressive commitment to sustainability, a true leader in the real estate sector.
 - *Achieved carbon neutral operations* in 2020 across their entire portfolio and have maintained it every year since.
 - *LEED Certification:* A large portion of their portfolio is LEED certified, with many achieving Gold or Platinum levels.
 - *ENERGY STAR Partner:* They are a long-standing ENERGY STAR Partner, consistently earning the "Partner of the Year" award and even achieving "Sustained Excellence" recognition for their continued commitment.
 - *Significant Energy and Water Reductions:* One example is at their Sunset Media Center, where they achieved an 8.9% decrease in energy use and a 14% decrease in water use over seven years.
 - *Fitwel Certifications:* They hold the record for the most Fitwel certifications of all time, demonstrating their dedication to creating spaces that promote the health and well-being of occupants.
- The company boasts high occupancy rates, strong rent growth, and a healthy balance sheet. This financial stability allows Kilroy to invest in new developments, acquire prime properties, and deliver value to its shareholders.

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

Macroeconomic Commentary



In 2024, the pace and magnitude of change became more extraordinary. The interplay of climate transition, geopolitical dynamics, and technological advancement continues to reshape the investment landscape at an unprecedented rate. Successfully navigating these transformative forces requires both adaptability and disciplined risk management. And amid the complexity, we find compelling evidence of human ingenuity and progress that creates meaningful investment opportunities.

In Green Alpha's macroeconomic commentary, we examine how these transformational forces are reshaping our world, and what they mean for long-term investors. This page includes brief summaries; you can find the article [here](#).

Market Environment

Global markets navigated significant challenges in 2024 amid persistent inflation, geopolitical tensions, and unprecedented climate impacts. Despite these headwinds, markets demonstrated resilience as inflation moderated without triggering a recession. Key risks remain, particularly around trade policies, government debt levels, and demographic shifts in major economies.

Macroeconomic Trends

Aging populations in Europe, Japan, and China continue to pressure fiscal sustainability and labor markets. The U.S. faces similar demographic headwinds, with declining worker-to-retiree ratios threatening entitlement programs. Government debt levels and higher interest rates may force continued austerity measures across developed markets in 2025.

Sector Transformation

The energy sector is undergoing structural change as renewables achieve cost advantages over traditional sources. Solar deployment accelerated in 2024, and battery costs fell to below \$100/kWh. This technological shift suggests continued margin pressure on traditional energy assets while creating opportunities in the renewable supply chain.

Technology & Innovation

Artificial intelligence deployment accelerated across sectors, driving productivity gains and margin expansion. Notable developments in biotechnology, particularly in multi-omics and AI applications, are creating new addressable markets in healthcare, agriculture, and materials. These innovations present both opportunities and disruption risks across portfolios.

Investment Implications

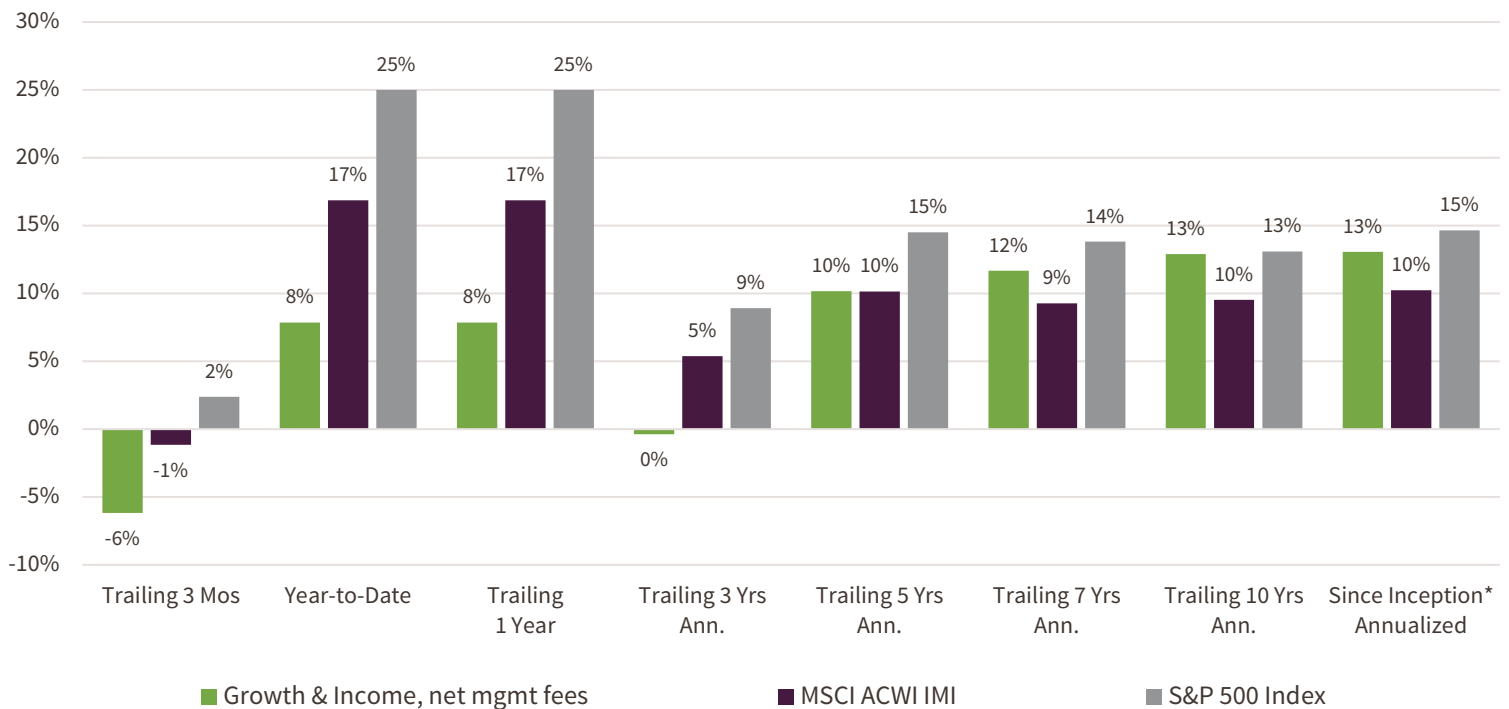
The pace of technological change and climate transition demands portfolio flexibility and careful risk management. We see compelling opportunities in:

- Companies leveraging AI for operational efficiency
- Renewable energy supply chain leaders
- Biotechnology innovators with strong intellectual property positions
- Firms successfully navigating demographic shifts

While macroeconomic headwinds persist, technological advancement continues to create attractive secular growth opportunities for long-term investors. The rapid pace of innovation across these sectors presents significant investment opportunities despite climate challenges. Success requires unprecedented market flexibility and institutional adaptation as the world undergoes transformative change.

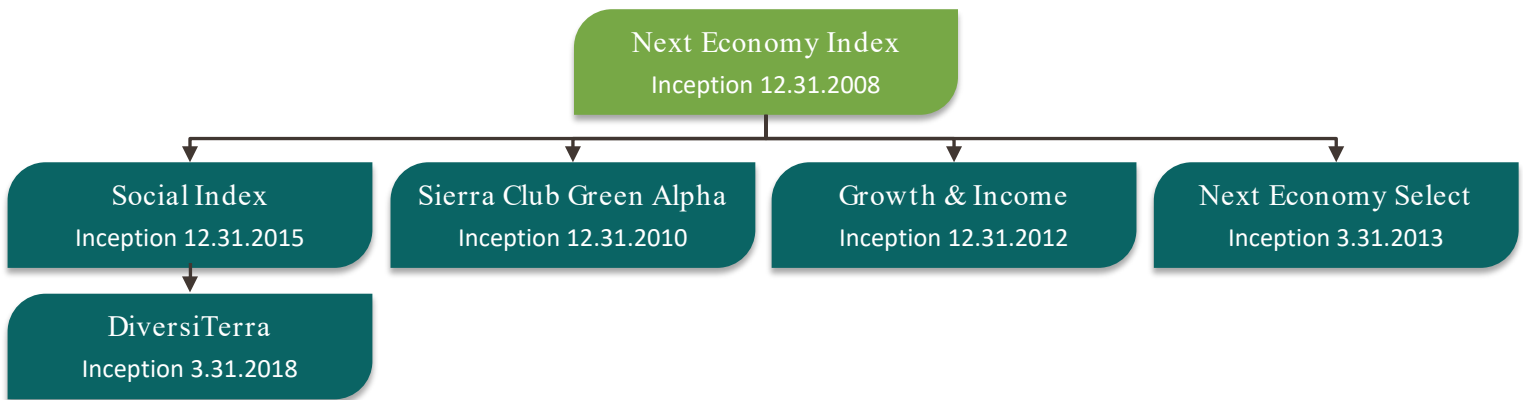
Full content: <https://greenalphaadvisors.com/2024-macro-commentary-next-economy-forces-reshaping-markets/>

Portfolio Performance & Attribution



Year-to-Date Sector Attribution by Bloomberg Industry Classification Standard	Average Weight (%)		Total Return (%)			Contribution to Return (%)		
	Portfolio	MSCI ACWI IMI (SPGM)	Portfolio	MSCI ACWI IMI (SPGM)	+/-	Portfolio	MSCI ACWI IMI (SPGM)	+/-
Technology	25.05	22.98	40.56	30.58	9.98	8.56	6.56	2.51
Consumer Staples	4.38	6.43	72.16	6.50	65.67	3.06	0.48	2.83
Real Estate	32.18	2.14	10.31	-0.63	10.94	2.65	-0.03	2.90
Communications	4.50	8.15	18.31	30.15	-11.84	0.78	2.31	-1.58
Utilities	3.74	2.10	1.39	12.65	-11.26	0.08	0.27	-0.19
Cash	0.82	0.65	0.00	5.68	-5.68	0.00	0.07	-0.07
Consumer Discretionary	3.10	10.16	-6.80	16.77	-23.57	-0.35	1.67	-2.12
Industrials	6.04	11.15	-9.04	13.10	-22.14	-0.61	1.49	-2.20
Financials	9.79	16.42	-9.40	26.48	-35.88	-0.89	4.15	-5.33
Health Care	4.94	11.22	-32.44	2.00	-34.45	-1.61	0.38	-2.13
Energy	5.47	4.53	-41.64	-3.55	-38.09	-3.39	-0.12	-3.55
Materials	0.00	4.51	0.00	-6.74	6.74	0.00	-0.31	0.32
Government	0.00	0.05	0.00	1.37	-1.37	0.00	0.00	0.00

*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. The sector attribution table is supplemental to the fully compliant composite returns presented at the top of the page. Please see the final page of this document for additional important disclosures.



- **High Income** – a compelling combination of 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, Current Ratio
- **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, so their largest opportunity for impact
- **Fossil fuel free since inception:** we never invest in companies that prospect, extract, refine, or transport fossil fuels, nor in fossil-fired utilities or internal combustion engine manufacturers

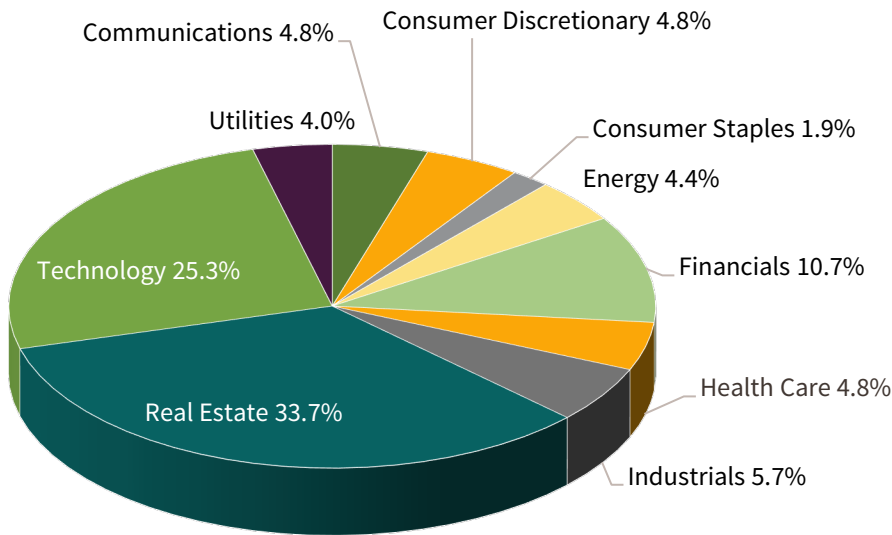
Characteristics	Growth & Income	Benchmark: MSCI ACWI IMI (SPGM)	Next Economy Index	Social Index	Next Economy Select	Sierra Club Green Alpha	DiversiTerra
# of Securities	36	2,691	152	113	57	49	56
Active Share vs MSCI ACWI IMI	96%	-	91%	94%	97%	98%	94%
Active Share vs Next Economy Index	75%	-	-	36%	68%	70%	68%
Sales Growth, Trailing 3-Yr	23%	16%	34%	40%	25%	27%	33%
P/E, Current	26.0	21.6	30.4	29.0	27.5	30.0	32.8
P/E, 1-Year Forward	16.9	18.9	25.6	24.5	22.3	21.0	23.9
Price/Sales	1.0	0.3	2.0	2.3	1.4	0.7	2.2
Price/Book	1.4	0.3	2.3	2.1	2.1	1.6	2.6
LT Debt/Equity	227%	84%	70%	85%	71%	69%	57%
Current Ratio	4.2	2.6	3.4	3.8	4.6	3.9	3.3
Dividend Yield	4.25%	1.86%	1.01%	1.08%	2.01%	2.23%	1.35%
Market Cap, Wtd Avg (\$B)	\$138.71	\$680.55	\$162.15	\$109.05	\$138.32	\$105.88	\$212.64
Market Cap, Median (\$B)	\$16.41	\$2.81	\$7.73	\$11.67	\$5.24	\$5.66	\$6.34
Turnover, Trailing 2-Yr Avg	13%	Not Available	25%	36%	20%	15%	17%
Beta, Trailing 3-Yrs	1.34	1.00	1.41	1.52	1.50	1.45	1.45
U.S.-Domiciled Companies	70%	63%	81%	89%	70%	70%	84%
% Revenue Derived in U.S.	54%	45%	52%	62%	52%	53%	58%

Characteristics are sourced from FactSet, based on a representative account and include cash. Please see additional disclosures on last page.

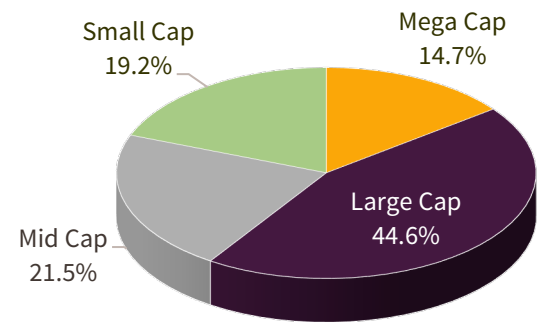
Portfolio Allocations

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.

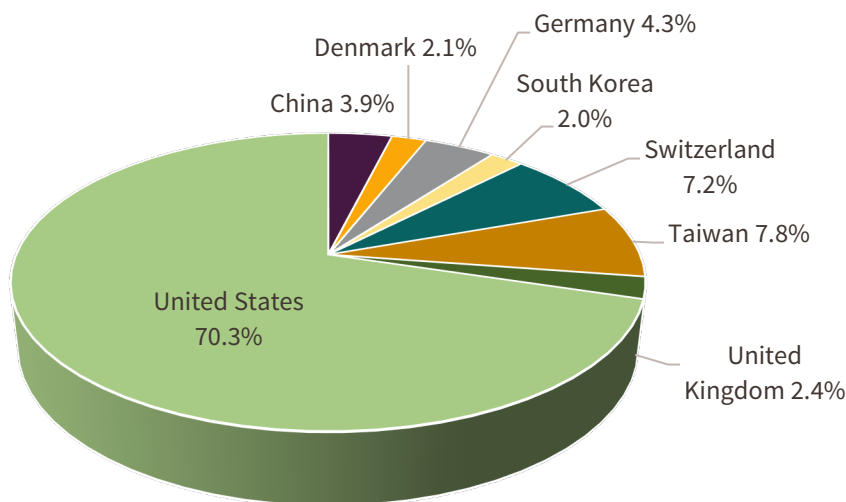
Sectors



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. Beginning May 31, 2023, composite membership also includes a minimum account size of \$25,000. The Growth & Income composite performance results reflect actual performance for a composite of discretionary client accounts meeting custodian and minimum account size requirements. 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.
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- The MSCI All Country World Investable Market Index (ACWI IMI) is a free float-adjusted market capitalization-weighted index that is designed to measure the combined equity market performance of developed and emerging markets. The Index covers approximately 99% of the global equity investment opportunity set. The MSCI ACWI IMI figures do not reflect any fees, expenses, or taxes. 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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