

Strategy Investment Objective

The Global Value Momentum Strategy seeks to provide exposure to global equities while providing increased exposure to stocks that exhibit value and momentum characteristics. The Strategy seeks to improve after-tax performance through tax-loss harvesting techniques.

Benchmark Description

The MSCI ACWI® Index measures performance for large and midsize companies in global markets.

Investment Process

Aperio uses multi-factor models and optimization software to construct portfolios of individual stocks that maintain similar industry, geographic, and risk characteristics relative to the target benchmark shown here. Taking advantage of the price volatility in stocks, we monitor and systematically rebalance clients' portfolios to recognize losses from securities that have declined. Realized losses may be able to offset Schedule D capital gains generated by other investments.

Strategy Factors

The Global Value Momentum Strategy uses the MSCI ACWI® Index as the benchmark and tilts the portfolio towards stocks with the following characteristic:

- Higher earnings yield and book-to-price ratio
- Higher momentum

Global Value Momentum Composite vs. MSCI ACWI as of 09/30/24 (%)

	3-Month	YTD	1-Year	3-Year	5-Year	10-Year	Inception
Pre-Tax Returns							
Aperio Strategy (Net)	4.60	16.89	28.34	7.90	-	-	6.10
Benchmark (Gross)	6.61	18.66	31.76	8.09	-	-	6.40
Active Return (Net)	-2.01	-1.77	-3.42	-0.19	-	-	-0.30
After-Tax Returns							
Aperio Strategy (Net)	4.55	16.65	28.43	12.38	-	-	10.56
Benchmark (Gross)	6.51	18.29	31.21	8.66	-	-	6.93
Active Return (Net)	-1.96	-1.64	-2.78	3.72	-	-	3.63
TAX ALPHA	0.04	0.14	0.62	3.90	-	-	3.93

Composite inception date is 08/31/2021. For tables above and below, composite performance is shown net of a 0.40% per annum management fee and estimated commissions/expenses, and reflects reinvestment of dividends and other income received. Benchmark performance is shown gross of management fees and commissions/expenses and reflects reinvestment of dividends and other income. After-tax performance for both composite and benchmark includes for each included portfolio the federal tax rates specified, or, if none given, the highest US federal tax rate applicable: 40.8% for short-term capital gains, 23.8% for long-term capital gains, and 23.8% for dividends. State tax rates included are based on the highest rate in each included portfolio's disclosed state, unless a custom tax rate is selected. All return data in the above table are annualized, except for 3-month and YTD. **Other financial professionals and service providers may charge additional fees not reflected here.**

Tax Alpha

Capital losses realized in an Aperio portfolio managed in an SMA can offset capital gains generated by other investments, thereby creating a tax benefit commonly referred to as "tax alpha". It is defined as the after-tax active return minus the pre-tax active return, and can be considered a measure of the value added through active tax management. A positive number indicates a potential tax savings (from realized capital losses), while a negative number indicates a potential tax drag (from realized capital gains). Aperio's tax-loss harvesting strategy seeks to generate positive tax alpha. Past performance is not indicative of future results. Please see Important Notes for more information.

Systematic Portfolio Construction

Factor-tilted strategies are quantitative investment strategies that target a risk/return profile different from that of a market cap-weighted benchmark. The strategies employ factors (stock characteristics) that active managers typically have used (e.g., value, size, momentum, quality).

Aperio Composite Historical Risk-Return Data vs. MSCI ACWI as of 09/30/24

	Strategy Pre-Tax	Strategy After-Tax	Benchmark
Annualized Returns (Net) (%)	6.10	10.56	6.40
Active Return Over Benchmark (Net) (%)	-0.30	3.63	
Sharpe Ratio (Net)	0.23	0.48	0.24
Information Ratio (Net)	-0.07	1.41	
Annualized Volatility (%)	16.35	16.51	16.57
Realized Beta vs. Benchmark	0.98	0.98	1.00
Realized Tracking Error vs. Benchmark (%)	2.11	2.52	

Historical risk-return data since composite inception date of 08/31/2021. Data is shown only for periods greater than three years.

Sample Portfolio Characteristics as of 9/30/2024

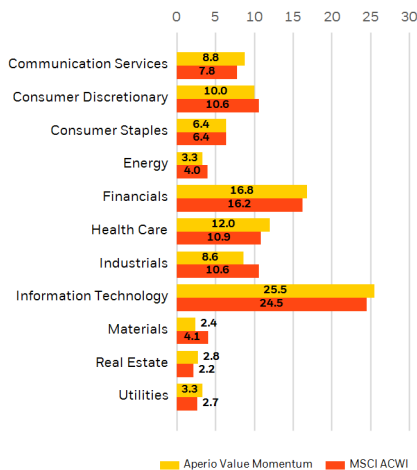
Overview Statistics	Global Value Momentum	MSCI ACWI
Number of Securities	428	2,687
Initial Tracking Error*	1.24%	0.00%
Standard Deviation*	14.23%	14.17%
Beta vs. Benchmark*	1.00	1.00
Wtd. Avg. Market Cap	\$616.9B	\$614.6B
Dividend Yield	2.16%	1.84%
Price to Earnings (TTM)	15.07	21.85
Price to Book	1.93	3.20

*Forecast risk measures. See Important Notes.

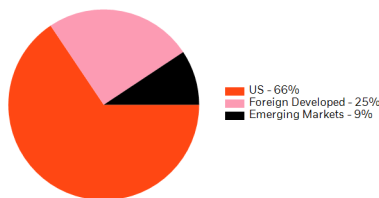
Sample Country Allocation (%)

	Aperio Value Momentum	MSCI ACWI
United States	65.6	64.2
Japan	5.1	5.0
Switzerland	3.7	2.2
China	3.3	2.9
France	2.5	2.6
Germany	2.2	2.0
Netherlands	1.9	1.1
Taiwan	1.8	1.9
Canada	1.7	2.7
India	1.6	2.1
Other	10.7	13.3

Sample Sector Allocation (%)



Sample Market Exposure (%)



Sample Top 10 Holdings (%)

Company	Weight
APPLE INC	4.3
NVIDIA CORP	4.1
MICROSOFT CORP	3.9
AMAZON.COM INC	2.2
META PLATFORMS INC	1.8
TAIWAN SEMICONDUCTOR MANU	1.4
ALPHABET INC	1.3
ALPHABET INC	1.2
BERKSHIRE HATHAWAY INC	1.2
BROADCOM INC	1.0

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Sample information on this page for illustrative purposes only. Actual accounts will vary.

Important notes

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The performance shown is for the Global Value Momentum Composite, which includes fully discretionary portfolios managed by Aperio in this strategy. Fully discretionary portfolios are those without legacy holdings, constraints, guidelines, or other client-driven requirements that would impact the intended strategy. Composite performance is shown net of a 0.40% per annum management fee and estimated commissions/expenses, and reflects reinvestment of dividends and other income received. Benchmark performance is shown gross of management fees and commissions/expenses and reflects reinvestment of dividends and other income. After-tax performance for both composite and benchmark includes for each included portfolio the federal tax rates specified, or, if none given, the highest US federal tax rate applicable: 40.8% for short-term capital gains, 23.8% for long-term capital gains, and 23.8% for dividends. State tax rates included are based on the highest rate in each included portfolio's disclosed state, unless a custom tax rate is selected. Actual after-tax returns achieved may vary and could be lower than reported due to an investor's specific tax circumstances. Clients who do not pay the assumed tax rates or client-specified rates or clients who do not have offsetting capital gains and income would not achieve the after-tax returns reported. **Other financial professionals and service providers may charge additional fees not reflected here.**

Model Risk: The sample portfolios are for illustrative purposes only and not based on any actual portfolio. Client portfolios will vary. Sample portfolio holdings and characteristics have been calculated using an MSCI Barra risk model. Models by their nature are simplifications of reality, and real-world events may prove those simplifications inappropriate. Among other things, errors can occur at any point from design through implementation.

Forecast risk measures are not a forecast of future performance. These are measures of potential risk based on sample portfolio and benchmark holdings, and risk model calculations as of the date of this document. Any changes in underlying assumptions, such as volatility, will alter these numbers, potentially significantly.

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