

Full Spectrum Systematic Strategy

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Executive Summary



Strategy

A momentum strategy that selects S&P 500 stocks repeatedly hitting new 26-week highs, allocated across five implied volatility bands to diversify across risk profiles and momentum types.



Performance

Over the past 10 years, the strategy generated a 1.24 Sharpe ratio and 7.6% annualized alpha over the S&P 500 Index.



Recommendation

BUY – Sharpe Edge recommends investing \$50,000 in this strategy using cash or bonds

- **Optimal Time Horizon:** Implementing a relative strength strategy—buying past winners and selling past losers—is highly profitable over a **3- to 12-month timeframe**. This exploits mid-term trends, differentiating it from contrarian strategies that work best on very short (1 week to 1 month) or very long (3 to 5 years) timelines
- **Strong Historical Returns:** The standout 6-month/6-month strategy (ranking stocks based on the past 6 months and holding for 6 months) realizes an average compounded excess return of 12.01% per year
- **Earnings Announcement Boost:** A significant driver of this performance occurs around quarterly earnings. Past winners consistently realize higher returns around earnings announcements for 7 months following the portfolio formation, accounting for roughly 25% of the holding period's returns.
- **Driven by Firm-Specific Information:** The strategy's profits cannot be attributed to systematic risk or delayed reactions to common market factors. Instead, the evidence points to market underreaction to firm-specific information, allowing momentum to persist

Article Title: Returns to Buying Winners and Selling Losers: Implications for Stock Market Efficiency (Jegadeesh and Titman).
Published 1993. Research period: 1965 - 1989

- **Long-Term Dissipation (Reversals):** The momentum effect is not permanent. Relative strength tends to run out of steam after about 12 months. Following the first year, past winners begin to experience negative abnormal returns, and half of the initial excess returns dissipate within the next two years. (GoDaddy)
- **The "January Effect":** The strategy experiences severe seasonal vulnerability, losing about 7% on average every January. Its success relies heavily on the rest of the year, generating positive returns in 71% of non-January months with an average monthly return of 1.66%.
- **High Turnover and Transaction Costs:** Maintaining this portfolio requires an average semiannual turnover of 84.8%. While risk-adjusted returns remain a robust 9.29% annually even after factoring in an estimated 0.5% transaction cost, excessive trading friction can threaten net margins.
- **Vulnerability to Extreme Market Reversals:** The strategy performs poorly during periods of high market volatility and mean reversion (e.g., the 1930s). Because it tends to hold high-beta stocks after a market rise and low-beta stocks after a decline, it is heavily penalized during sharp market rebounds.

Article Title: Returns to Buying Winners and Selling Losers: Implications for Stock Market Efficiency (Jegadeesh and Titman).
Published 1993. Research period: 1965 - 1989

Strategy Rationale

Industry Momentum

- **Adjusting for industry effects:**

Momentum from individual equities are significantly lower and statistically insignificant

Industry momentum strategies are more profitable than individual stock strategies

- **Different Methodologies support the evidence:**

Individual momentum strategies are reliant on selling past losers while industry momentum strategies returns are primarily driven by long positions.

- **Industry momentum is strongest at the short term:**
Usually strongest at one-month period, dissipating after 1-year like individual momentum strategies.

- **Momentum profit sources:**

- cross-sectional variation in unconditional mean returns
- serial correlation in factor/semipassive portfolios
- serial correlation in industry return components
- serial covariation in firm-specific components

Article Title: Do Industries Explain Momentum? (Tobias J. Moskowitz; Mark Grinblatt)

Strategy Rationale

Industry Momentum

- **Why groupings are effective**

High Correlation

Same regulatory environment

Similar behavior in Corporate Finance

Sensitivity to Macroeconomic shocks

Supply and Demand Fluctuations

- **Be careful though!**

Industry momentum drives much of individual stock momentum, and stocks within an industry tend to be much more highly correlated than stocks across industries, momentum strategies are not very well diversified.

- **Rational**

Less diversification

Not a free arbitrage

Systematic Risk,

Growth, Industry

shocks, irreversible

investments

- **Behavior**

Conservatism

Representativeness

Overconfidence

Slow Information

Article Title: Do Industries Explain Momentum? (Tobias J. Moskowitz; Mark Grinblatt)

Strategy Design

Description

- Buy S&P 500 stocks persistently hitting new 26-week highs – a well-documented continuation signal. Diversify selections across five implied volatility bands to avoid concentrating in one type of momentum and to capture different risk profiles in a single portfolio.

Origin

- Jegadeesh (1993) documented that buying recent winners generates persistent excess returns over intermediate horizons. Moskowitz (1999) showed that much of this effect is driven by industry momentum. Our IV band structure forces diversification across industries by sampling from different volatility regimes.

Goal

- S&P 500 stocks hitting repeated new 26-week highs will continue to outperform over the following quarter, and allocating across IV bands will deliver this alpha with greater consistency and lower drawdowns than concentrated momentum approaches.

Parameters

- Universe: S&P 500 (point-in-time constituents).
- Screen: 3+ new 26-week highs in 5 trading days. Ranking: 10-day touch density, recency tiebreaker.
- Allocation: 5 IV bands × 2 stocks = 10 holdings, equal-weighted.

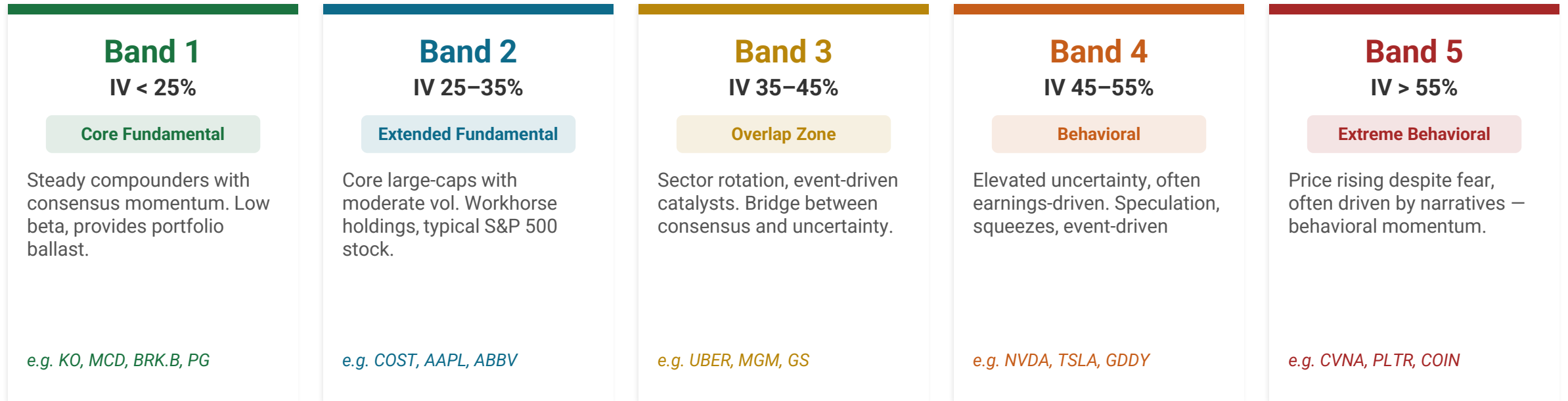
Backtesting Parameters

Screening Criteria

Parameter	Description	Stock Universe
Index Membership	S&P 500	503 stocks
Momentum Signal	3 new 26-week highs in 5 trading sessions	~27 stocks (average)
Implied Volatility	Allocate according to IV band	~27 stocks
Ranking	10-day touch density, recency tiebreaker	10 stocks

IV Classification Framework

Implied volatility serves as a proxy for market uncertainty. By allocating across the full IV spectrum, we diversify across risk profiles and momentum types.



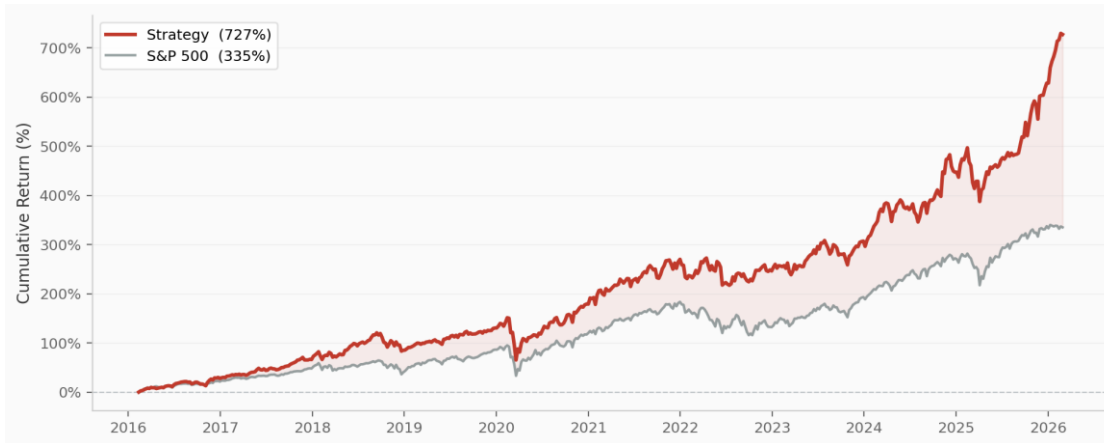
FUNDAMENTAL

BEHAVIORAL

Recommended Holdings

#	Ticker	Company	Industry	Mkt Cap (\$M)	Beta	IV (30D)	Band
1	CBOE	Cboe Global Markets Inc	<i>Investment Services</i>	\$31,371	-0.26	23.97%	Band 1
2	PCG	PG&E Corp	<i>Electrical Utilities</i>	\$41,761	0.47	21.23%	Band 1
3	MNST	Monster Beverage Corp	<i>Beverages</i>	\$83,446	0.27	26.16%	Band 2
4	TRGP	Targa Resources Corp	<i>Oil & Gas Midstream</i>	\$50,686	0.94	31.20%	Band 2
5	BKR	Baker Hughes Company	<i>Oil & Gas Equipment</i>	\$64,492	1.06	36.39%	Band 3
6	FDX	Fedex Corp	<i>Freight & Logistics</i>	\$90,993	0.90	39.55%	Band 3
7	AMAT	Applied Materials Inc	<i>Semiconductors</i>	\$295,461	1.89	50.65%	Band 4
8	TER	Teradyne Inc	<i>Semiconductors</i>	\$50,103	2.05	61.97%	Band 5
9	GLW	Corning Inc	<i>Electronic Equipment</i>	\$129,018	1.23	66.13%	Band 5
10	CIEN	CIENA Corp	<i>Communications</i>	\$49,328	1.90	99.84%	Band 5

Backtesting Performance



Strategy Summary

	10-Year	5-Year
Annualized Return	23.28%	22.29%
Annualized Alpha	+7.60%	+8.74%
Annualized Vol	18.71%	18.07%
Sharpe Ratio	1.24	1.23
Max Drawdown	-34.19%	-18.32%
Win Rate	62.3%	60.2%
Benchmark Return	15.68%	13.55%

Year	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	Avg
Strategy	27.93%	30.02%	11.40%	24.39%	21.16%	32.56%	-6.41%	17.54%	34.38%	33.09%	13.60%	21.8%
S&P 500	21.50%	21.83%	-5.20%	32.97%	16.40%	30.57%	-18.11%	26.29%	26.90%	17.55%	-0.54%	15.5%
Alpha	+6.43	+8.19	+16.60	-8.58	+4.76	+1.99	+11.70	-8.75	+7.48	+15.54	+14.14	+6.3

727%
Total Return
vs 335% SPX

+7.6%
Ann. Alpha
10-year

1.24
Sharpe
vs 0.93 SPX

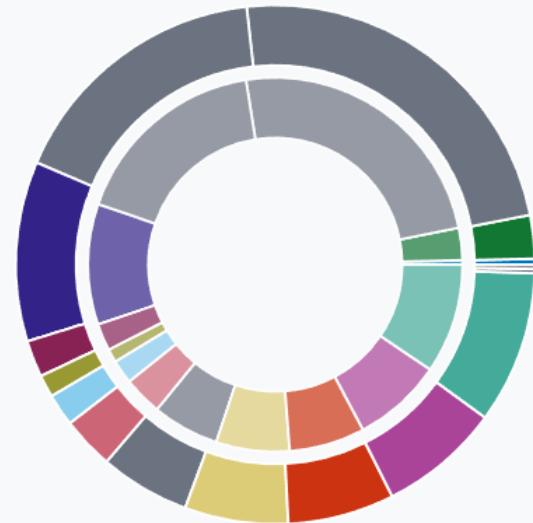
-34.2%
Max DD
vs -34% SPX

62.3%
Win Rate
weekly

1.04
Avg Beta
near-market

Effect on the Portfolio

Sector Allocation



Inner: Current Outer: Projected

Affected Sectors

Sector	Now	Proj	Δ
Technology	9.0%	9.7%	+0.7%
Broad Market	21.1%	20.6%	-0.5%
Fixed Income	14.9%	14.6%	-0.3%
Consumer Defensive	0.0%	0.2%	+0.2%
Unknown	0.0%	0.2%	+0.2%
Utilities	1.0%	1.2%	+0.2%
Consumer Discretionary	6.7%	6.5%	-0.2%
Commodities	5.0%	4.9%	-0.1%
Financials	5.5%	5.6%	+0.1%
Energy	5.7%	5.8%	+0.1%
Consumer Staples	2.9%	2.8%	-0.1%
Healthcare	2.4%	2.4%	-0.1%
Materials	2.0%	2.0%	-0.1%

Risk Metrics

Metric	Current	Projected	Δ
Beta	0.71	0.73	+0.03
VaR 95%	-0.01%	-0.01%	-0.00
Vol (ann)	0.11%	0.12%	+0.00
Sharpe	-0.46	-0.45	+0.02
Max DD	-0.08%	-0.08%	-0.00

Factor Exposures

Factor	Current	Projected	Δ
Momentum	-0.20	-0.19	+0.011
Quality	-0.03	-0.03	+0.002
Value	-0.04	-0.04	-0.005
Size	0.07	0.06	-0.006
Volatility	-0.72	-0.70	+0.024

Risks

<u>Risk</u>	Mitigation
Momentum Crash Risk	<ul style="list-style-type: none">-Don't overweight extreme high-beta stocks-Use implied volatility to separate calmer trend from speculative
Long-Term Reversal Risk	<ul style="list-style-type: none">-Rebalance quarterly-Stay in the middle time horizon where research shows momentum is the strongest
Industry Concentration Risk	<ul style="list-style-type: none">-Use S&P 500 to ensure liquidity-Because industries tend to cluster in volatility, diversify across volatilities
High-Volatility Risk	<ul style="list-style-type: none">-Only 50% of the portfolio in high volatility-Equal weighting prevents single-stock blow-ups-Quarterly rebalancing resets exposure

Summary & Recommendation

Strategy Merits



- **Performance**

Over the past 10 years, the strategy generated a 1.24 Sharpe ratio and 7.6% annualized alpha over the S&P 500 Index.



- **Risk**

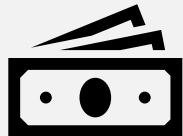
Momentum crashes are real and can't be countered entirely, but volatility classification diversifies risk



- **Effects on Portfolio**

Maintains a diversified market position

Action Plan

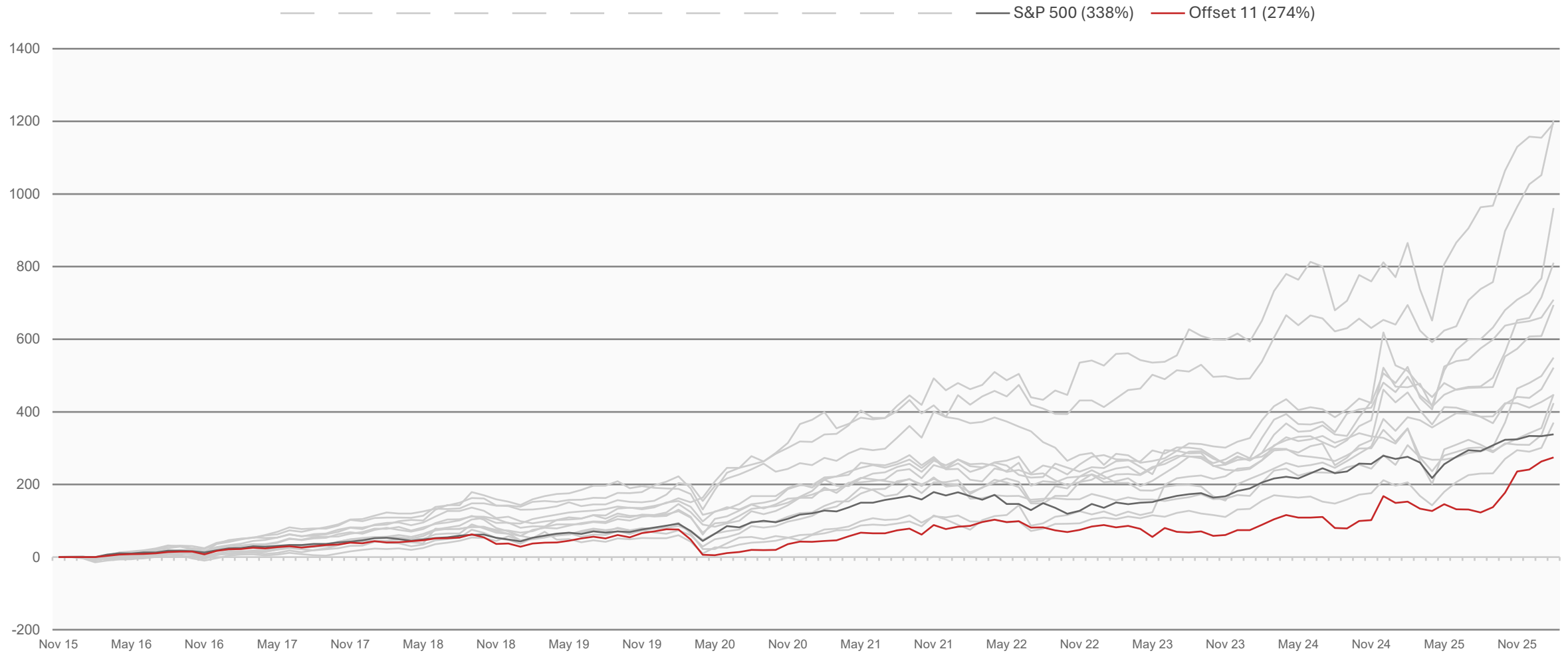


- **Recommendation: BUY**

Invest \$50,000 funded by cash in the portfolio with a quarterly rebalancing schedule.

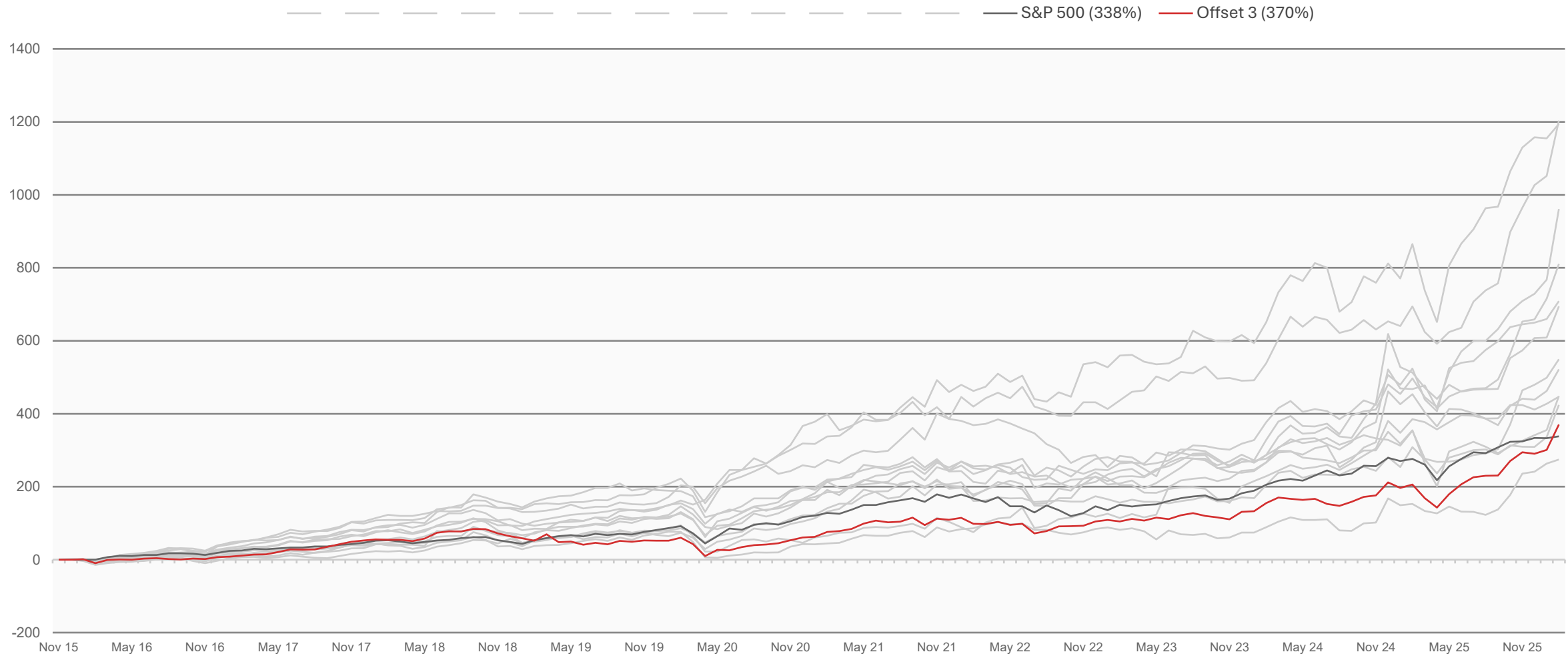
Appendix

10Y Quarterly Rebalance



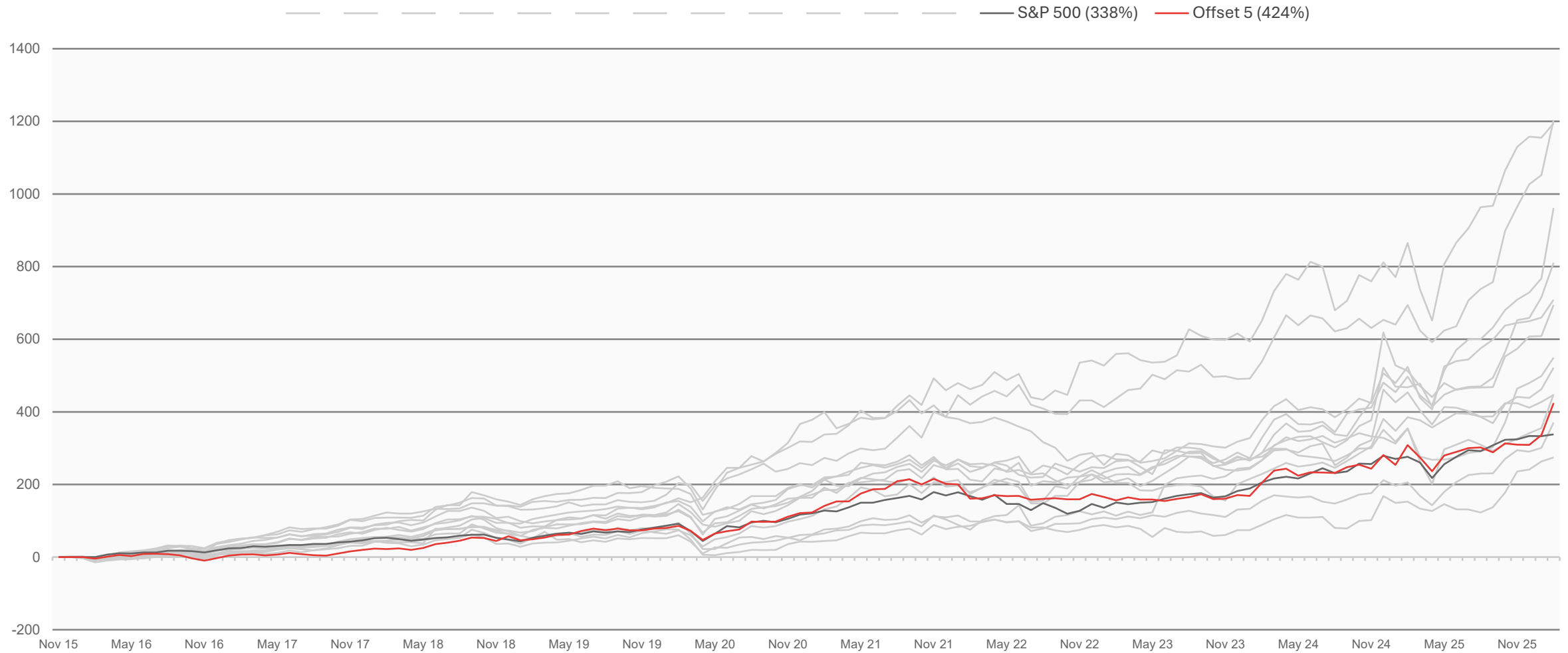
Ann. Return: **13.3%** Alpha: **-2.0%** Sharpe: **0.52** Max DD: **-42.5%** Vol: **25.4%**

10Y Quarterly Rebalance



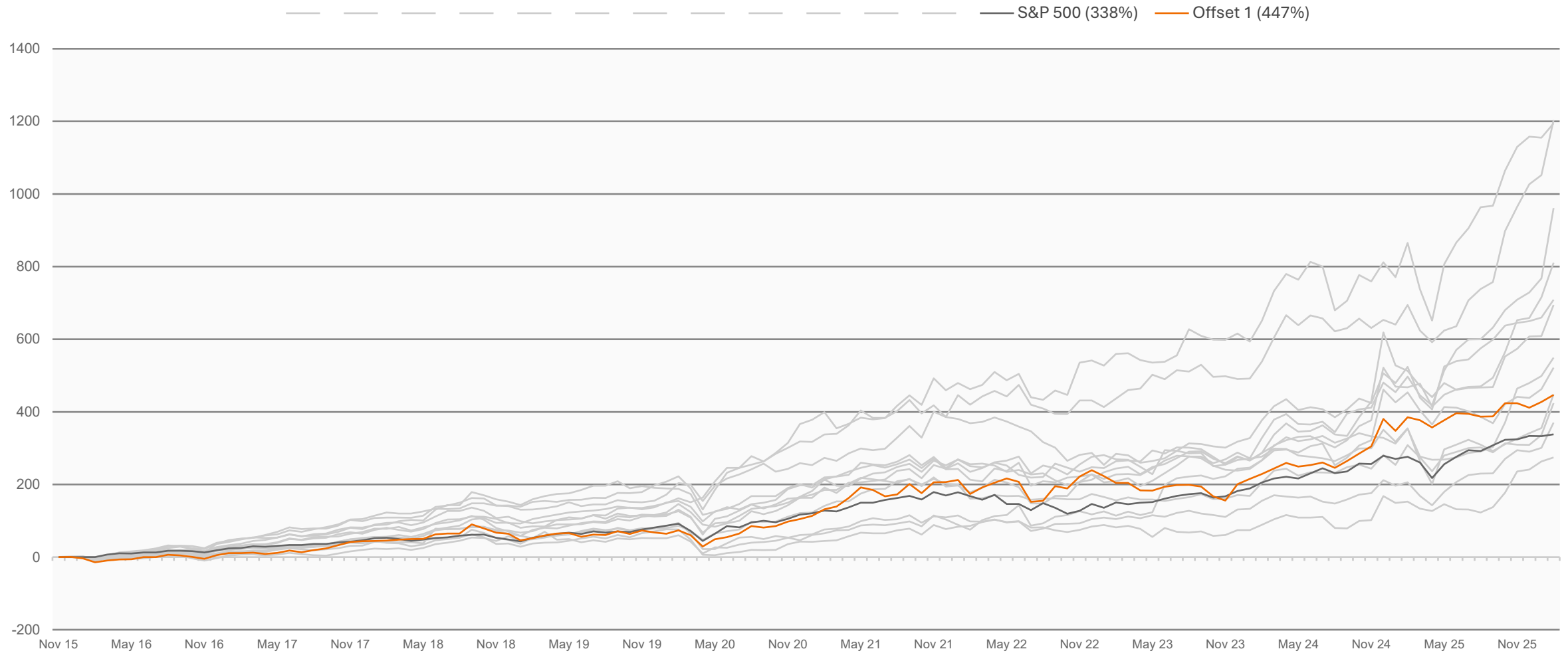
Ann. Return: **16.6%** Alpha: **+1.2%** Sharpe: **0.76** Max DD: **-42.6%** Vol: **21.9%**

10Y Quarterly Rebalance



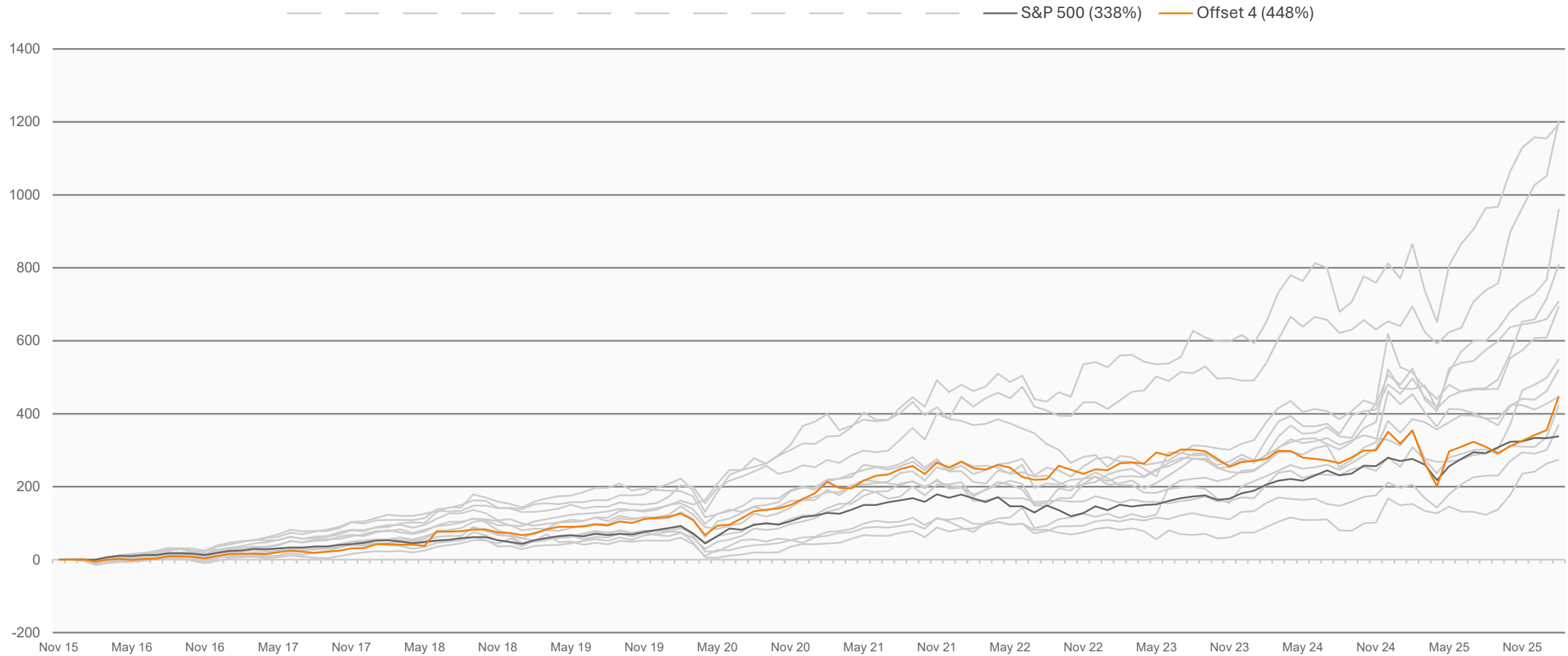
Ann. Return: **18.1%** Alpha: **+2.8%** Sharpe: **0.87** Max DD: **-30.1%** Vol: **20.8%**

10Y Quarterly Rebalance



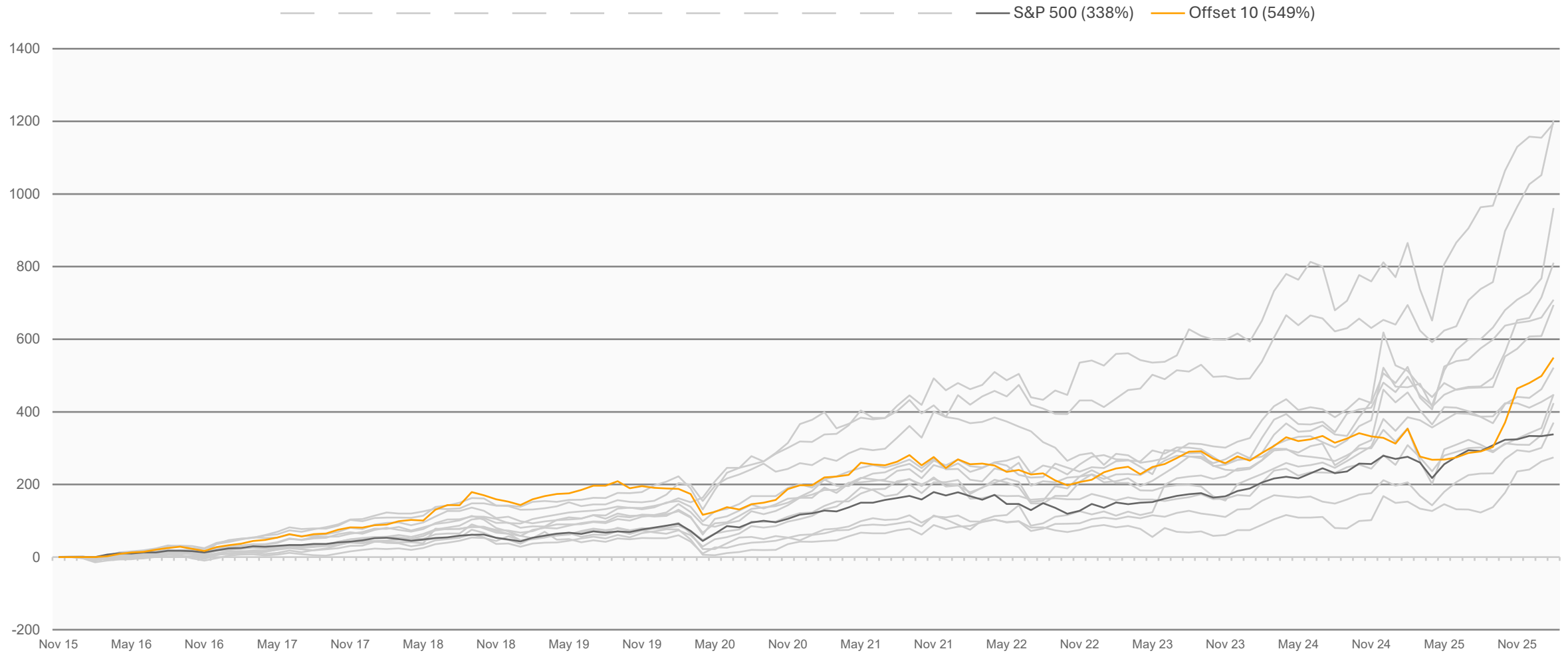
Ann. Return: **18.2%** Alpha: **+2.9%** Sharpe: **0.77** Max DD: **-39.8%** Vol: **23.7%**

10Y Quarterly Rebalance



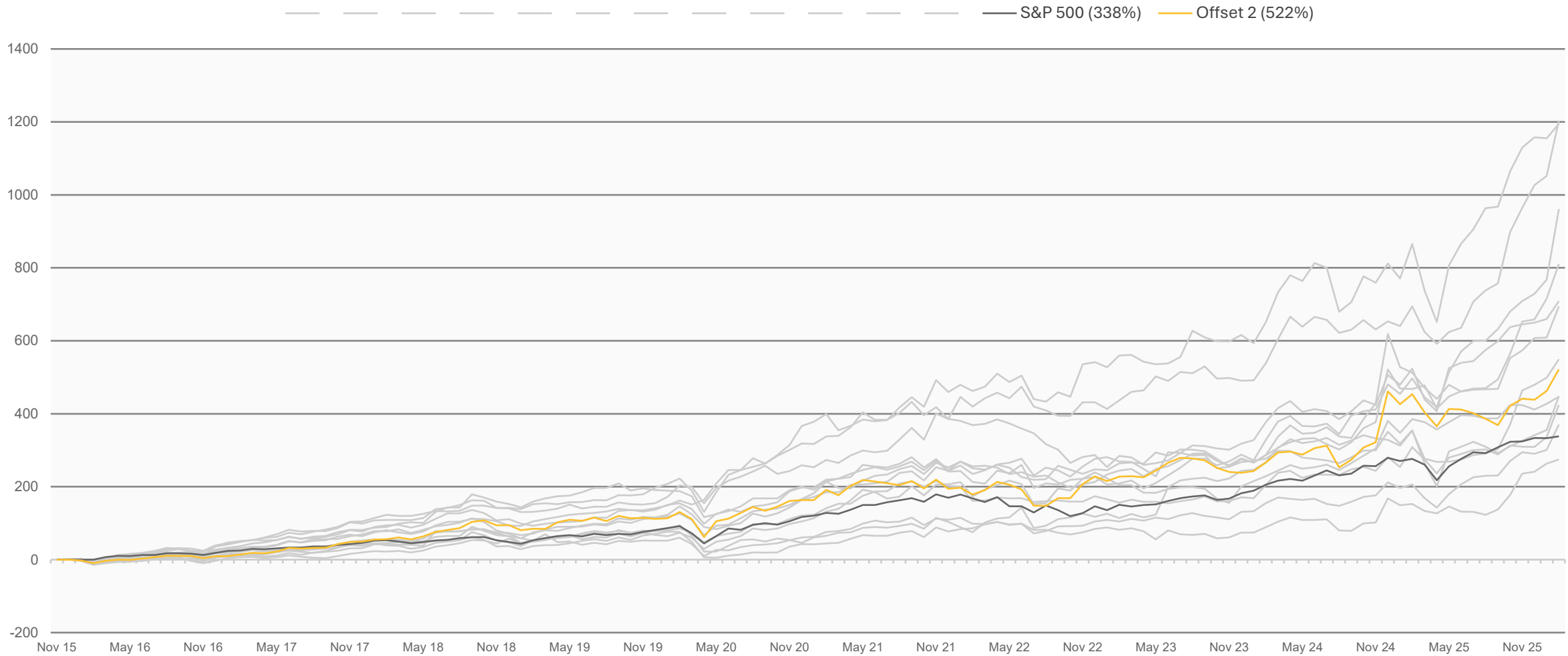
Ann. Return: **18.6%** Alpha: **+3.2%** Sharpe: **0.79** Max DD: **-34.5%** Vol: **23.3%**

10Y Quarterly Rebalance



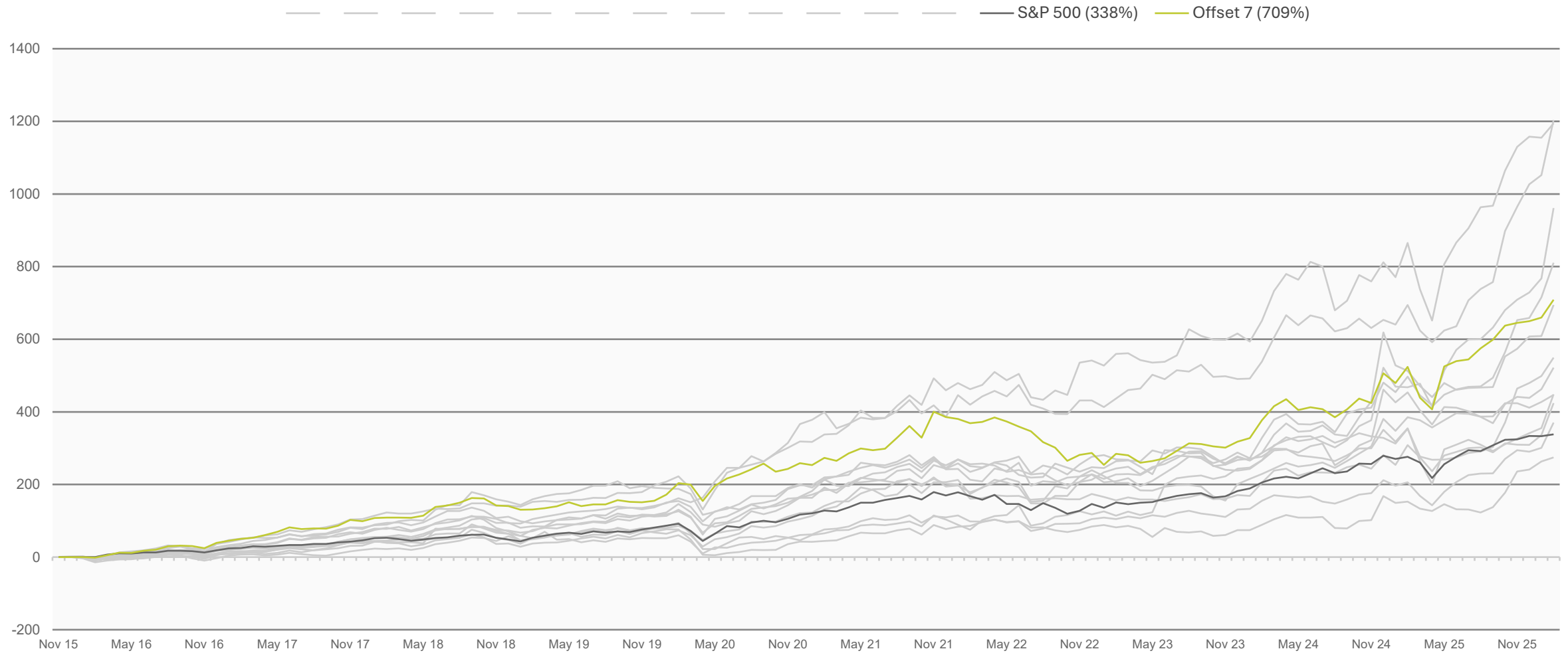
Ann. Return: **19.7%** Alpha: **+4.4%** Sharpe: **0.85** Max DD: **-40.2%** Vol: **23.2%**

10Y Quarterly Rebalance



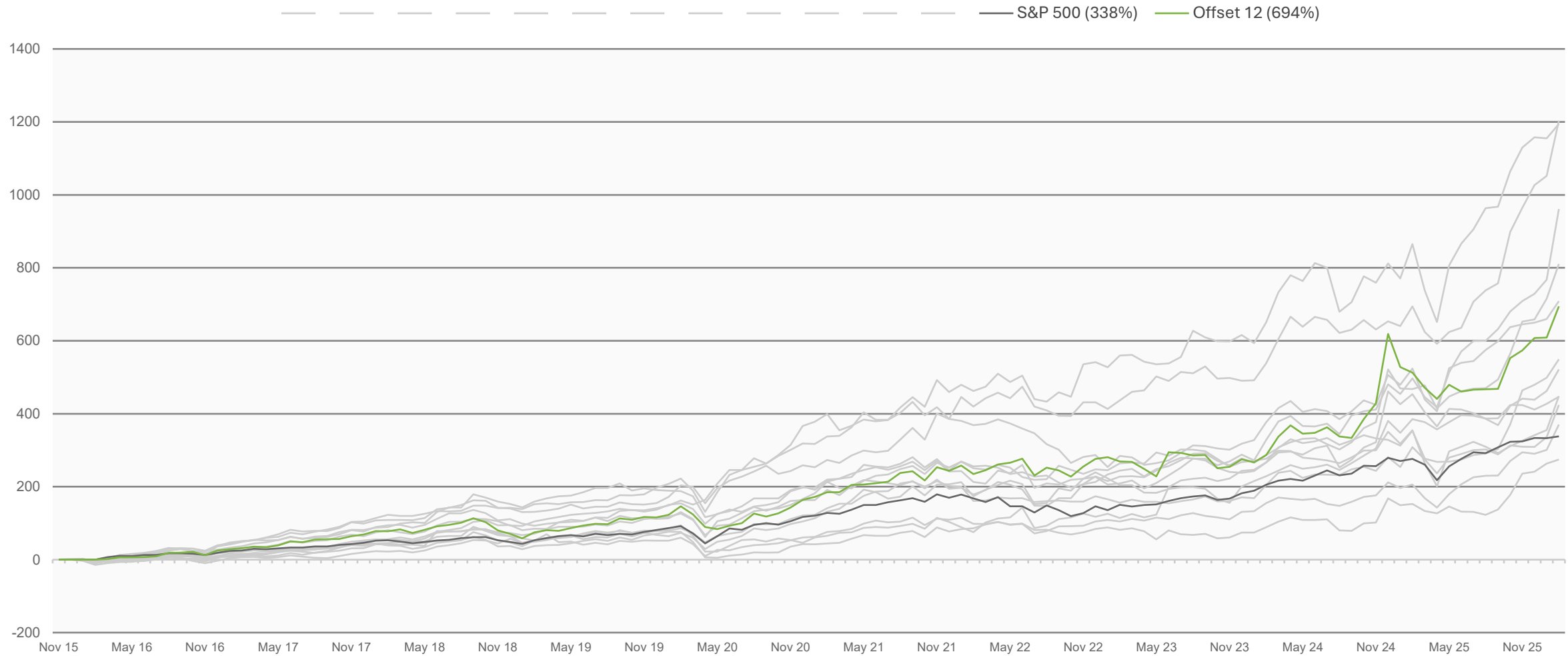
Ann. Return: **20.0%** Alpha: **+4.6%** Sharpe: **0.87** Max DD: **-38.6%** Vol: **23.0%**

10Y Quarterly Rebalance



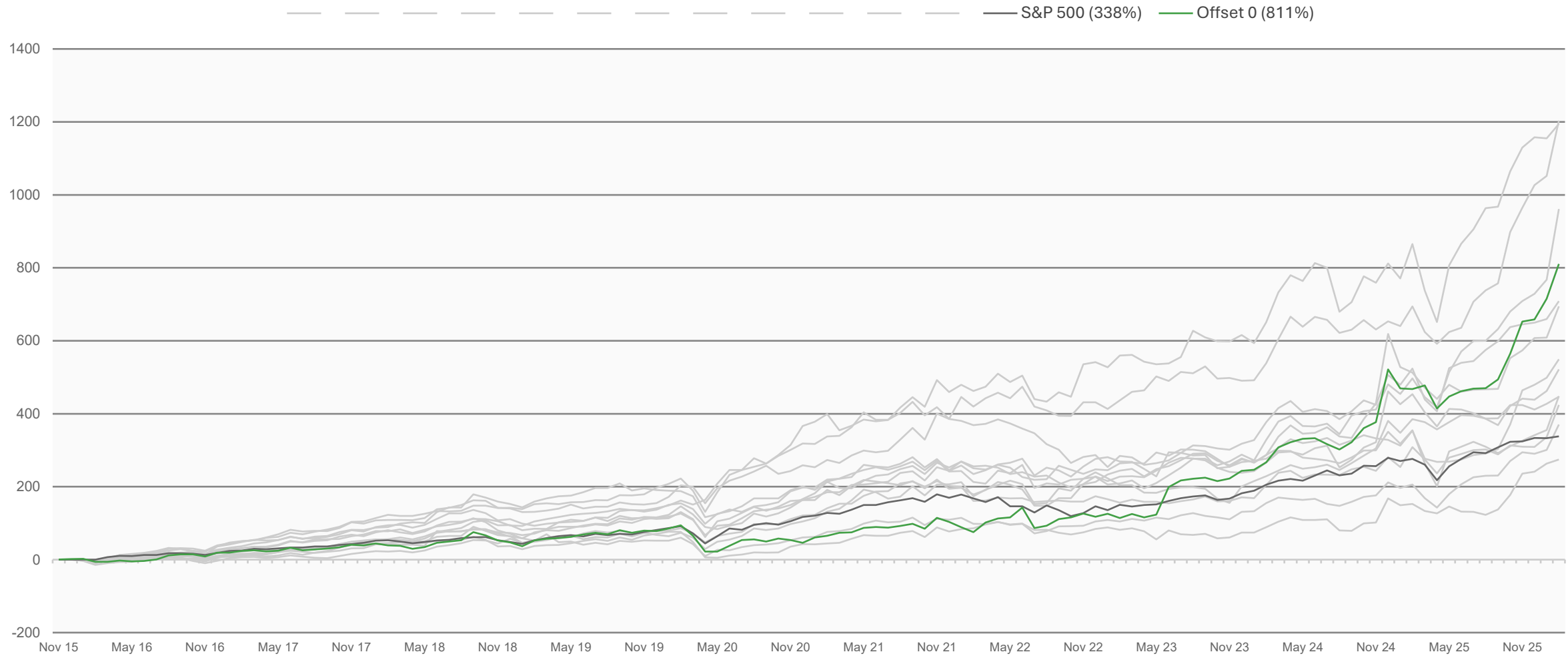
Ann. Return: **22.3%** Alpha: **+7.0%** Sharpe: **1.03** Max DD: **-31.7%** Vol: **21.6%**

10Y Quarterly Rebalance



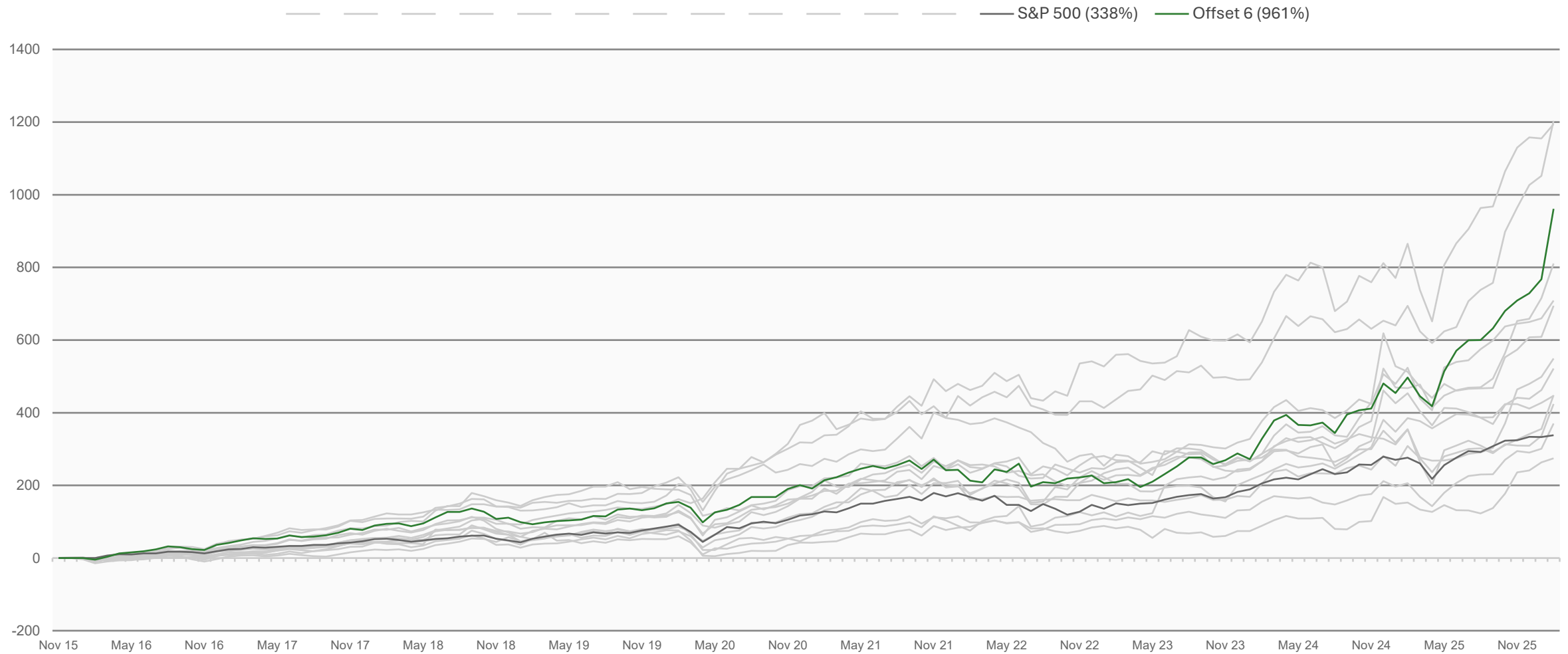
Ann. Return: **22.4%** Alpha: **+7.1%** Sharpe: **1.01** Max DD: **-36.0%** Vol: **22.3%**

10Y Quarterly Rebalance



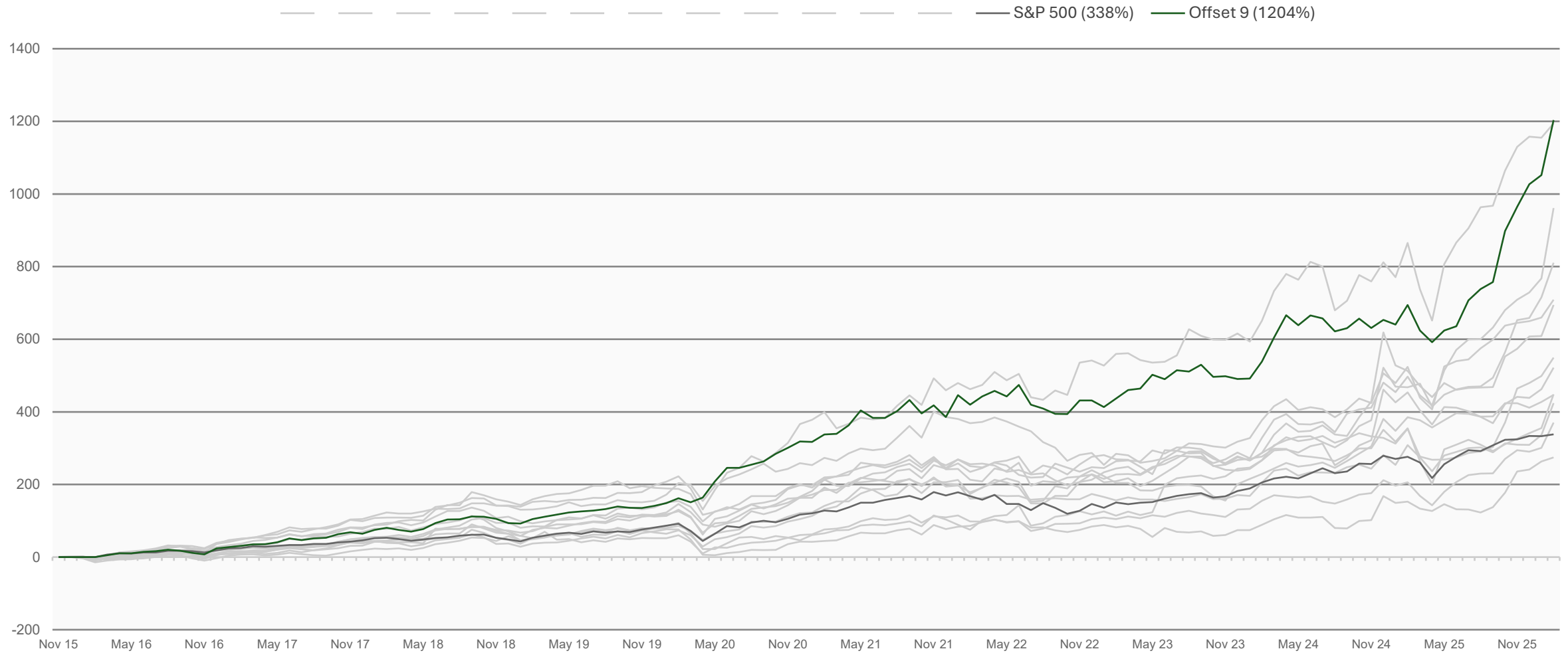
Ann. Return: **23.9%** Alpha: **+8.6%** Sharpe: **0.92** Max DD: **-43.1%** Vol: **26.1%**

10Y Quarterly Rebalance



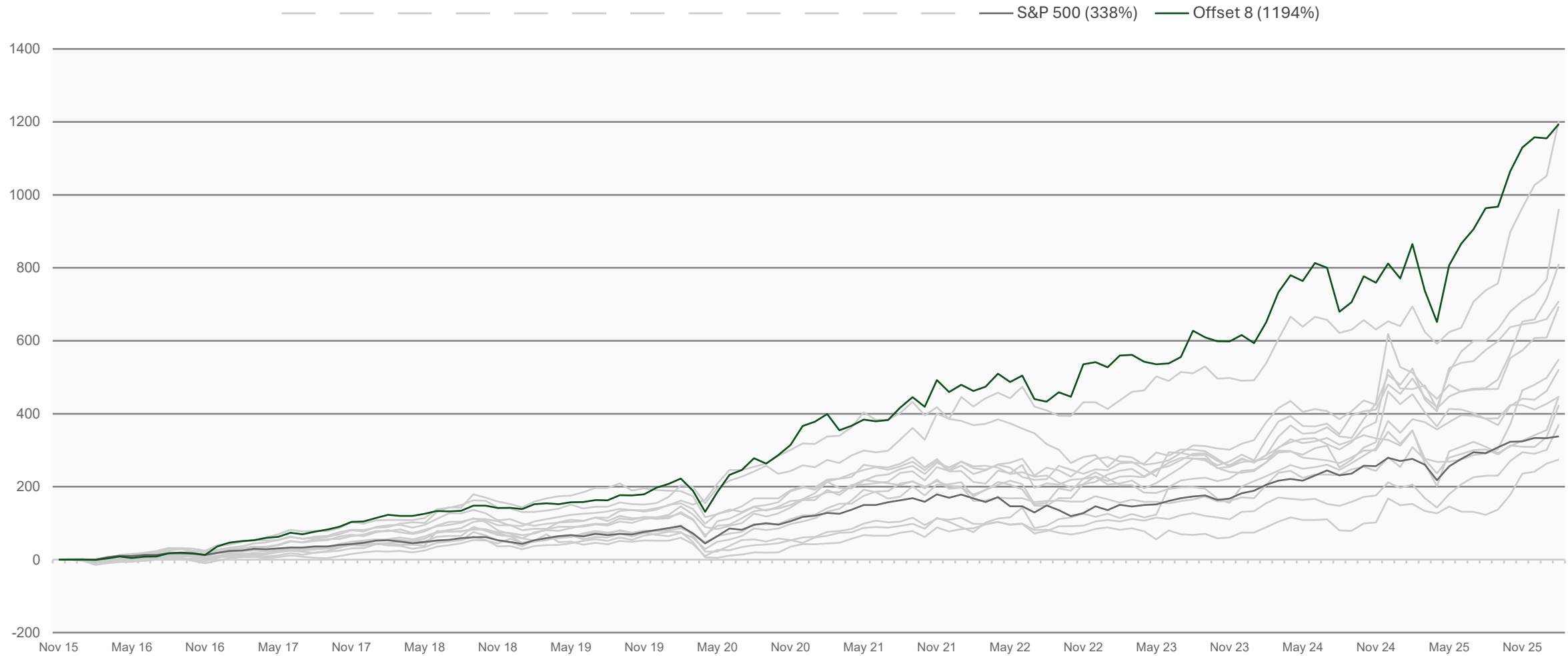
Ann. Return: **25.8%** Alpha: **+10.4%** Sharpe: **1.20** Max DD: **-29.6%** Vol: **21.5%**

10Y Quarterly Rebalance



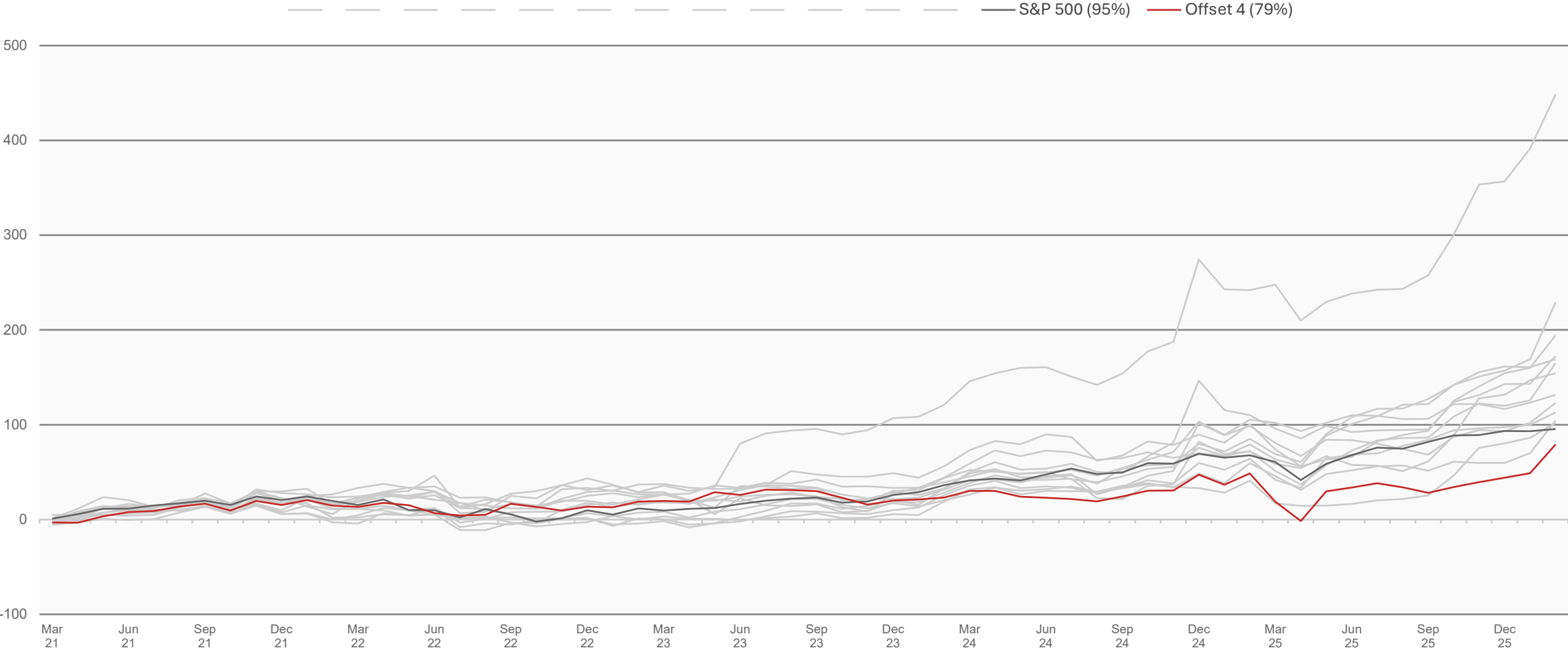
Ann. Return: **28.5%** Alpha: **+13.1%** Sharpe: **1.26** Max DD: **-23.6%** Vol: **22.6%**

10Y Quarterly Rebalance



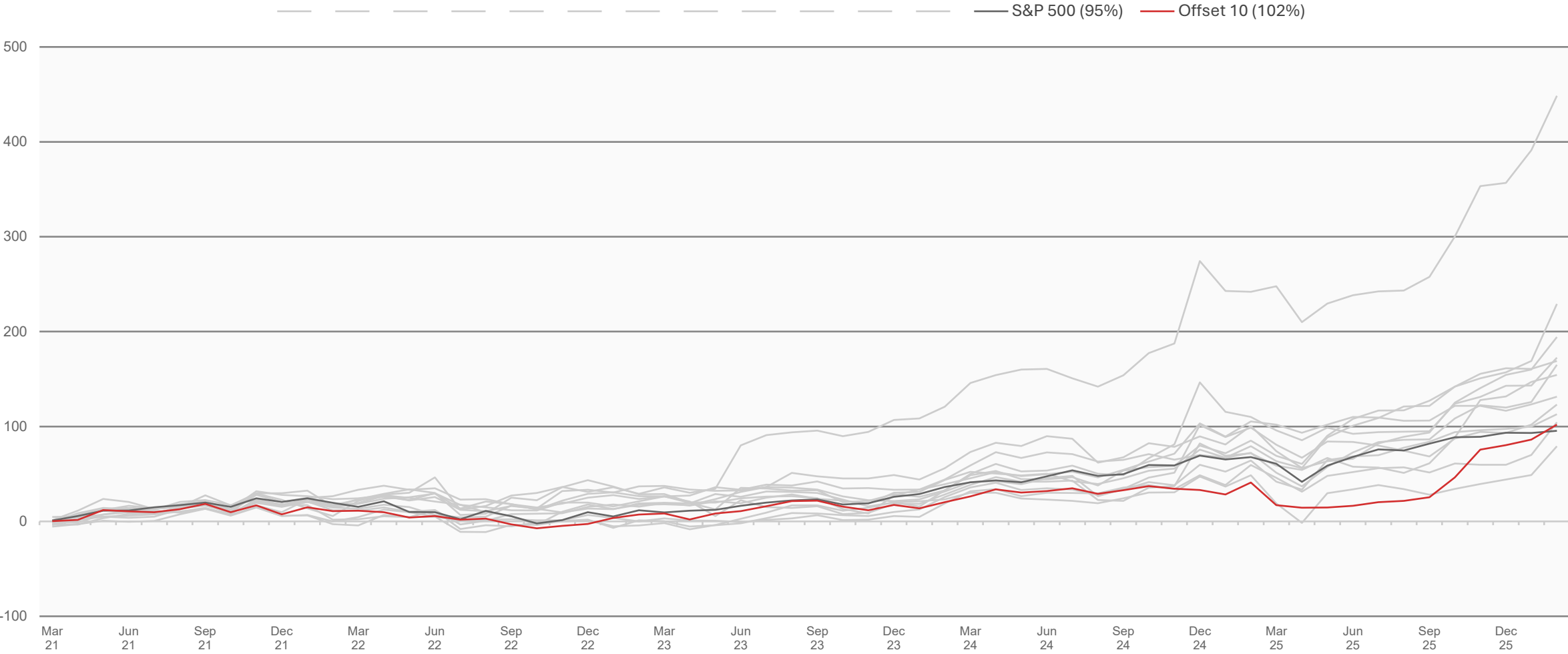
Ann. Return: **28.5%** Alpha: **+13.2%** Sharpe: **1.24** Max DD: **-41.1%** Vol: **23.0%**

5Y Quarterly Rebalance



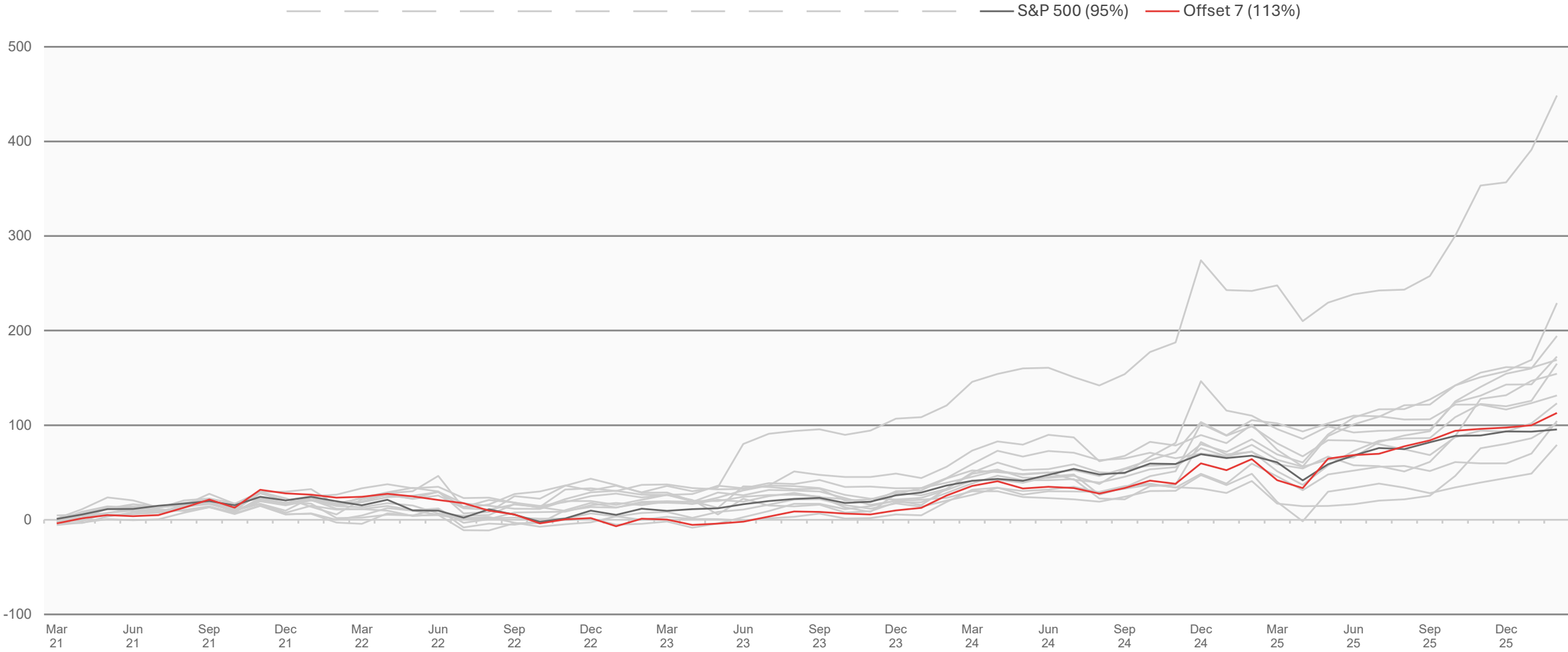
Ann. Return: **13.5%** Alpha: **-0.6%** Sharpe: **0.60** Max DD: **-34.5%** Vol: **22.5%**

5Y Quarterly Rebalance



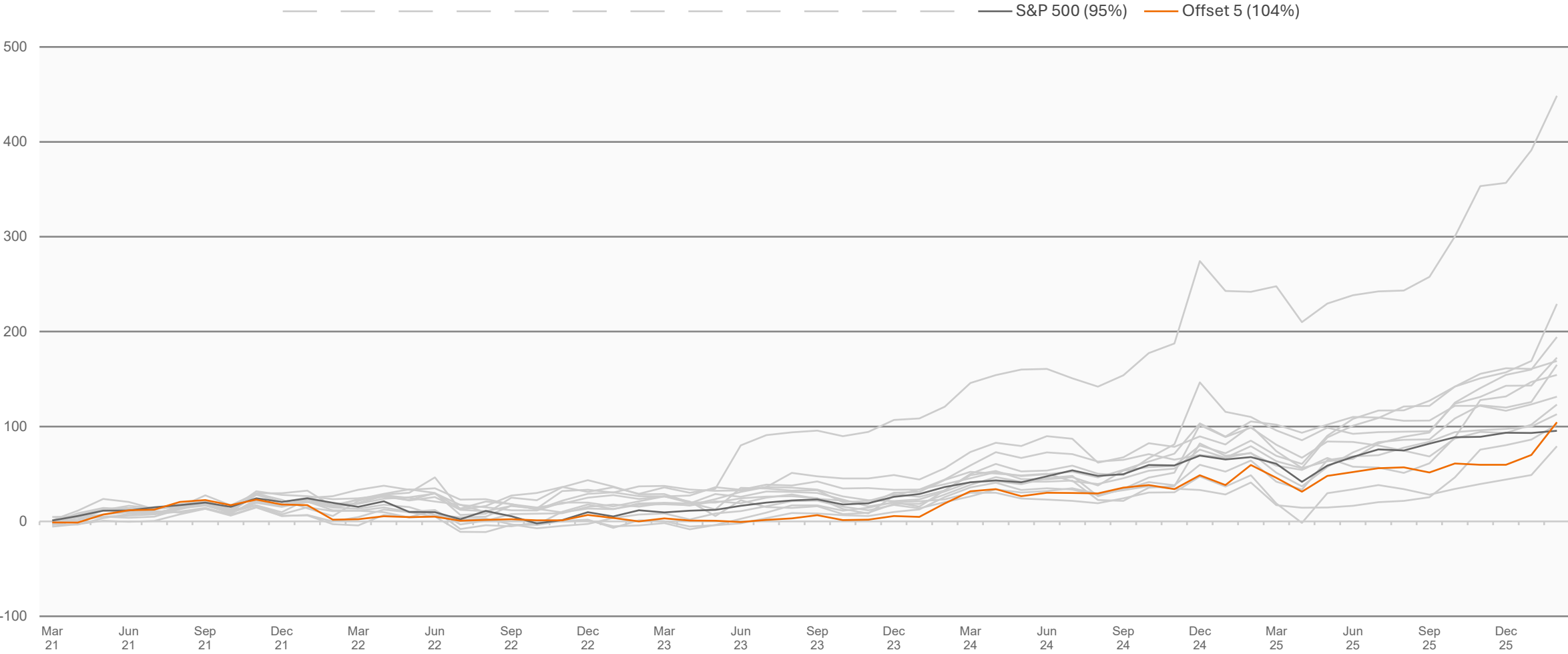
Ann. Return: **14.6%** Alpha: **+0.5%** Sharpe: **0.66** Max DD: **-25.1%** Vol: **22.2%**

5Y Quarterly Rebalance



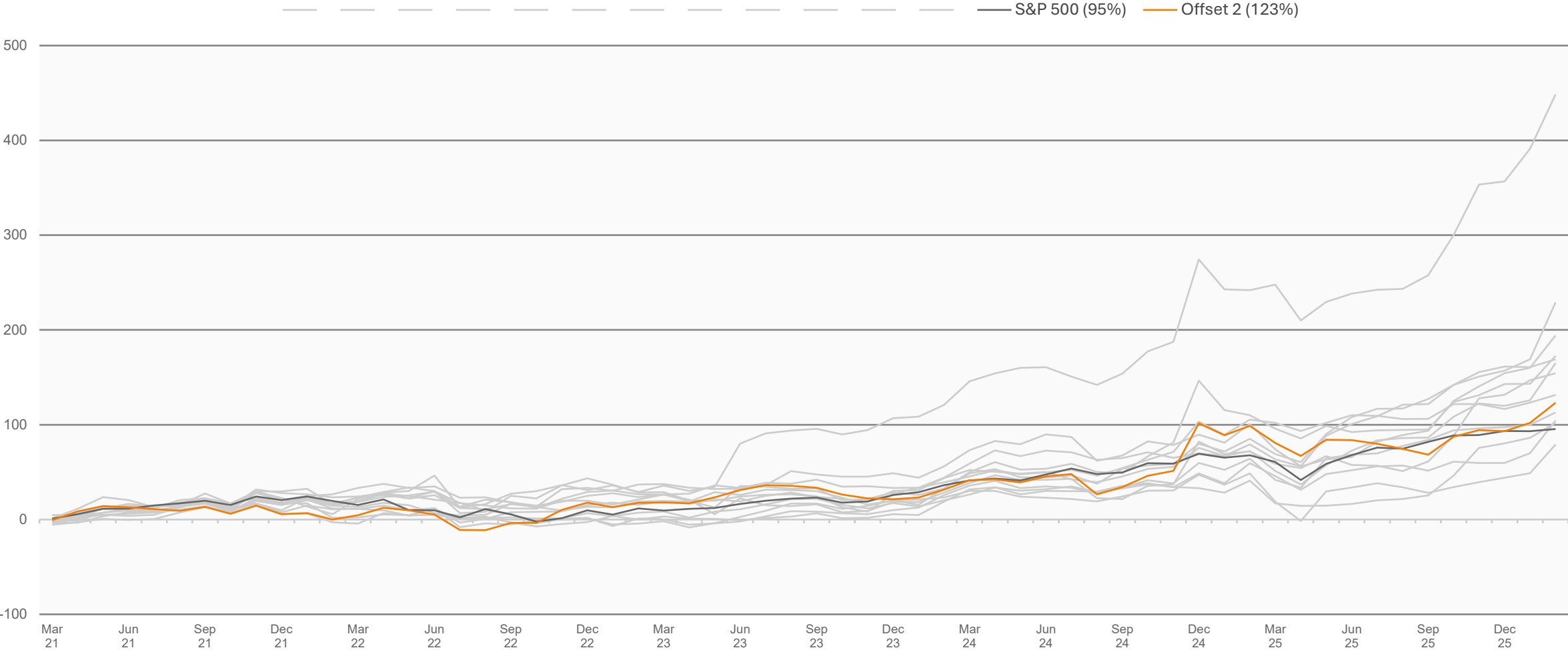
Ann. Return: **15.9%** Alpha: **+1.8%** Sharpe: **0.77** Max DD: **-31.7%** Vol: **20.6%**

5Y Quarterly Rebalance



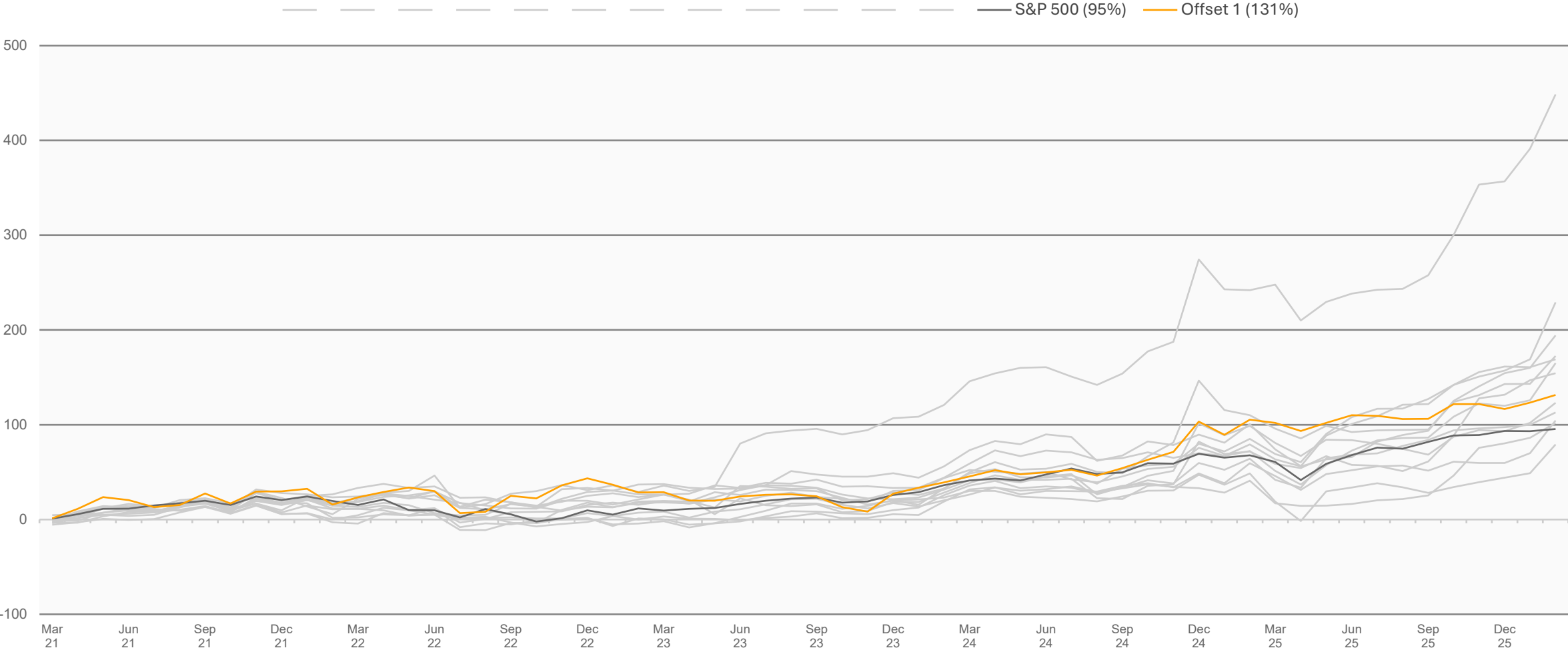
Ann. Return: **16.7%** Alpha: **+2.6%** Sharpe: **0.82** Max DD: **-26.5%** Vol: **20.5%**

5Y Quarterly Rebalance



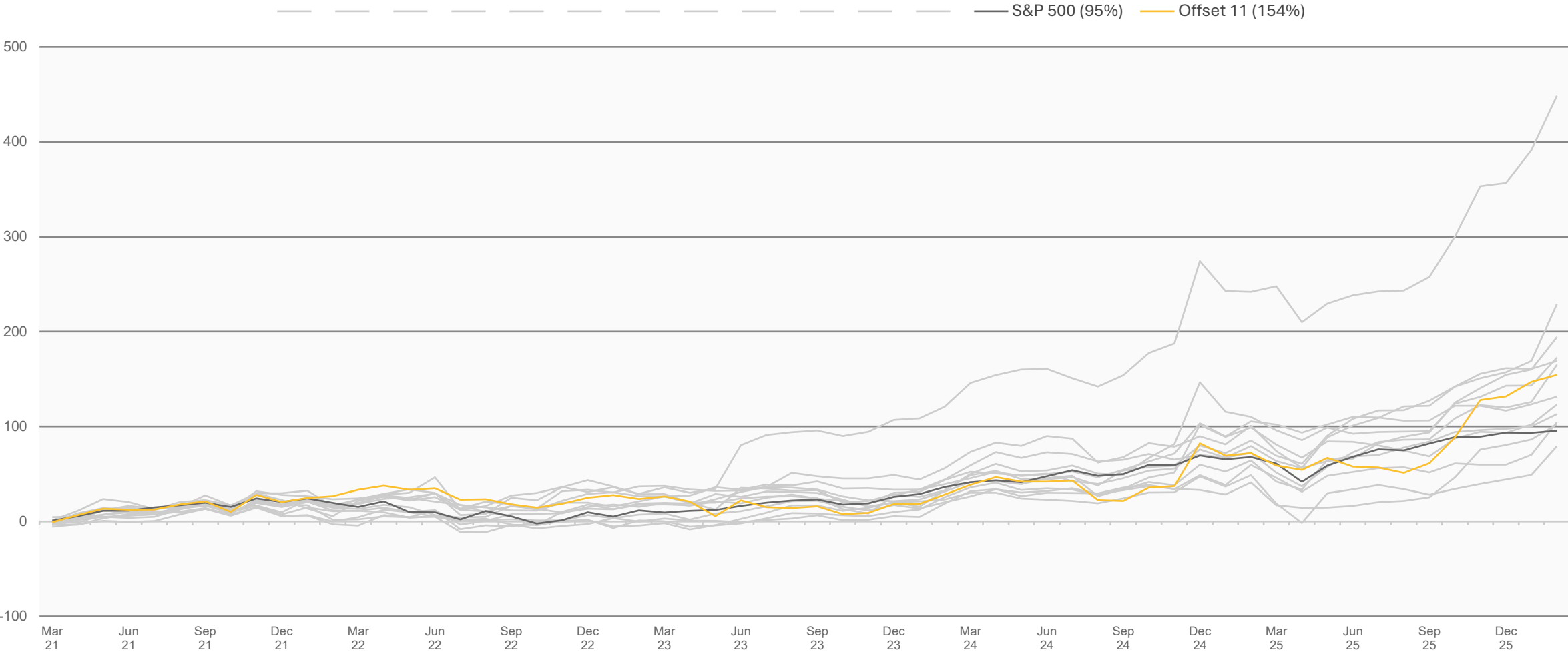
Ann. Return: **18.5%** Alpha: **+4.4%** Sharpe: **0.79** Max DD: **-27.6%** Vol: **23.3%**

5Y Quarterly Rebalance



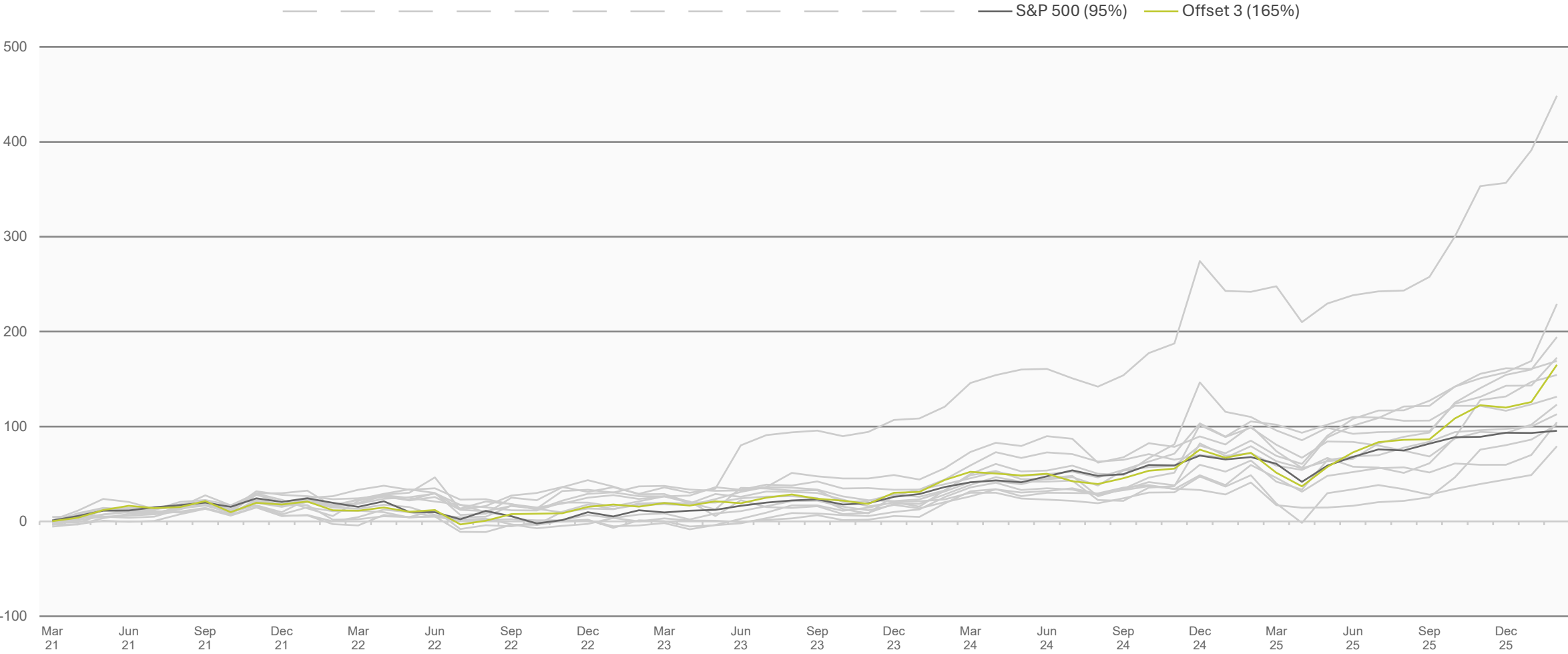
Ann. Return: **18.9%** Alpha: **+4.7%** Sharpe: **0.78** Max DD: **-27.4%** Vol: **24.1%**

5Y Quarterly Rebalance



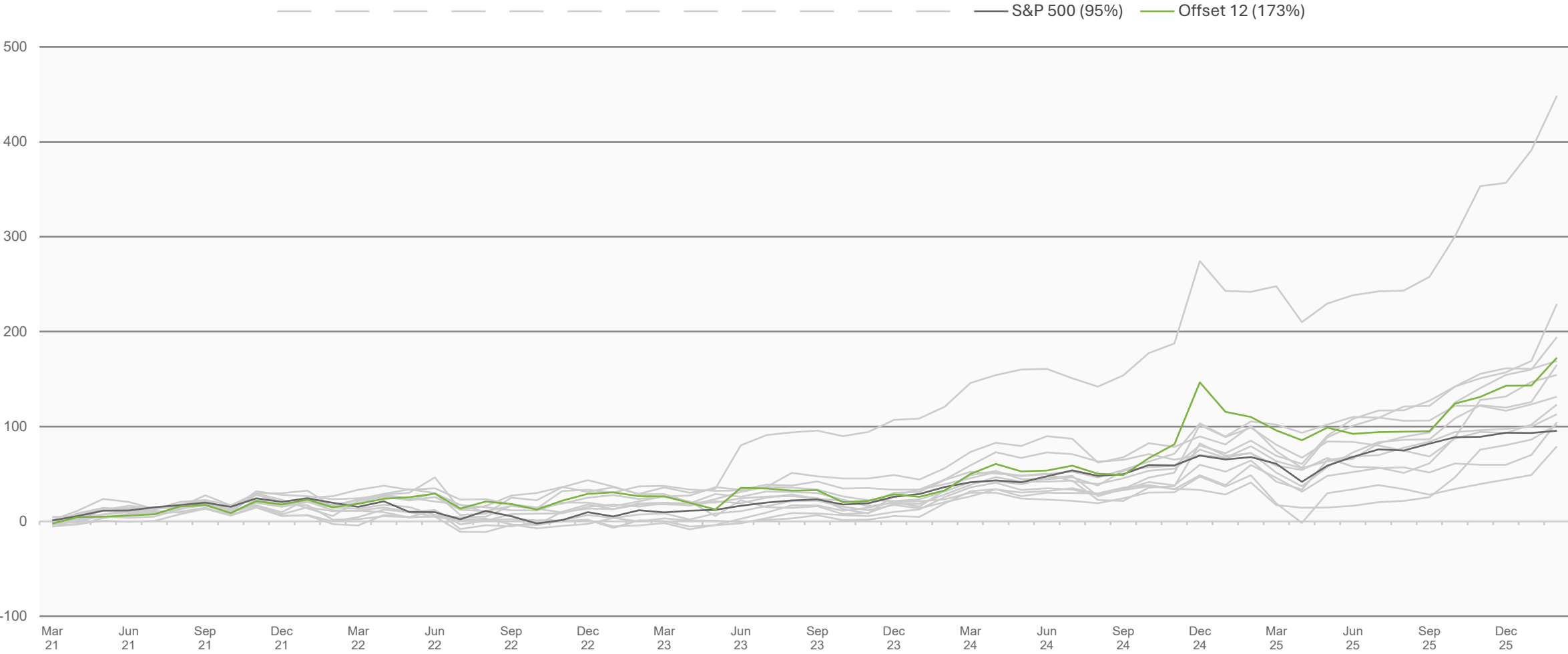
Ann. Return: **19.7%** Alpha: **+5.5%** Sharpe: **0.67** Max DD: **-28.0%** Vol: **29.4%**

5Y Quarterly Rebalance



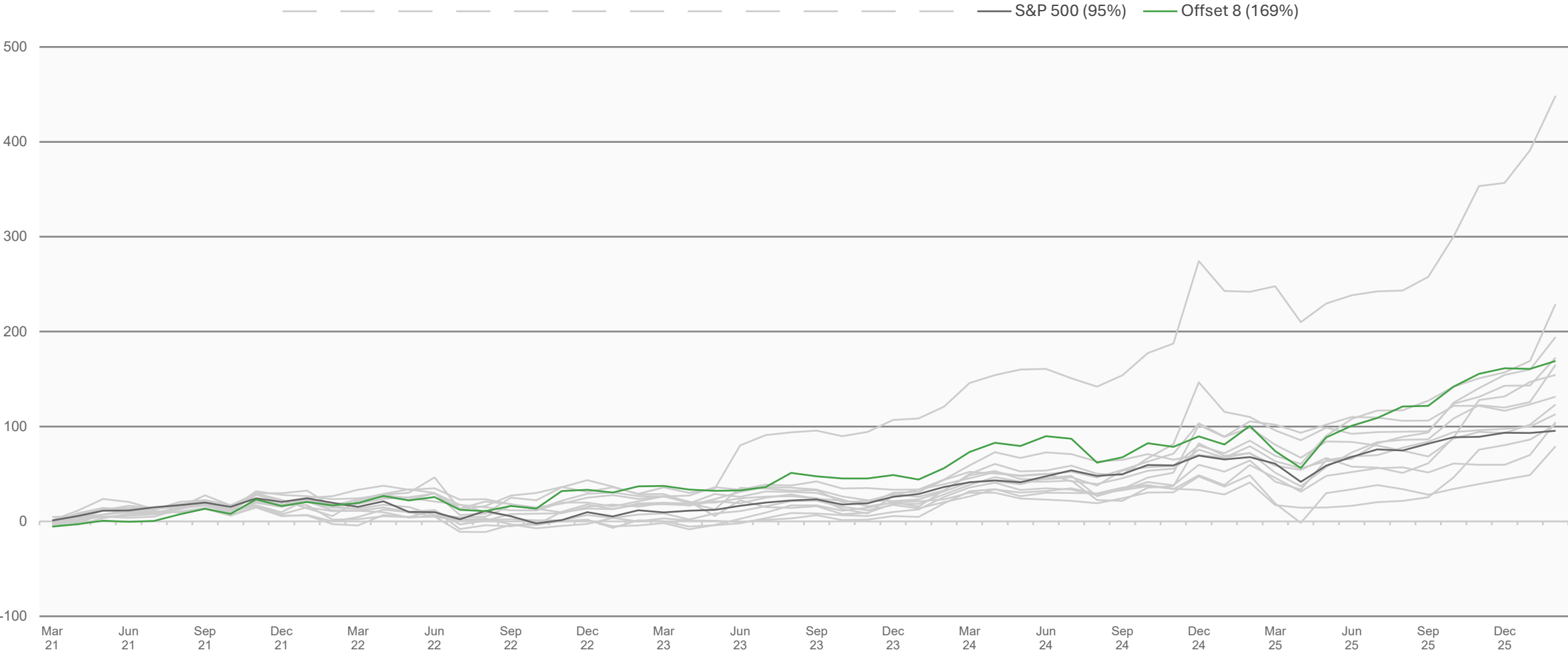
Ann. Return: **22.2%** Alpha: **+8.1%** Sharpe: **1.02** Max DD: **-26.1%** Vol: **21.7%**

5Y Quarterly Rebalance



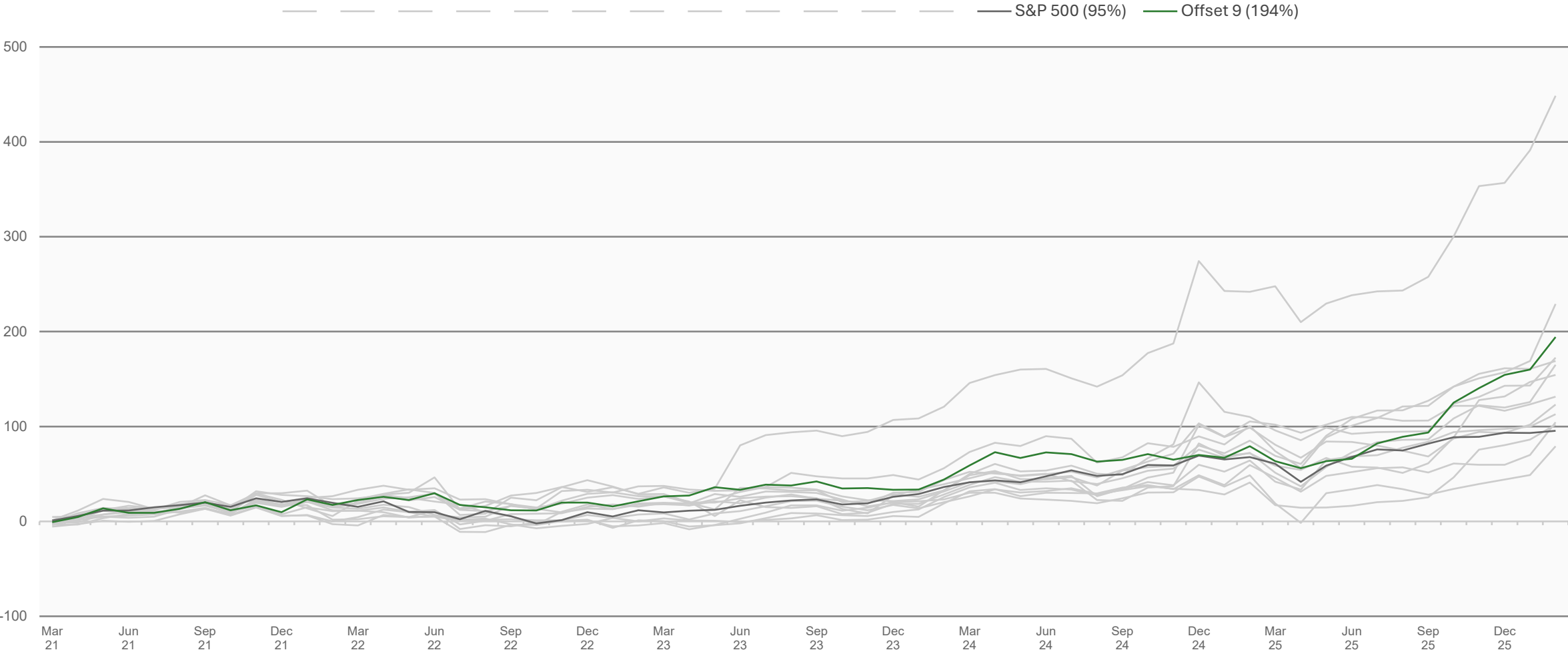
Ann. Return: **22.4%** Alpha: **+8.2%** Sharpe: **0.95** Max DD: **-25.7%** Vol: **23.4%**

5Y Quarterly Rebalance



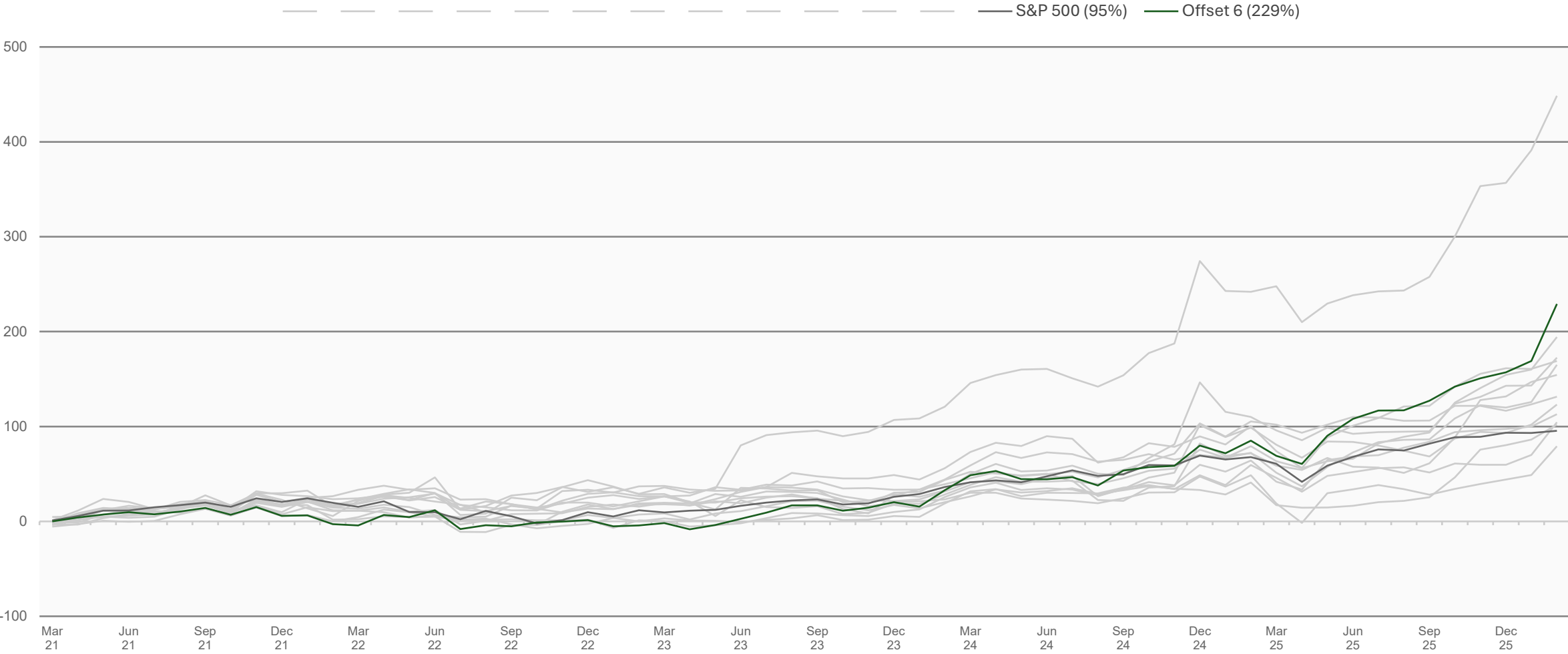
Ann. Return: **22.4%** Alpha: **+8.3%** Sharpe: **1.03** Max DD: **-23.5%** Vol: **21.7%**

5Y Quarterly Rebalance



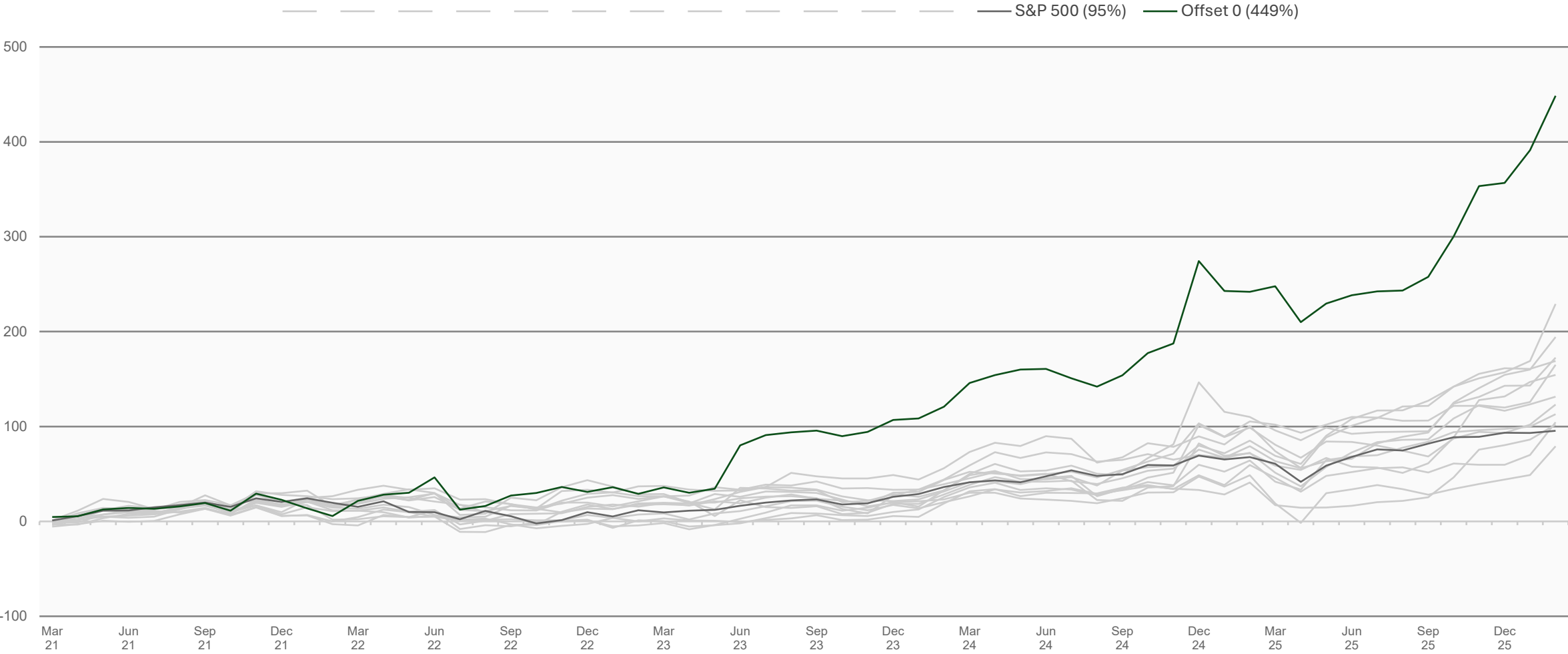
Ann. Return: **24.4%** Alpha: **+10.2%** Sharpe: **1.11** Max DD: **-18.1%** Vol: **21.9%**

5Y Quarterly Rebalance



Ann. Return: **26.8%** Alpha: **+12.7%** Sharpe: **1.22** Max DD: **-22.9%** Vol: **21.9%**

5Y Quarterly Rebalance



Ann. Return: **40.5%** Alpha: **+26.3%** Sharpe: **1.40** Max DD: **-24.5%** Vol: **28.8%**