Better Together

Macro + Factor rotation for smarter portfolio construction

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Contents

Disciplined long-term investors face three persistent threats on their path to financial independence and goal attainment:

01.

Sequence of Return Risk

Poor market performance early in retirement withdrawals can permanently impair long-term outcomes and threaten the security of a well-designed financial plan.

02.

Behavioural Risk

Large, sudden drawdowns trigger emotional reactions that cause investors to abandon sound strategies at the worst times.

03

Implementation Risk

Investors are increasingly steered towards high-cost, illiquid, and opaque investment vehicles in pursuit of more favourable risk adjusted returns.

The solution:

The CrestCast™ Macro-Aware US Factor Rotation Index offers a rules-based, macro-aware approach that dynamically rotates factor exposures based on regime classification.

Built on rigorous walk-forward validation, the underlying algorithm has been ooperating in strict out-of-sample mode since 2014 to empower overlays that systematically adapt to macro conditions while preserving portfolio integrity.

Rather than rely on discretionary shifts or backward-looking tilts, the index provides a forward-guided mechanism to align exposures with the prevailing macro regime —delivering a more intelligent, repeatable approach to equity factor exposure and risk management.

Key Results vs. Russell 3000® Index (05/2001 – 05/2025)

11.15% vs 8.77%
Annualized Return

14.58% vs 15.48%
Annualized Std Dev

0.69 vs 0.52
Sharpe Ratio

-39.15% vs –51.20%
Max Benchmark Drawdown

0.64 Beta vs. Benchmark

4.84% Annualized Alpha vs. Benchmark

59.98% Down Capture

82.62% Up Capture

0.41 Information Ratio

Value Proposition

A differentiated solution for ETF sponsors, direct index platforms, and model portfolio managers seeking better risk-adjusted returns, lower drawdowns, and scalable implementation.

Meeting the moment for long term investors

Markets are inherently volatile, a characteristic that offers investors opportunities for return. Macro-driven risk events, though, consistently trigger significant market drawdowns that not only impact financial outcomes, but which also fundamentally alter investor behavior and derail long-term plans.

Long-term investors continue to face these macro-threats, now amplified by a faster and more complex market environment.

For decades investors have relied on static diversification and long-term discipline.

Today, advanced analytics allow us to see old truths more clearly and call for the next evolution in disciplined, fiduciary investing: dynamic, intelligent portfolio design that accounts for macro-driven risk events.

We're not inventing new relationships; rather, we are applying sharper tools to better align portfolios with timeless realities.

1. Sequence of Return Risk
When negative returns hit in close proximity to an investors goals, they can dramatically alter financial outcomes. Even well-designed plans can unravel due to poor timing. The risk is not just theoretical—it's structural. Early losses, especially when paired with ongoing withdrawals, compound rapidly and reduce the capital base required for long-term growth. This sequencing challenge can be especially devastating during fragile macro environments when correlations rise and volatility spikes.

2. Behavioral Risk
Investors are human, and markets tend to be driven by emotions in the short term. Sharp drawdowns—especially those triggered by macro shocks—can push even disciplined investors to make reactive, value-destroying decisions. These moments don't just affect performance; they erode confidence and long-term planning. Whether it's panic selling, abandoning proven strategies, or retreating into perceived safety indefinitely, behavior under stress often leads to outcomes that derail goals. Portfolios that fail to account for these risks aren't just vulnerable to loss —they set the stage for investor error.

3. Implementation Risk
As markets evolve and traditional alpha becomes harder to find, many investors are guided towards sophisticated private market strategies that come with long lockups, sophisticated private market, high fees, and complex or opaque structures. These approaches may offer potential upside to risk adjusted performance—but they introduce new risks in the form of illiquidity, lack of transparency and restricted accessibility. For many individual investors, these trade-offs are impractical and often imprudent.

These challenges are not edge cases. They are recurring features of modern markets. Advisors and investors require a more adaptive, resilient, and accessible approach to alpha oriented portfolio construction.

Fortunately, the asset management world is evolving. Mutual funds continue to give way to exchange-traded funds (ETFs), which offer greater efficiency, transparency, and accessibility in both active and passive strategies.

Direct indexing—where investors own individual securities within an index—has unlocked new avenues for personalization, tax efficiency, and implementation flexibility. Undoubtedly, these innovations are laying the groundwork for a more adaptive, investor-centric future.

The next evolution in fiduciary management, though, requires that firms look beyond wrappers and personalization to innovate at the portfolio construction layer, such that investors are less exposed to market drawdowns, and are positioned to achieve more consistent alpha.

A New Foundation for Portfolio Construction

Macro regime awareness and systematic factor investing each offer unique strengths —but when combined, they create something more powerful. The CrestCast™ Index bridges this gap, aligning forward-looking macro insights with disciplined factor rotation to better navigate market turbulence. For investors and advisors seeking smarter tools to stay invested through uncertainty, this fusion represents a new foundation for resilient portfolio construction.

By linking regime awareness to factor exposures, the CrestCast™ Macro-Aware US Factor Rotation Index offers an elegant solution that directly addresses the biggest risks investors face today.

The CrestCast™ index—or derived factor and sector overlays—respond to this need. By linking macro regime analysis to factor rotation, the CrestCast™ Macro-Aware US Factor Rotation Index empowers strategies to maintain growth orientation while dynamically reducing risk in Fragile environments.

CrestCast overlay

A macro-aware, rules-based approach to factor rotation

While no single factor consistently outperforms, our core belief is that macro regimes fundamentally dictate the relative success of different investment factors. Identifying these regimes early enables prudent, evidence-based adjustments to portfolio exposures—enhancing performance while preserving discipline.

How It Works (Overview)

1. Regime Classification
We classify regimes using advanced statistical techniques on macro indicators and market volatility data. This process includes rigorous time-series cross-validation to ensure our model avoids look-ahead bias, relying only on information available at the time.

2. Factor Mapping
During our initial development phase, we systematically analyzed pre-2014 data to empirically determine which factors exhibit superior performance in Durable versus Fragile macro regimes.

3. Portfolio Application
Monthly exposures derived from the CrestCast™ index dynamically shift based on the identified regime—e.g., emphasizing Momentum, Quality, and Size in Durable environments, and pivoting toward Low Beta and Defensive factors in Fragile periods.

No Retraining

The core logic and parameters of our model were strictly developed and finalized using data through 2013. Since 2014, the CrestCast™ index has operated in a fixed, purely out-of-sample mode with no retraining or further optimization. This ensures the portfolio implementations are a direct, unbiased reflection of patterns identified during our initial model development—not the result of retrospective backtest fitting or curve-fitting on recent data.

Beyond the backtest

Results You Can Trust
Our performance results are grounded in a rigorous and transparent process. While the CrestCast™ Macro-Aware US Factor Rotation Index officially launched in August 2025, the historical index simulation reflects how the strategy would have performed using real-time signals dating back to 2001. Importantly, these signals are derived from a machine learning algorithm that was fully developed on data through 2013, and has been operating in strict out-of-sample mode from 2014 forward. The result is a performance profile that builds confidence through process.

CrestCast™ Performance Summary vs. Benchmark

Exhibit 1.
Over each major timeframe, the CrestCast™ index demonstrates superior risk efficiency—combining lower volatility, lower beta, and stronger risk-adjusted returns, resulting in a smoother and more resilient investor experience.

	1 year		5 year		10 year		Since Inception	
	CressCast™ Index	Benchmark	CressCast™ Index	Benchmark	CressCast™ Index	Benchmark	CressCast™ Index	Benchmark
Total Return (CAGR)	19.28%	16.93%	15.74%	16.25%	15.69%	12.26%	11.15%	8.77%
Standard Deviation	12.14%	12.74%	13.31%	16.58%	13.73%	15.91%	14.58%	15.48%
Sharpe Ratio	1.14	0.93	0.96	0.83	0.99	0.69	0.69	0.52
Beta	0.27	1	0.48	1	0.64	1	0.64	1
Alpha	14.66%	–	6.25%	–	7.93%	–	4.84%	–
Ulcer Ratio	9.41	5.05	5.28	1.91	4.16	1.77	1.08	0.69
Tracking Error	14.87%	–	13.64%	–	12.79%	–	12.00%	–
Information Ratio	0.73	–	0.46	–	0.62	–	0.41	–
Up Capture	70.61%	100%	62.37%	100%	73.20%	100%	82.62%	100%
Down Capture	10.34%	100%	30.93%	100%	33.99%	100%	59.98%	100%

Exh. 1

How does the CrestCast™ index address the major threats investors face?

Threat One

The CrestCast™ index demonstrates a clear advantage in enhancing downside protection and improving risk efficiency compared to its benchmark. While delivering a competitive annualized return of 11.15% versus the benchmark's 8.77%, its strength lies in how it manages risk throughout the cycle.

With a lower beta of 0.64, a 60% down capture, and 83% up capture, the index consistently pursues favourable risk-reward dynamics. This asymmetry in performance capture translates into a more resilient experience for investors—evidenced by a since inception Sharpe ratio of 0.69 compared to the benchmark's 0.52.

This superior risk management translates directly into an opportunity for better risk-adjusted performance for investors.

The index exhibits a positive Alpha of 4.84% versus the benchmark, suggesting its ability to generate excess returns beyond what

would be expected given its risk profile.

Exhibit Two shows the durability of the strategy's alpha across rolling 5-year periods. Rolling periods offer a more comprehensive view of performance

consistency. Its impressive down capture of 59.98% compared to the benchmark's 100% underscores its effectiveness in mitigating losses during market downturns, even while capturing a respectable 82.62% of market upside.

CrestCast™ Index Rolling 5-Year Annualized Alpha vs. Benchmark

Exhibit 2.
This chart highlights the durability of CrestCast™ alpha across market cycles. Positive alpha was achieved in the vast majority of rolling 5-year periods, reinforcing that the strategy's outperformance is structurally persistent.
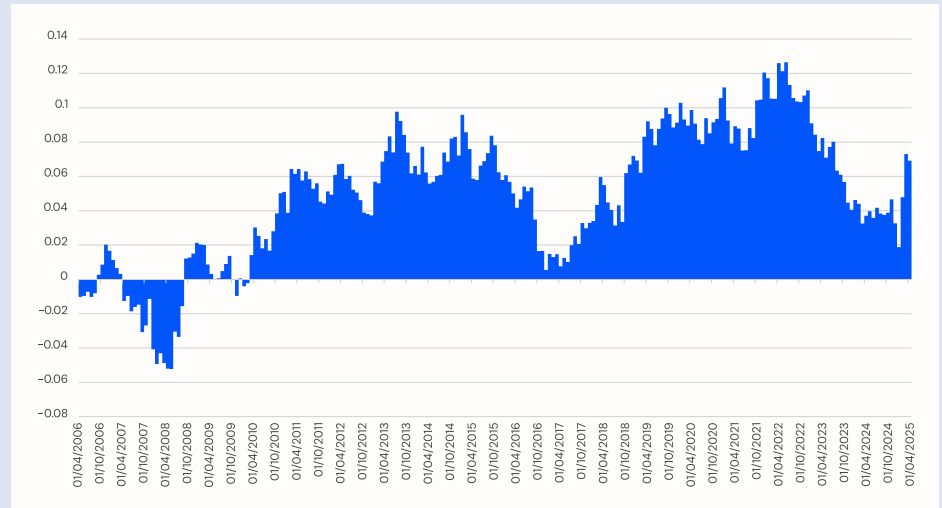
Exh. 2

Threat Two

Unmanaged market drawdowns significantly impact investor psychology, leading to detrimental behavioral errors. CrestCast™'s demonstrated ability to reduce volatility and mitigate deep drawdowns—evidenced by its materially lower Max Drawdown and higher Ulcer Ratio—directly addresses this challenge.

The Ulcer Ratio, in particular, reflects not just how far portfolios fall, but how long they

stay underwater—capturing the persistent psychological stress that derails investors.

By delivering a smoother and less prolonged drawdown experience, CrestCast™ helps strengthen investor confidence, promote strategy adherence, and reduce the likelihood of emotionally driven, value-destroying decisions.

CrestCast™ vs. Benchmark Drawdowns (Full History)

Exhibit 3.
CrestCast™ has consistently mitigated peak-to-trough drawdowns relative to the benchmark—delivering meaningful protection during periods of macro stress. This capital preservation effect is foundational to addressing behavioral risk and sequence-of-return challenges.

— CrestCast™ index
— Benchmark
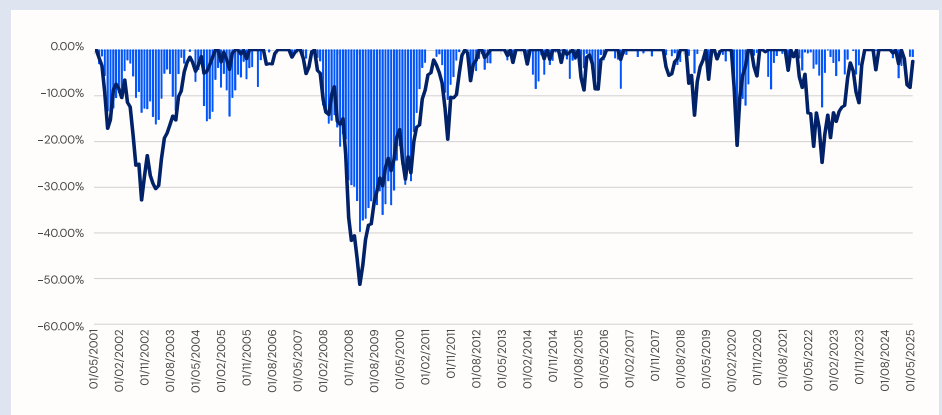
Threat Three

Whether implemented via an ETF model portfolio, within an ETF wrapper, or through an overlay implementation on a direct indexing platform, our index is designed for implementation using high-volume, well-traded securities – and available under attractive pricing levels.

Marketplace viability

A scalable and differentiated advantage

The CrestCast™ Macro-Aware US Factor Rotation Index offers an adaptable solution across multiple delivery models, and its strength lies in how it helps platforms better serve long-term investors navigating real-world challenges—namely, sequence risk, behavioral missteps, and lack of access to liquid, risk-managed strategies.

Key Features:

Differentiated Product Line
Integrates macro adaptation into direct indexing, ETF, and model portfolios—creating distinctive offerings in a crowded marketplace.

Full-Cycle Appeal
Helps investors remain invested while better managing risk through changing economic regimes.

Turnkey Implementation
Monthly, rules-based output that aligns with existing workflows for seamless adoption.

Transparent Systematic Model
Enables monthly client communication grounded in data—not market opinion—improving advisor-client trust and retention.

Strategic Benefits:

Improved Outcomes for Long-Term Investors
Helps mitigate key risks—sequence, behavior, and drawdown—while offering access to institutional-quality logic without lockups or opacity.

Increased Revenue Opportunity
Advisors and clients are more willing to pay for differentiated, alpha-seeking strategies that also enhance confidence during downturns.

Reduced Client Attrition
By smoothing the investment ride and communicating clearly, advisors can reduce panic-driven exits.

Greater Share of Wallet
Improved results and messaging open the door for deeper client relationships and platform usage.

Advisor Differentiation
Platforms that offer macro-aware, adaptive strategies elevate their positioning and value to advisors competing for trust and retention.

Enabling platform differentiation at scale

The CrestCast™ Macro-Aware US Factor Rotation Index offers an adaptable solution across multiple delivery models. Below are illustrative examples of how its strength can help platforms better serve long-term investors navigating real-world challenges—namely, sequence risk, behavioral missteps, and lack of access to liquid, risk-managed strategies.

01.
Direct Indexing Platforms

A direct indexing platform with less than $1B in AUM is poised to scale, but seeks differentiation in a crowded marketplace. They recognize advisor and end-investor demand for better risk-managed equity solutions and decide to add a "macro-aware check-box" to offer a macro-dynamic overlay derived from the CrestCast™ Macro-Aware US Factor Rotation Index:

Advisor messaging becomes more compelling. Advisors can shift from offering generic passive portfolios to macro-aware, dynamically adaptive solutions.

End-client experience improves. Portfolios remain fully invested, but exposures evolve—helping clients stay the course through turbulent markets.

Revenue opportunity expands. With a differentiated, alpha-seeking product layer, platforms can justify higher pricing tiers and gain greater advisor engagement.

02.
Systematic Overlays for Active Managers

A systematic equity manager is facing outflow pressure resulting from insufficient alpha generation relative to the fund's Total Expense Ratio (TER). By layering a CrestCast-derived macro overlay atop their strategies

Consistency improves. The macro classification acts as a stabilizer, aligning exposures with prevailing environments.

Complementary processes enhance value proposition. Managers retain discretion while benefiting from a systematically adaptive macro lens.

Commercial viability increases. Strategies can be repositioned as hybrid systematic-active offerings—bridging innovation with tradition.

03.
Sponsored ETFs (White-Labeled Systematic Exposure)

ETF sponsor with deep distribution channels to the wealth management industry recognize an appetite for a more resilient core equity offering. They white-label a CrestCast™ powered ETF to

Offer a macro-aware alternative to static factor funds. Introduce a rules-based ETF that adjusts exposures based on the prevailing regime.

Differentiate in a crowded ETF market. Move beyond traditional beta and static smart beta funds by offering a disciplined, adaptive strategy with a clear narrative.

Empower advisors with a compelling story. Sales teams gain a credible and intuitive message — HOW and WHY the fund shifts exposures, not just what it holds.

Regardless of the specific implementation model, the CrestCast™ Index empowers platforms and advisors to offer truly differentiated solutions that improve client outcomes and enhance business value.

Conclusion

The future of adaptive investing

Investors today face a unique challenge: how to remain invested and on-plan in a world of rising volatility, unpredictable macro events, and emotional decision points. For advisors, the question is how to build portfolios that meet these realities—without sacrificing access, liquidity, or simplicity.

The CrestCast™ Macro-Aware US Factor Rotation Index helps solve this.

It brings together:
- The independent power of factor-based strategies,
- The directional insight of macro regime classification,
- And the amplified value of combining both systematically.

Together, macro-awareness and factor rotation create a new type of equity core—one that aims to preserve capital during turbulence, pursue alpha through market cycles, and communicate clearly along the way. The result is a more efficient, resilient, and trustworthy investment experience for advisors and end investors alike.

Institutional investors have long turned to private equity for its higher-return potential and low correlation to public markets—but at a cost: long lockups, high fees, and limited transparency.

While we don't suggest replacing private equity, it's worth noting that strategies powered by the CrestCast™ Index aim to

deliver many of the same portfolio benefits—enhanced return potential and risk-adjusted performance—without requiring illiquidity, opacity, or structural complexity. Our approach is not picking a fight with private equity; it simply offers a more liquid, accessible complement for investors pursuing a shift in their portfolio's efficient frontier.

Through macro-driven factor rotation and disciplined implementation, index-derived overlays offer a modern answer to the timeless challenges of drawdowns, behavior, and accessibility--without the liquidity and expense trade-offs that have historically accompanied advanced strategies.

Intervallum Technologies

Get in Touch

Ready to bring Passive 3.0™ to life on your platform? Let's talk →

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