TIRMANN

Building dynamic quantitative systems for investment firms

Tirmann is a quantitative software studio specialising in the research, development and licensing of systematic algorithmic portfolios for investment firms.

Investment philosophy and operational model.

OVERVIEW

Tirmann was founded following five years of hands-on R&D and live operation of quantitative strategies across index and commodity futures. In systematic trading, theoretical knowledge sets the framework, but it is live market exposure that separates robust systems from well-constructed backtests. Everything built at Tirmann has been forged through years of direct market operation, iterative refinement, and continuous validation against real execution conditions.

Tirmann develops and licenses algorithmic frameworks and strategy architectures validated through exhaustive out-of-sample testing, walk-forward analysis, and Monte Carlo stress simulations, ensuring full auditability with zero discretionary override. Critically, every strategy licensed is traded simultaneously on proprietary capital. Full skin-in-the-game, and complete alignment of interests.

THE PROBLEM: STATIC MODEL DECAY

Most quantitative failures stem from "static model decay." A strategy optimized for a specific market regime (e.g., low volatility bull market) inevitably degrades when market structure shifts.

Dynamic lifecycle

We do not deliver static code; we manage a dynamic strategy lifecycle:

Structural diversification

Our systems are designed to capture specific market anomalies across non-correlated markets, primarily indices and commodities. By balancing exposure across distinct asset classes and logic frameworks, the architecture is engineered to minimize cross-strategy correlation and eliminate single-point-of-failure risks.

ARCHITECTURAL CORE PILLARS

Surviving market regime shifts requires more than just a statistical edge; it demands an infrastructure built on absolute transparency, deep execution liquidity, and systematic risk containment. The Tirmann framework rests on three uncompromising pillars:

Systematic rigor

Every parameter is grounded in structural market anomalies.

Operational scalability

Our architecture is engineered exclusively for deep-liquidity futures (CME).

Risk governance

Predefined mathematical kill-switches at the strategy and portfolio levels.

MICRO-STRUCTURAL AND TACTICAL EDGE

OHLC and volatility architecture

Systematic analysis of discrete price action, dynamic daily ranges, and intraday breakout/mean-reversion mechanics based on rolling volatility Z-scores.

Momentum and mean-reversion metrics

Statistical measurement of price velocity and mathematical deviations from structural means to optimize entry/exit timing for complex reversal and breakout patterns.

Structural market cycles

Quantitative tracking of multi-timeframe price cycles to identify underlying structural trends and govern alpha regime transitions.

MACRO-FUNDAMENTAL OVERLAY AND CAPITAL FLOWS

Proprietary nowcasting regimes

Automated processing of leading global macroeconomic indicators to algorithmically classify macro regimes (Goldilocks, Reflation, Stagflation, Deflation).

CFTC capital flows and crowding factors

Normalization and quantitative screening of CFTC Commitment of Traders data to exploit market participant positioning, actively avoiding liquidity squeezes at historical sentiment extremes.

ADVANCED INFRASTRUCTURE AND PROPRIETARY TOOLING

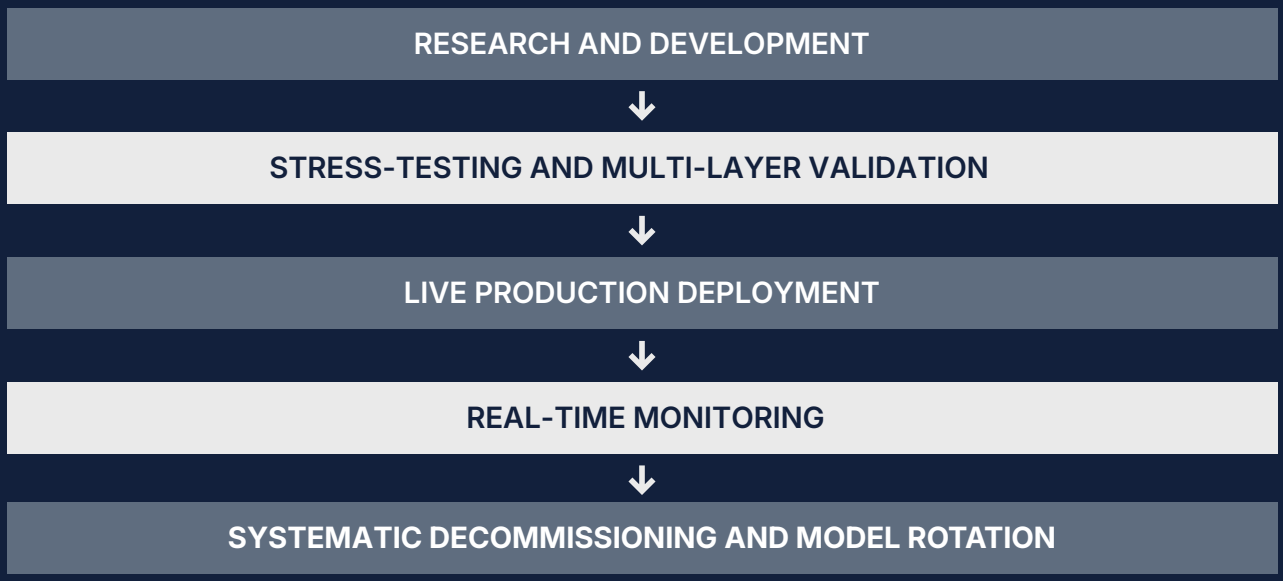
Macro data extraction engine

Automated production pipeline designed to ingest, clean, and structure global macro indicators and Nowcasting datasets into mathematically auditable signals.

Dynamic rotation software

Algorithmic execution module that systematically manages cross-strategy capital reallocation and strategy decommissioning based on real-time multi-layer risk indicators.

The validation gauntlet and infrastructure.



VALIDATION PROCESS

Every model must pass through our proprietary validation funnel to ensure statistical significance.

Hypothesis-driven research

Strategies are built on economic or structural premises, not random data mining.

Walk-Forward analysis

Dynamic optimization testing to ensure parameters adapt to changing market conditions without over-fitting.

Statistical stress testing

This delivers a mathematically bounded risk profile within a strict 95% confidence interval.

Out-of-sample validation

A data-lockout period to verify that the statistical edge observed in-sample remains present on unseen data and then in a live environment.

STRATEGY UNIVERSE AND STRUCTURAL DIVERSIFICATION

Tirmann maintains a proprietary reserve of over 150 rigorously validated algorithms across all futures markets, engineered for maximum cross-market diversification and low inter-strategy correlation. This pool is in constant evolution, new models are continuously developed on novel logic frameworks and updated market data, ensuring the reserve remains statistically robust and operationally relevant over time.

Asset class

Our models span equity indices and commodity futures, balancing exposure between financial and physical delivery markets to mitigate single-sector concentration risk.

GOLD | NASDAQ | S&P500 | CRUDE OIL | NATURAL GAS | CORN | PALLADIUM

LIVE CATTLE | FEEDER CATTLE | COPPER | EUROFX | SOYBEAN | ALUMINIUM | PLATINUM

Behavioral clusters

Algorithms are categorised by their underlying market logic. Trend following and mean reversion, ensuring the portfolio can capture structural anomalies across all market conditions.

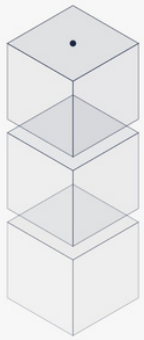
The rotational reserve

We do not force all 150+ models into the market simultaneously. Instead, this universe serves as a highly qualified dynamic reserve. As market regimes shift, our framework systematically deactivates decaying models and deploys reserve strategies that possess the highest mathematical alignment with the current volatility cycle.

150+

Algorithms developed and validated

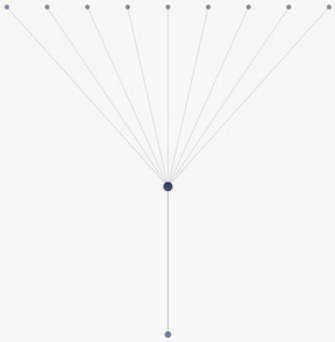
Equity indices & commodities
CME deep-liquidity futures
In constant evolution



15+

Years of market data tested per model

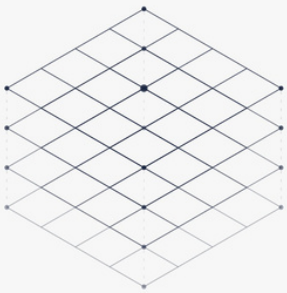
Since January 2010
Multiple market regimes
Walk-forward validated



5+

Independent validation layer

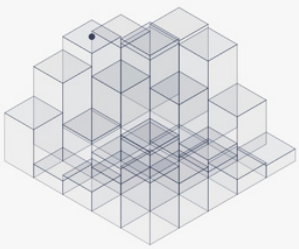
Hypothesis testing
Monte Carlo stress test
Out-of-sample validation



100%

Documented and fully auditable

Full Blueprint report
Zero discretionary override
Skin in the game



We build algorithmic trading systems

SYSTEMATIC SEAT CONFIGURATION & DEPLOYMENT

We assemble a cohesive strategy architecture tailored to your firm's technical setup and risk boundaries. Deployed software slots are mapped to your exact margin capacity, ensuring structural diversification and cross-market synergy.

STRATEGY DOCUMENTATION AND BLUEPRINT REPORT

Every configuration is accompanied by a detailed Blueprint report that is systematically re-issued at each monthly rotation. This continuous reporting delivers updated historical metrics and stress tests, providing your risk committee with permanent compliance auditability.

ALGORITHM LICENSING

Our proprietary software framework is accessible through a transparent, seat-based licensing structure built for complete autonomy. We enforce a clean tech-vendor model with zero profit-sharing, no discretionary control, and no capital lock-ins.

ONGOING MONITORING AND MONTHLY ROTATION

Markets evolve. So does your portfolio. Strategies falling below predefined performance criteria are systematically suspended and replaced: ensuring your portfolio remains aligned with current market regimes without requiring active management.

SERVICE AND OPERATIONAL CONTINUITY

A dedicated technical service layer runs alongside your deployment to ensure maximum system integrity. This infrastructure support provides direct-access debugging, stability oversight, and scheduled maintenance via secure VPS environments for seamless live execution.

PERFORMANCE REPORT

Live performance and drawdown analysis from Jan. 2024

29 Jan 2024 · 26 Jun 2026 · 2,010 trades · 2.4 years

LIVE · 29 JAN 2024 → 26 JUN 2026 · 2,010 TRADES

LIVE KEY PERFORMANCE INDICATORS

TOTAL P&L (NET)	RET / DD	SHARPE RATIO	MAX DRAWDOWN	WIN RATE
$779,670	13.19	3.12	-$59,120	43.63%
	2.4 years	Sortino: 7.08	5 neg. months	PF: 1.48

LIVE DETAILED METRICS

OVERALL PERFORMANCE	
Total P&L (USD)	$779,670
Total P&L Gross	$819,870
Transaction Fees (est.)	-$40,200
Sharpe Ratio	3.12
Sortino Ratio	7.08
Calmar Ratio	7.29
Omega Ratio	1.87
Gain / Pain	0.87
Serenity Index	18.59
Recovery Factor	13.19
Ret / DD	13.19
PERIODIC RETURNS	
Avg Monthly P&L	$27,329
Best Month	130.56%
Worst Month	-23.13%
Best Day	59.60%
Worst Day	-18.34%
Positive Months	80.0%
Best Year	357.39%
Worst Year	132.44%
Positive Years	100.0%

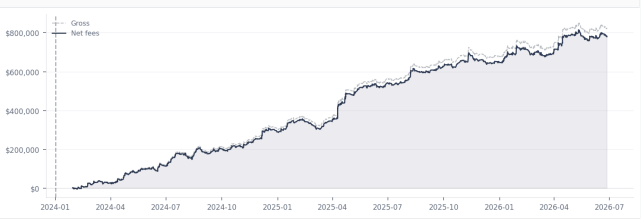
RISK	
Max Drawdown %	-44.44%
Max Drawdown USD	-$59,120
Volatility (ann.)	99.81%
VaR 95%	-6.28%
CVaR 95%	-8.77%
Ulcer Index	0.1681
% Time in DD	87.0%
DISTRIBUTION	
Skewness	2.34
Excess Kurtosis (N=0)	14.03
TRADES	
Nb Trades	2010
Fee / Trade (est.)	$20.00 round-turn
Win Rate	43.63%
Profit Factor	1.48
Expectancy (USD)	$408
R Expectancy	0.24 R
Payoff Ratio	1.71
Best Trade	$29,990
Worst Trade	$-6,110
Avg Win	$2,900
Avg Loss	$-1,691
Max Consec. Wins	8
Max Consec. Losses	11
Kelly %	14.91%

1M	3M	6M	YTD	1Y	ITD
+17.73%	+92.31%	+126.86%	+132.44%	+257.77%	**+779.67%**

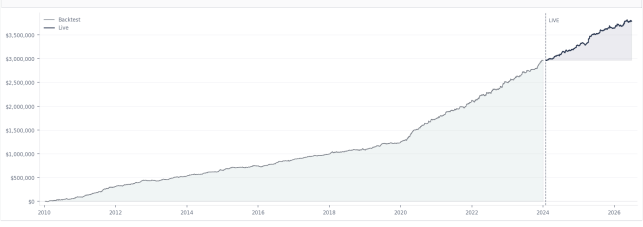
NOV 25	DEC 25	JAN 26	FEB 26	MAR 26	APR 26	MAY 26	JUN 26	TOTAL
$2,880	$-10,995	$77,820	$-21,775	$17,240	$75,445	$-6,960	$515	**$134,170**

EQUITY CURVE

CUMULATIVE P&L (USD) · LIVE

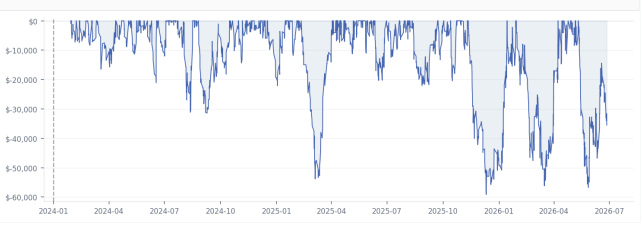


DEVELOPMENT PERIOD + LIVE P&L

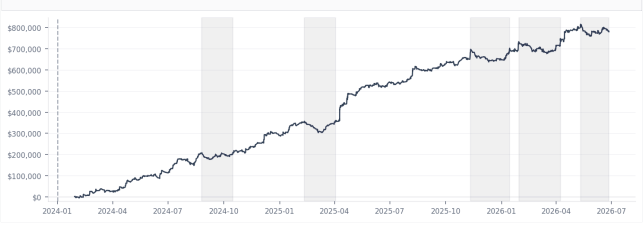


DRAWDOWN ANALYSIS

DRAWDOWN (USD)



WORST 5 DRAWDOWN PERIODS (USD)



ROLLING METRICS · 126 TRADING DAYS (~6 MONTHS)

ROLLING SHARPE (126D)

ROLLING VOLATILITY ANN. (126D)

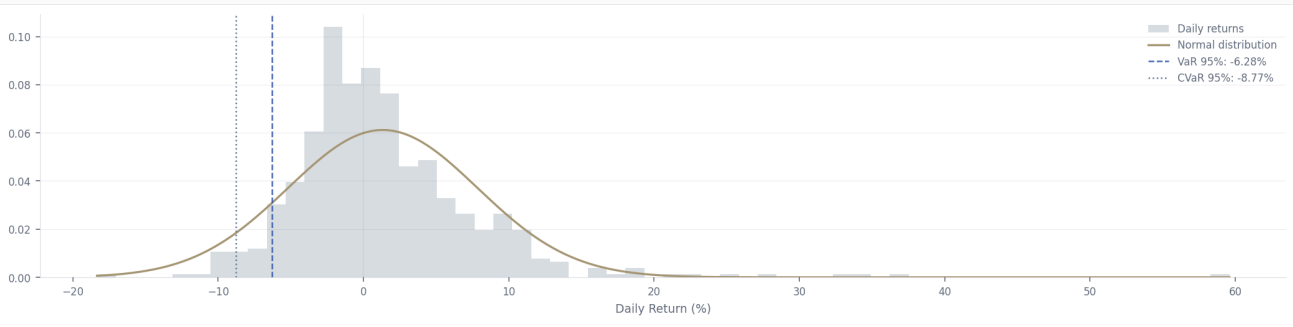
MONTHLY RETURNS (USD) · 1 STANDARD CONTRACT

MONTHLY RETURNS HEATMAP

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	YTD
2024	$-3,425	$22,315	$8,750	$46,105	$29,795	$16,715	$63,550	$12,695	$18,190	$10,260	$41,830	$37,190	**$303,970**
2025	$53,945	$-20,050	$33,515	$133,120	$41,375	$19,235	$14,480	$43,460	$30,705	$31,945	$2,880	$-10,995	**$373,615**
2026	$77,820	$-21,775	$17,240	$75,445	$-6,960	$515							**$142,285**

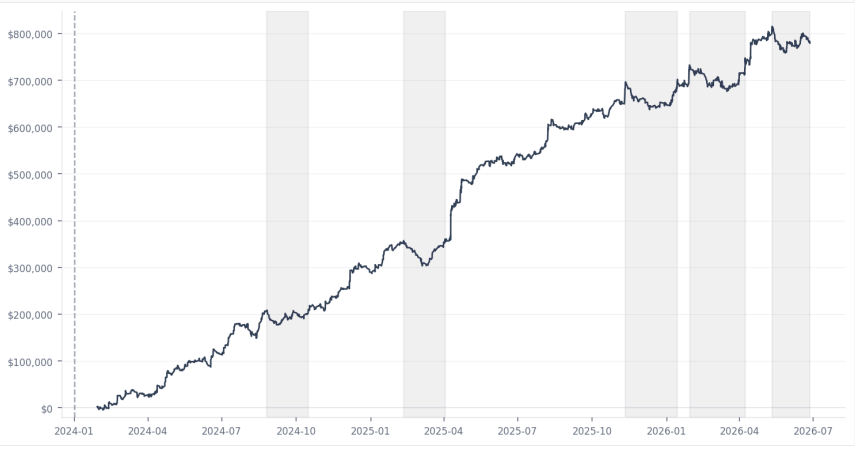
RETURN DISTRIBUTION

DAILY RETURN DISTRIBUTION



WORST 10 DRAWDOWN PERIODS

DRAWDOWN PERIODS (USD)

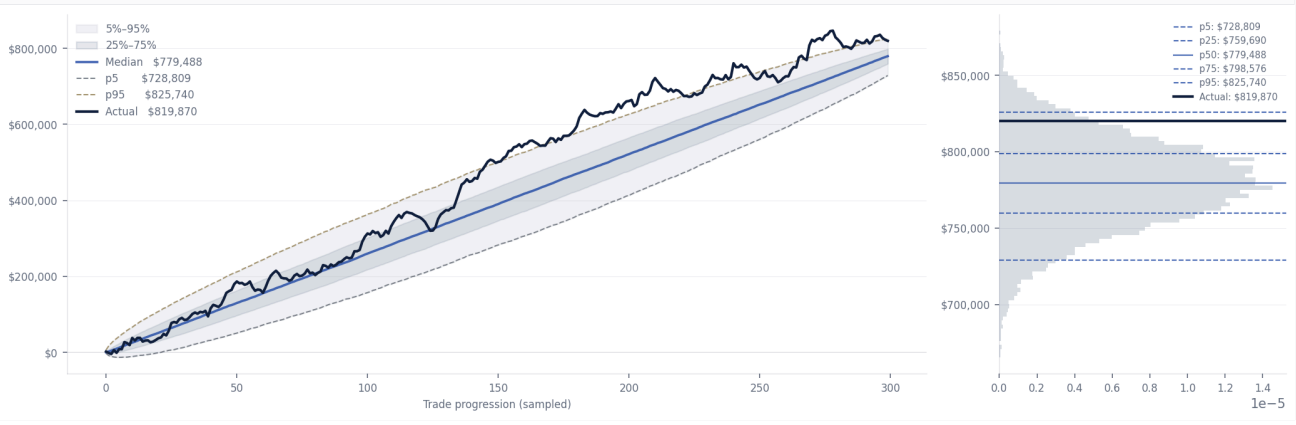


10 WORST PERIODS

STARTED	RECOVERED	DRAWDOWN	DURATION
11 Nov 2025	13 Jan 2026	-$59,120	63d
11 May 2026	*In progress*	-$56,740	46d
29 Jan 2026	07 Apr 2026	-$56,185	68d
10 Feb 2025	02 Apr 2025	-$53,835	51d
25 Aug 2024	15 Oct 2024	-$31,420	51d
19 Jul 2024	16 Aug 2024	-$31,130	27d
17 Dec 2024	15 Jan 2025	-$22,095	29d
11 Aug 2025	22 Sep 2025	-$22,050	41d
09 Jun 2024	18 Jun 2024	-$21,100	8d
13 Oct 2025	23 Oct 2025	-$20,455	9d

MONTE CARLO · 10,000 SIMULATIONS · 5% TRADES SKIPPED

MONTE CARLO SIMULATIONS



PROBABILITY OF PROFIT	P5 · PESSIMISTIC	P50 · MEDIAN	P95 · OPTIMISTIC
100.0%	$728,809	$779,488	$825,740
	5th percentile	50th percentile	95th percentile

CONFIDENCE LEVEL	NET PROFIT	% NET PROFIT	NB TRADES	MAX DD	MAX % DD	RET/DD	R EXP	AVG ANNUAL %	MAX CONSEC. LOSSES
Original	$779,670	779.7%	2010	$59,120	44.4%	13.19	0.24 R	324.0%	11
50	$779,488	779.5%	1910	$41,522	31.2%	18.77	0.24 R	323.9%	10
60	$772,139	772.1%	1910	$43,877	33.0%	17.60	0.24 R	320.8%	11
70	$764,150	764.1%	1910	$46,852	35.2%	16.31	0.24 R	317.5%	11
80	$754,954	755.0%	1910	$50,566	38.0%	14.93	0.23 R	313.7%	12
90	$741,235	741.2%	1910	$56,760	42.7%	13.06	0.23 R	308.0%	13
92	$737,044	737.0%	1910	$58,502	44.0%	12.60	0.23 R	306.3%	13
95	$728,809	728.8%	1910	$61,977	46.6%	11.76	0.23 R	302.8%	14
97	$721,469	721.5%	1910	$66,391	49.9%	10.87	0.22 R	299.8%	15
98	$715,765	715.8%	1910	$69,715	52.4%	10.27	0.22 R	297.4%	15
99	$706,090	706.1%	1910	$75,161	56.5%	9.39	0.22 R	293.4%	16
100	$665,345	665.3%	1910	$118,110	88.8%	5.63	0.21 R	276.5%	24

For each confidence level, profit = (100-CL)th percentile, max DD = CL-th percentile across 10,000 simulations. 5% of trades randomly skipped per simulation. Returns computed on arithmetic basis (fixed-capital).

This report is provided for informational purposes only and does not constitute investment advice. Past performance is not indicative of future results. All figures are based on backtested or live trading data and may include estimates. Transaction fees are approximate. Results may differ materially from actual trading outcomes due to slippage, liquidity constraints, and other market factors. For institutional use only — not for public distribution.

Live equity curve from January 2024

29 Jan 2024 · 26 Jun 2026 · 2,010 trades · 2.4 years · base capital $1,000,000

NOTICE - PERCENTAGE RETURNS ON FUTURES STRATEGIES

This supplementary analysis is provided for conventional reporting purposes only. All percentage figures are computed against an arbitrary reference capital of **$1,000,000** and carry no intrinsic meaning without that context.

In futures trading, the dollar P&L per contract is the only objective performance unit, determined solely by price movement and contract specifications, independent of any capital allocation. Percentage returns are therefore never standardised across traders without explicit disclosure of capital reference, margin usage and position sizing methodology.

Ratio metrics (Sharpe, Ret/DD, Sortino, Calmar) are capital-reference-independent and constitute the correct basis for strategy comparison.

KEY PERCENTAGE INDICATORS

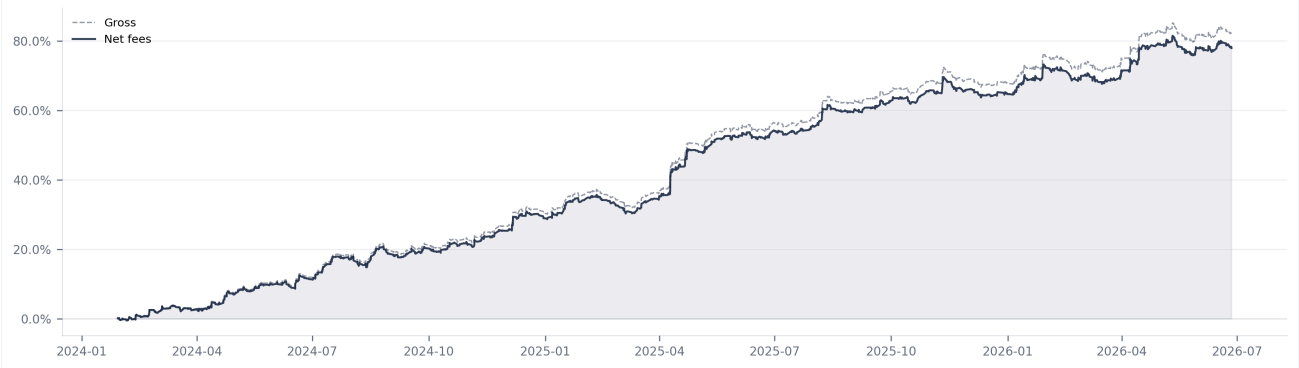
TOTAL RETURN (NET)	AVG ANNUAL RET.	SHARPE RATIO	MAX DRAWDOWN	VOLATILITY ANN.
78.0%	32.4%	3.28	5.6%	10.0%
base $1,000,000	2.4 years	Sortino: 7.56	trade-level peak-to-trough	annualised daily vol

PERCENTAGE METRICS - BASE $1,000,000

RETURNS - BASE $1,000,000	
Total Return (net)	77.97%
Total Return (gross)	81.99%
Transaction Fees (est.)	-$40,200
Avg Annual Return	32.40%
Volatility (ann.)	10.00%
Sharpe Ratio	3.28
Sortino Ratio	7.56
Calmar Ratio	5.79
DRAWDOWN	
Max Drawdown %	5.60%
Ulcer Index	0.0188
% Time in Drawdown	86.3%
VaR 95%	-0.62%
CVaR 95%	-0.87%
PERIODIC RETURNS	
Best Month	13.31%
Worst Month	-2.18%
Positive Months	83.3%
Best Year	37.36%
Worst Year	14.23%
Win Rate	43.63%

CUMULATIVE RETURN (%)

CUMULATIVE RETURN - BASE $1,000,000



DRAWDOWN (%)

DRAWDOWN % - TRADE-LEVEL, BUSINESS-DAY SNAPSHOTS

MONTHLY RETURNS (%)

MONTHLY RETURNS HEATMAP - BASE $1,000,000

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	YTD
2024	-0.34%	2.23%	0.88%	4.61%	2.98%	1.67%	6.35%	1.27%	1.82%	1.03%	4.18%	3.72%	**30.40%**
2025	5.39%	-2.00%	3.35%	13.31%	4.14%	1.92%	1.45%	4.35%	3.07%	3.19%	0.29%	-1.10%	**37.36%**
2026	7.78%	-2.18%	1.72%	7.54%	-0.70%	0.05%							**14.23%**

Dynamic rotation and regime governance.

THE NECESSITY OF REGIME ALIGNMENT

The core challenge in systematic trading is not finding an edge, but managing its inevitable decay. Most quantitative failures occur when a static portfolio remains exposed to a market regime that has fundamentally shifted.

Tirmann's architecture is built on the premise that alpha is a perishable asset. Rather than assuming market conditions will remain static, the framework deploys a dynamic rotation engine that continuously realigns the active strategy pool to the prevailing volatility regime.

ROTATION ENGINE MECHANICS

Unlike traditional "Buy and Hold" algorithmic portfolios, our engine systematically filters the strategy universe based on real-time performance integrity:

Regime detection

Continuous monitoring of market microstructure to identify shifts (e.g., from low-volatility trend to high-volatility mean reversion).

Model health audit

Every active strategy is benchmarked against its historical statistical profile. If a model exhibits "Regime Drift" or structural decay, it is automatically returned to the reserve.

Alpha replacement

The system selects replacement candidates from the 150+ validated models that show the highest mathematical alignment with the new market environment.

DYNAMIC ROTATION AND RISK GOVERNANCE

Structural synergy

Pairing orthogonal logics (Trend vs. Mean Reversion) to offset individual drawdowns.

Volatility protection

Dynamic weighting to maintain a stable risk profile, regardless of market noise.

Microstructure integrity

Immediate removal of any model deviating from its original research thesis.

Static holding vs. Active rotation

OOS from 2024-01-01 · 105 strategies

AVERAGE DRAWDOWN REDUCTION

+37.5%

Close to close per model average

AVERAGE P&L CAPTURE

43.5%

Average P&L retained across all models

OVERVIEW

Portfolio equity & underwater curve · OOS

UNFILTERED MAX DD

550,338 $

Peak: 4,523,495 $ · Trough: 3,973,158 $

Recovery Factor: 7.23x

FILTERED 1M+5M MAX DD

209,228 $

Peak: 1,454,972 $ · Trough: 1,245,745 $

Recovery Factor: 14.36x

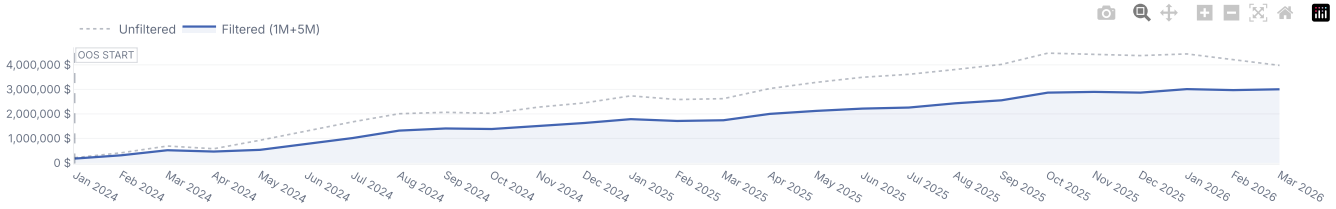
SAVINGS

+341,110 $

62.0% max DD reduction

Trade-by-trade · consolidated portfolio

CUMULATIVE P&L (USD)



PORTFOLIO ANATOMY

All dimensions · consolidated portfolio (OOS)

METRIC	UNFILTERED	FILTERED 1M+5M	DELTA
Episodes	4	5	+1.0
Frequency / year	1.8	2.2	+0.4
Max DD ($)	499,275 $	73,445 $	-85.3%
Avg DD ($)	200,246 $	43,984 $	-78.0%
Max Duration	5m	3m	-2.0
Avg Duration	3.0m	2.2m	-0.8
Max Recovery	2m	2m	+0.0
Avg Recovery	1.3m	1.2m	-0.1
Time in DD	44.4%	40.7%	-8.3%
Recovery Factor	7.97	40.89	+413.0%
Pain Index	3.844	1.498	-61.0%

UNDERWATER

DRAWDOWN

Study carried out on the complete pool available at the time (105 models), over an OOS period from 2024-01-01.

The roadmap to your tailored infrastructure.

1

Consultation and proof of concept.

This step lays the foundation for a licence configuration truly aligned with your setup, experience, and objectives.

2

Licence configuration and review.

Your seats are configured around your margin capacity, followed by a full system review and Q&A session.

3

Documentation and delivery.

You receive an initial Blueprint report detailing historical backtests and risk metrics, which is systematically re-issued at every monthly rotation.

4

Deployment and activation review.

Technical documentation is provided for platform configuration. Deployment decisions and activation remain entirely under client control.

5

Algorithm monitoring and rotation.

Underperforming models are systematically rotated out per our quantitative protocol, accompanied by an updated Blueprint report for continuous compliance.

Timeline of the proof of concept.

DUE DILIGENCE AND ALIGNMENT

Every engagement begins with a quantitative assessment. You provide your daily return history, we calculate the decorrelation score against our active strategy pool and simulate the combined portfolio across key risk metrics: drawdown profile, ratios, correlation regime stability.

The output is a full impact report. If the figures confirm a structural interest on both sides, we proceed to the next step.

OBJECTIVE

Confirm the mathematical synergy between your existing portfolio and ours before any deployment.

DELIVERABLE

Full decorrelation and a combined portfolio impact report.

LIVE PHASE

Over one calendar quarter, a defined set of strategies operates under live market conditions on a dedicated account. You observe execution quality, monthly rotation in real time with full access to trade-level data.

No commitment is required. Deployment decisions remain entirely at your discretion.

OBJECTIVE

Experience live performance first-hand, with complete visibility before any formal commitment.

DELIVERABLE

One full quarter of auditable live trade data. Monthly rotation reports. Full execution logs.

LICENCE ACTIVATION

Once both parties have validated the fit, quantitatively and operationally, the licence is formalised. Seat count, markets, and rotation schedule are confirmed, and the engagement moves to a long-term partnership.

OBJECTIVE

Formalise a long-term engagement built on verified performance.

DELIVERABLE

Signed licence configuration and first official Blueprint report for the active deployment.

No upfront cost for the POC. In case of non-conversion, a flat infrastructure fee applies (fully deductible upon any subsequent licence).

Structural edge and over-fit prevention.

MULTI-LAYER VALIDATION GATE

Models must pass sequential tests: historical dislocations, walk-forward stability, and out-of-sample validation. Failure at any independent layer triggers immediate, non-discretionary decommissioning.

PARAMETER PARSIMONY AS A ROBUSTNESS CRITERION

Deliberately simple algorithms capture genuine structural anomalies instead of over-fitted data. Minimizing parameters ensures logic transferability, serving as a direct proxy for out-of-sample robustness.

SELECTIVE OPTIMISATION, NOT SYSTEMATIC OPTIMISATION

Microstructure-driven filters exclude environment-mismatched trades. Optimisation is exclusively a final refinement layer applied to models with an already proven, standalone edge.

Strategic efficiency and resource allocation.

Capital efficiency

Licensing Tirmann replaces fixed overhead with a predictable software expense. It grants instant access to 150+ rotated models with zero profit-sharing, retaining 100% of your alpha.

Operational leverage

Internal quantitative infrastructure demands heavy fixed capital and specialized engineering teams exposed to key-person risk; licensing Tirmann eliminates these structural constraints.

Alpha is perishable.
Architecture is permanent.

Tirmann is an independent quantitative research and development framework specializing in systematic trading architecture. Built on the premise that market regimes are fundamentally fluid, the infrastructure shifts the focus from static algorithm deployment to dynamic lifecycle governance.

By integrating exhaustive statistical validation, cross-market structural diversification, and automated risk protocols, Tirmann provides a highly resilient technological foundation for deep-liquidity futures markets.

Universe

150+ validated algorithmic models

Markets

Global index and commodity futures

Execution

100% systematic and non-discretionary

Risk control

Hard-coded limits and dynamic regime rotation

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