CMA EXPO GOLD

Systematic Gold Strategy - We manage trades, not your money with rules-based quantitative execution.

by CMA Technologies QUANT & ALGO

Institutional Transparency • Non-Custodial Model • Rules-Based Automation

Who We Are

CMA Technologies Foundation

100% in-house quantitative research and development with proprietary, math-driven automation systems delivering institutional transparency and reproducible analytics.

Quantitative Excellence

Proprietary algorithms and mathematical models drive all trading decisions with zero human emotion or bias interference.

Research Driven

In-house R&D team continuously develops and refines systematic strategies using advanced statistical and mathematical methodologies.

Institutional Standards

Audit-friendly outputs and reproducible analytics ensure complete transparency and regulatory compliance for institutional investors.

Operating Model (Non-Custodial)

Investor Control

Funds remain in the investor's own account or wallet at all times. CMA executes strategies programmatically with full reporting transparency, reducing operational risk and aligning incentives perfectly.

Custody Control

Investors maintain complete custody of their funds while CMA manages systematic trade execution through secure API connections and protocols.

Programmatic Execution

Automated strategy implementation with comprehensive reporting ensures transparent operations and reduces counterparty risk for all stakeholders involved.

Strategy Overview (EXPO GOLD)

EXPO GOLD Strategy

Rules-based systematic strategy targeting Gold (USD) with long-bias and hedge awareness, using exit-only realized P&L accounting for conservative performance measurement.

Asset Focus

- Primary asset: Gold denominated in USD
- Rules-based systematic execution methodology
- Long-bias with hedge awareness

Accounting Method

- Exit-only realized P&L tracking in USD
- Unrealized drawdowns excluded from equity calculations
- Conservative clean profit representation

Risk Management

Disciplined systematic approach with hedge awareness.

Performance Tracking

Growth shown only from realized profits.

Transparency

Clean conservative accounting methodology.

Data & Methodology

Comprehensive backtesting dataset spanning over 28 years with detailed trade-by-trade analysis. One row equals one closed trade with daily realized P&L aggregated into equity calculations for complete transparency.

Parameter	Value	Description	Period Coverage	Data Quality
Start Capital	$1,000,000	Base Investment	1997-06-13	Historical
End Date	2025-09-24	Analysis Period	28+ Years	Complete
Total Days	10,330	Market Days	Full Coverage	No Gaps
Trade Records	2,351	Closed Trades	All Recorded	Auditable
Accounting Method	Realized P&L	Exit-Only	Conservative	Clean Data

Key Facts (At a Glance)

2,351
Main Trades

53.38%
Win Rate

1.95
Profit Factor

$70,483
Expectancy Per Trade

Win Rate Analysis

53.38% win rate demonstrates consistent profitable trade selection across varied market conditions and regimes.

- Main trades executed with systematic discipline
- Balanced approach to risk and reward
- Sustainable edge over extended periods

Profit Factor Strength

1.95 profit factor indicates gross profits nearly double gross losses, demonstrating effective risk management.

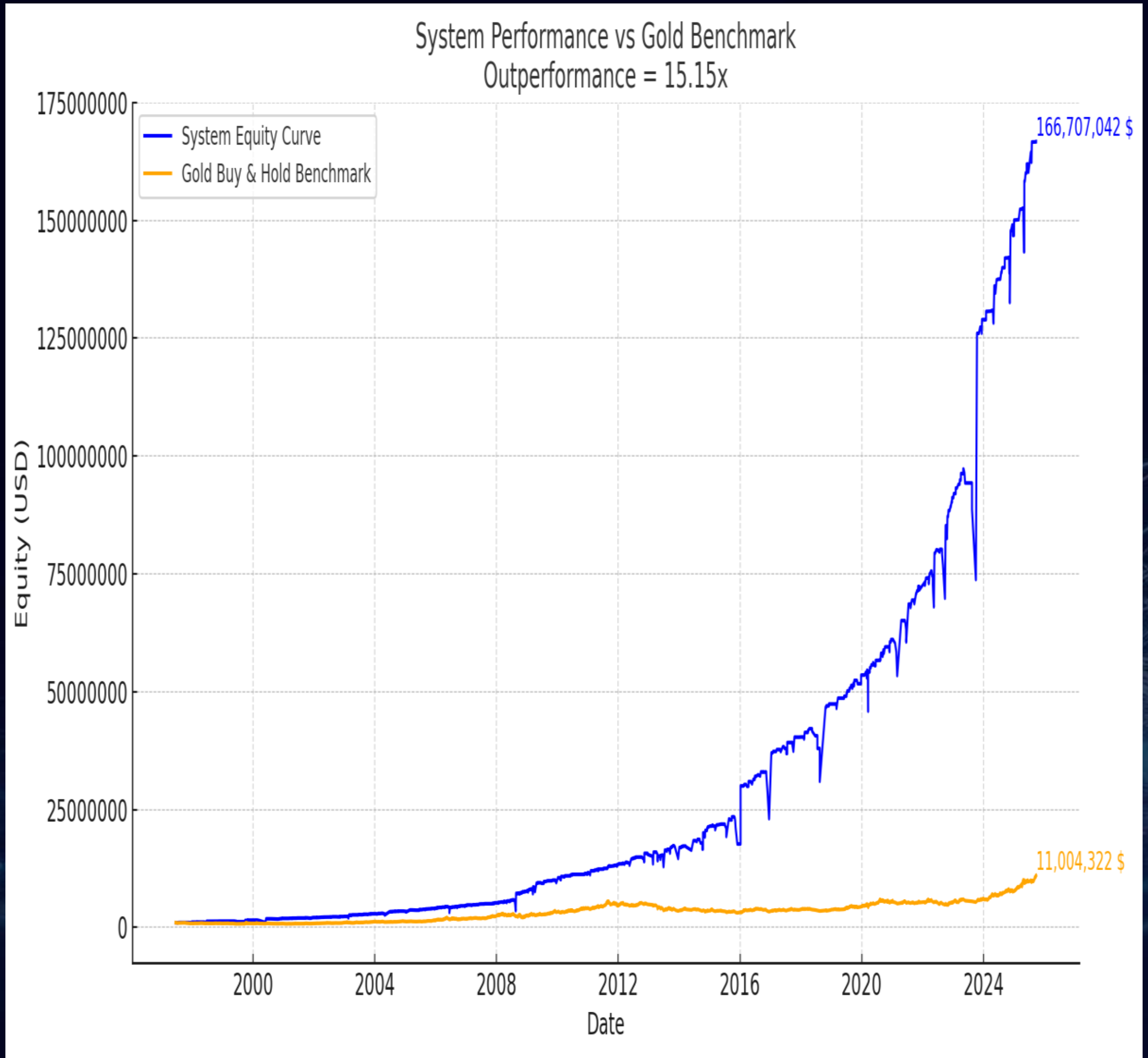
- Strong positive expectancy per trade execution
- Effective loss cutting and profit taking
- Payoff ratio of 1.70 supports profitability

Expectancy Excellence

Average expectancy of $70,483 per trade creates substantial compounding potential over time.

- Consistent positive mathematical edge demonstrated
- Combination of win rate and payoff
- Strong foundation for long-term growth

Equity vs Spot (Hero Performance)



Final Equity Achievement

From $1 million starting capital, the EXPO GOLD strategy achieved $166,707,041.51 final equity, representing exceptional long-term compound growth over the 28-year testing period with disciplined systematic execution.

Performance Metrics Summary

Compound Annual Growth Rate of approximately 19.81% net with maximum drawdown of -39.59% (≈ -$2.31M), demonstrating strong risk-adjusted returns over multiple market cycles and regime changes.

Performance Summary

Risk-Adjusted Performance Ratios

Multiple risk-adjusted metrics demonstrate the strategy's ability to generate superior returns while managing downside volatility effectively across market cycles.

- Sharpe Ratio (annual, RF=4%): 0.99 - solid return per unit of total volatility
- Sortino Ratio (annual): 2.94 - exceptional return per unit of downside volatility only
- Sortino highlights superior downside protection quality versus standard Sharpe measurement

Total Realized Profit Generation

Conservative accounting methodology shows only realized profits from actual trade exits, excluding unrealized gains for transparent performance measurement.

- Total Net Profit: $165,707,041.51 in realized gains only from trade exits
- Exit-only accounting provides clean and conservative profit representation methodology
- All gains represent actual cash earned rather than theoretical unrealized appreciation

Expectancy & Payoff (Why This Matters)

Mathematical Edge Foundation

The combination of positive expectancy and favorable payoff ratio creates a mathematically robust foundation for long-term profitability regardless of short-term market fluctuations.

Positive Expectancy Value

Average outcome per trade of $70,483 represents the mathematical edge that drives long-term compound growth.

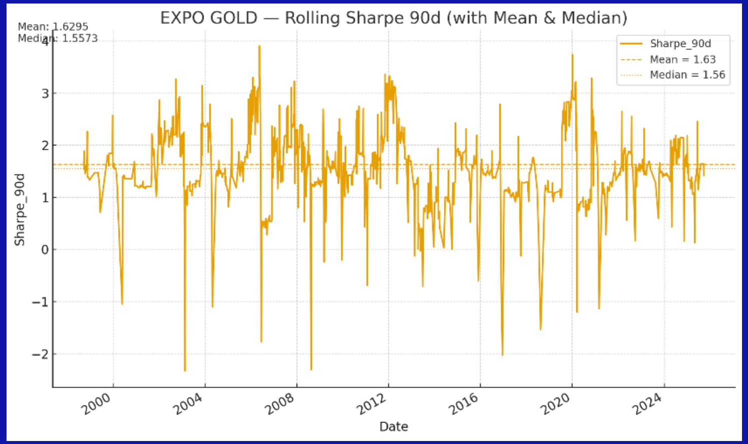
Favorable Payoff Ratio

Payoff ratio of 1.70 means average wins are 1.7 times larger than average losses, crucial for profitability.

Profitability Framework

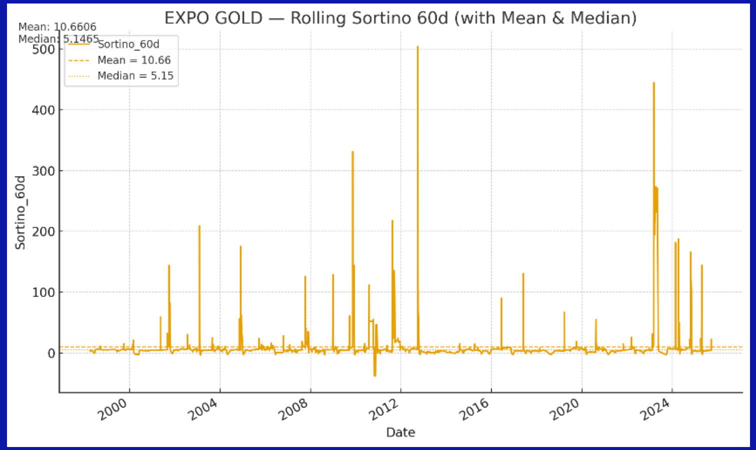
A strategy can maintain profitability with modest win rates when payoff ratios are sufficiently favorable.

Rolling Risk Quality



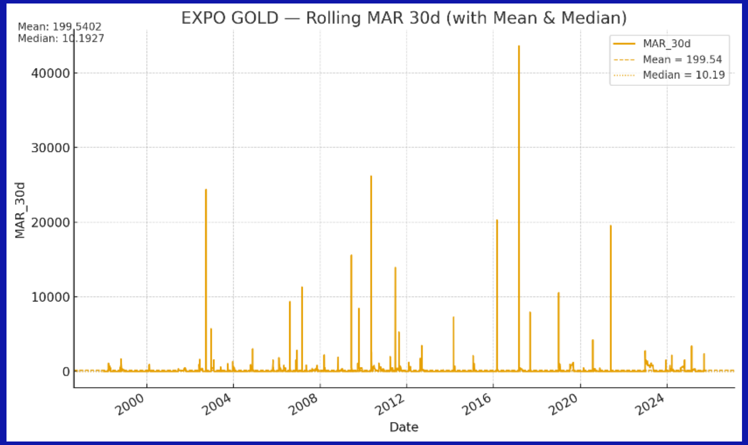
Rolling Sharpe Analysis

- Annualized return versus total risk measurement
- 90-day rolling windows show consistency
- Mean and median guide typical performance levels



Rolling Sortino Metrics

- Focuses on bad-day volatility only
- Superior downside protection measurement methodology
- Demonstrates risk management effectiveness



Rolling MAR Quality

- Window CAGR divided by maximum drawdown
- Risk-adjusted return quality measurement
- Shows how returns are generated

Reading the Rolling Metrics

Rolling Metrics Interpretation

Rolling metrics provide dynamic insight into strategy performance across different market regimes, showing not just how much profit is generated but the quality and consistency of that profit generation.

Rolling Sharpe Ratio

Annualized return versus total risk in recent 60-day window, measuring overall risk-adjusted performance consistency.

Rolling Sortino Ratio

Focuses exclusively on bad-day volatility, highlighting downside protection and risk management effectiveness.

Rolling MAR Ratio

Window CAGR divided by maximum drawdown in same period, showing return quality and recovery characteristics.

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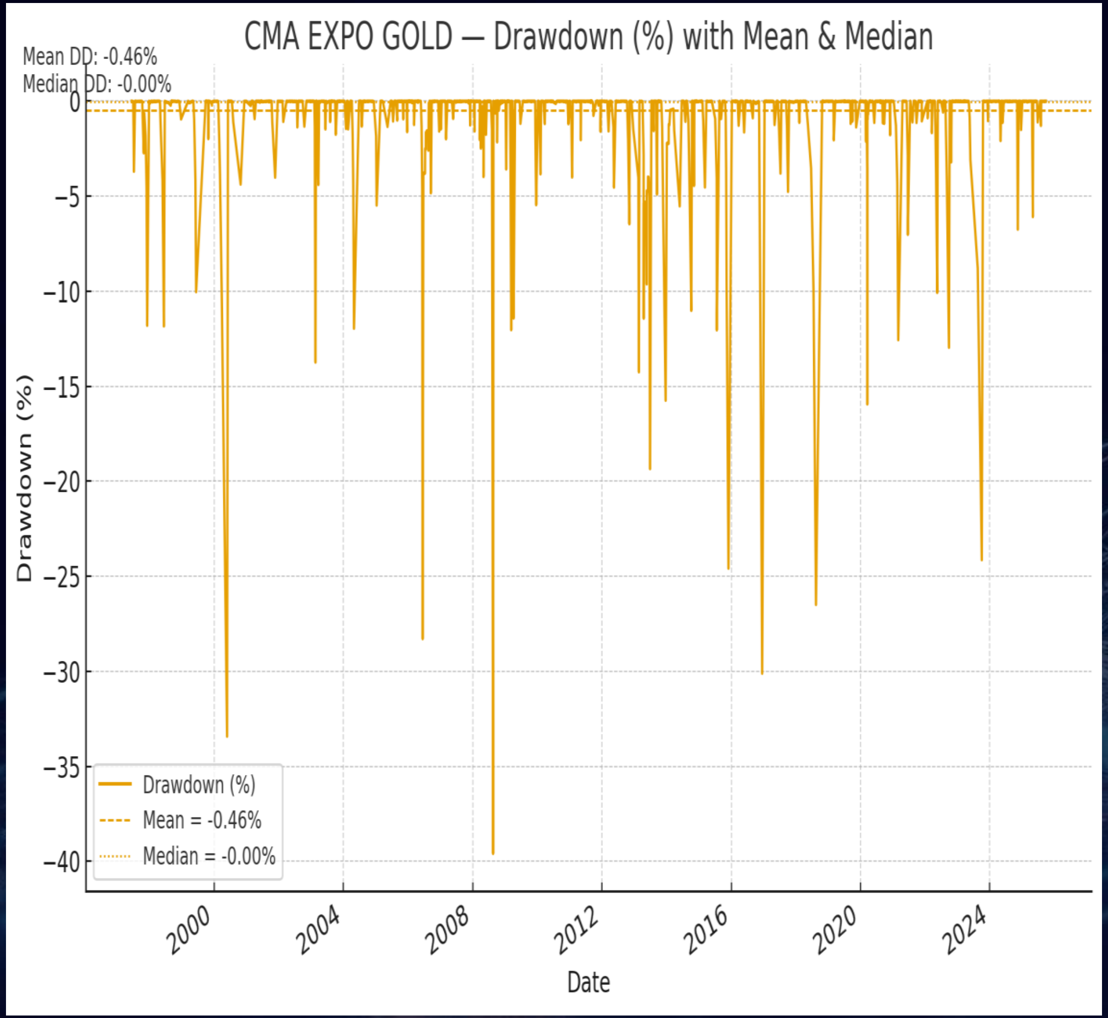
Drawdown Behavior Analysis



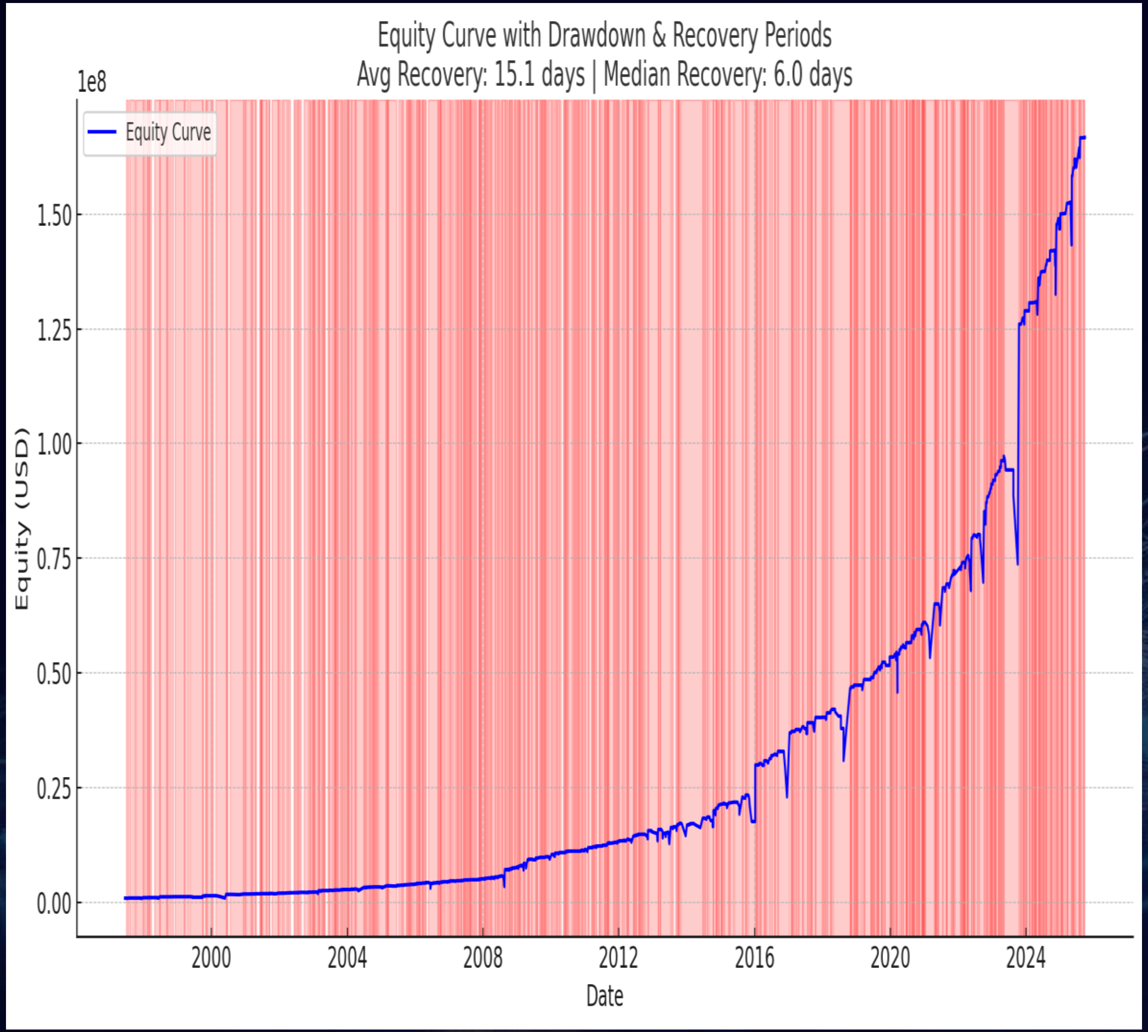
Peak-to-Trough Analysis

Drawdown patterns reveal the strategy's behavior during adverse market conditions, showing both the severity of declines and the systematic discipline required for recovery phases.

Recovery Rhythm Discipline

Disciplined recoveries maintain the compounding curve's integrity over time. Drawdowns are inevitable in any strategy, but systematic recovery processes ensure long-term capital preservation and growth.

Strategy Equity (Detail View)



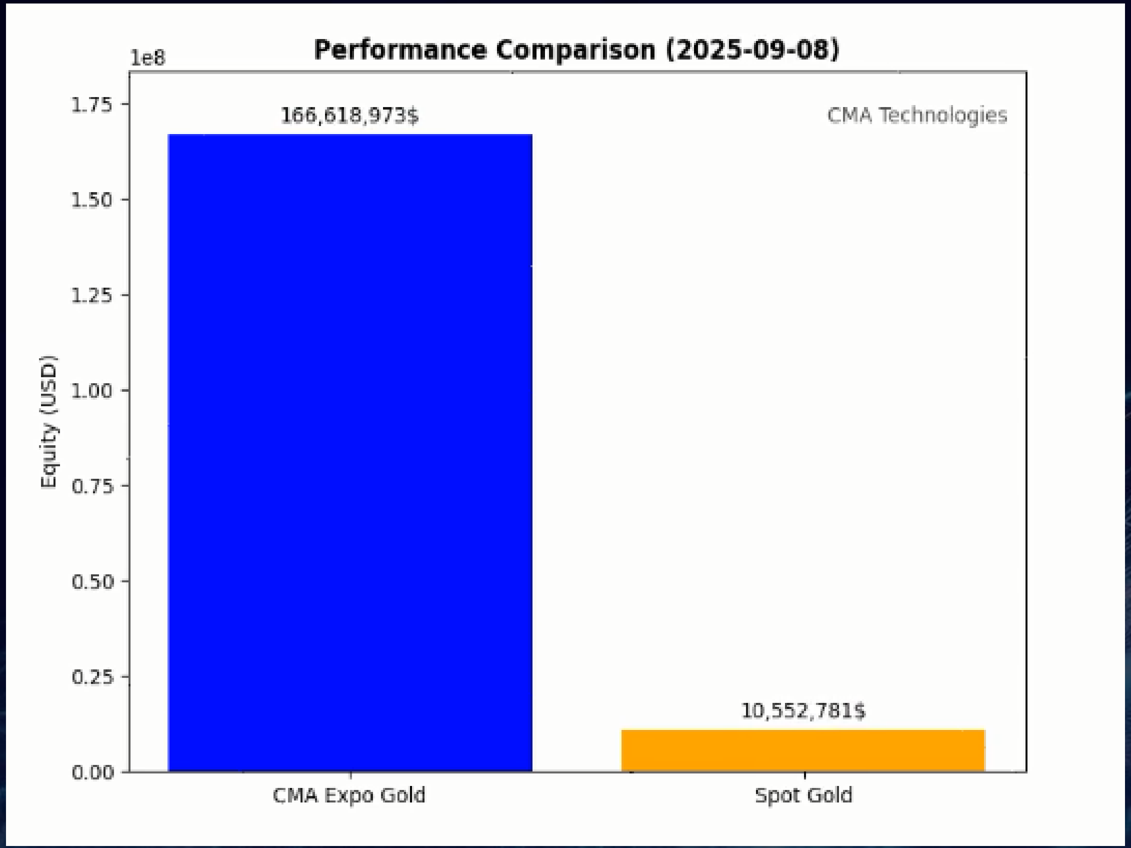
Conservative Equity Representation

Equity grows exclusively through realized profits from actual trade exits. Unrealized drawdowns are excluded from equity calculations, providing a conservative cash-earned equity representation.

Realized Profit Focus

This methodology ensures that all displayed equity growth represents actual cash earned rather than theoretical unrealized gains, providing transparency and conservative performance measurement.

Spot Baseline



Neutral Baseline Comparison

Buy-and-hold gold performance from the same start capital and date range provides a neutral baseline to anchor the systematic strategy's outperformance narrative.

Fair Comparison Framework

Using identical starting conditions, time periods, and capital amounts ensures an apples-to-apples comparison between systematic strategy execution and passive gold investment.

Capacity & "Retirement-Grade" Profile

Institutional-Grade Design

Engineered as a long-horizon, pension and retirement-style allocation while maintaining complete investor custody control and transparent systematic execution.

Scalability Engineering

- Capacity engineered for hundreds of millions USD
- Gold's global liquidity supports large allocations
- Execution design accommodates institutional scale

Retirement-Grade Posture

- Rule-based discipline eliminates human emotion
- Downside-aware metrics including Sortino and MAR
- Multi-decade data coverage demonstrates robustness

Long Horizon

Designed for extended investment periods.

Investor Control

Non-custodial model maintains investor autonomy.

Systematic Discipline

Rules-based execution without human bias.

Governance & Transparency

Non-Custodial Execution Model

Investors retain complete control over their funds while CMA provides systematic strategy execution through secure protocols and transparent reporting mechanisms.

- Funds remain in investor's own account or wallet at all times during execution
- CMA executes strategies programmatically with full API security and oversight protocols
- Complete investor control reduces operational risk and aligns incentives for mutual success

Comprehensive Analytics & Reporting

Monthly analytics packages with exportable logs and audit-ready P&L trails ensure complete transparency and regulatory compliance for institutional standards.

- Monthly comprehensive analytics reports with detailed performance breakdowns and risk metrics
- Exportable transaction logs and trade records for independent verification and audit purposes
- Audit-ready P&L trails with complete documentation for regulatory compliance and due diligence

Risk Controls & Operations

Systematic Risk Management

Comprehensive risk control framework relies on procedures and mathematical models rather than human opinion or emotional decision-making for consistent systematic execution.

Parametric Guardrails

Continuous monitoring of rolling metrics and drawdown levels with predefined parametric limits and automatic safeguards.

Exchange Connectivity

Robust exchange connectivity with fail-safes and comprehensive runbooks for operational continuity and reliability.

Mathematical Foundation

All decisions based on mathematical models and systematic procedures, eliminating human emotion and subjective bias.

Capacity & Liquidity Notes

Technical Capacity Framework

Gold market depth and liquidity characteristics support large ticket sizes and staged allocation strategies while maintaining execution quality through advanced implementation methodologies.

Market Depth Analysis

- Gold market depth supports large institutional tickets
- Global liquidity enables substantial allocation scaling
- 24-hour trading provides flexible execution windows

Execution Optimization

- Slippage minimization through incremental scaling methodologies
- Strategic venue selection for optimal execution quality
- Practical pathways to scale without breaking performance

Scalability

Engineered for institutional scale requirements.

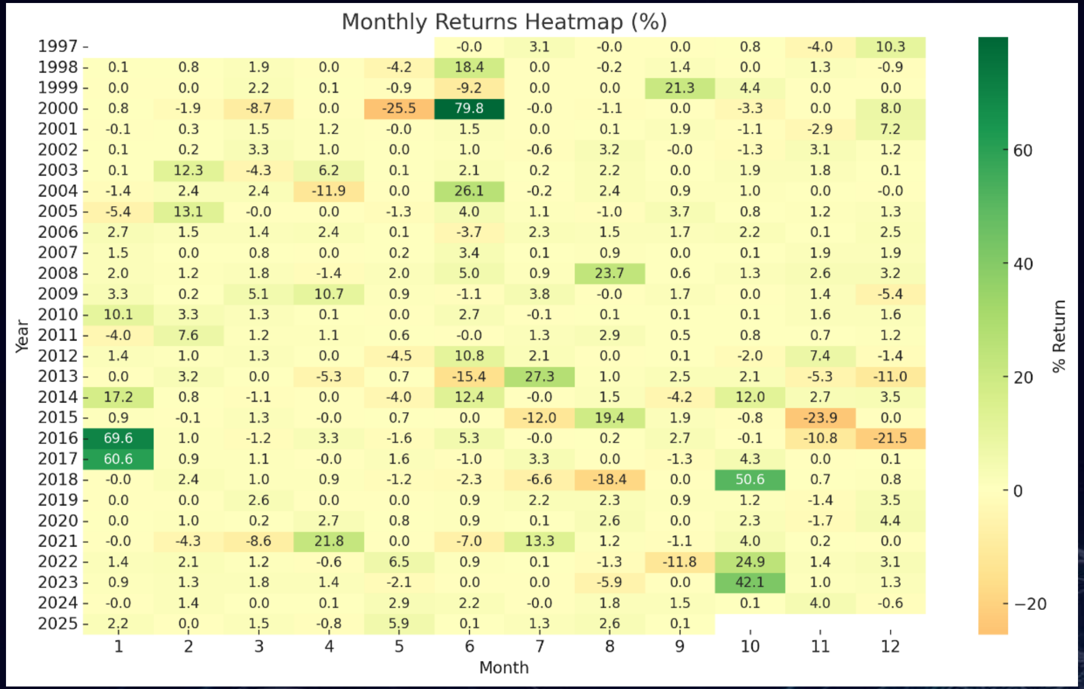
Performance

Maintains execution quality at scale.

Implementation

Staged allocation and venue optimization.

Case Snapshots (Regime Changes)

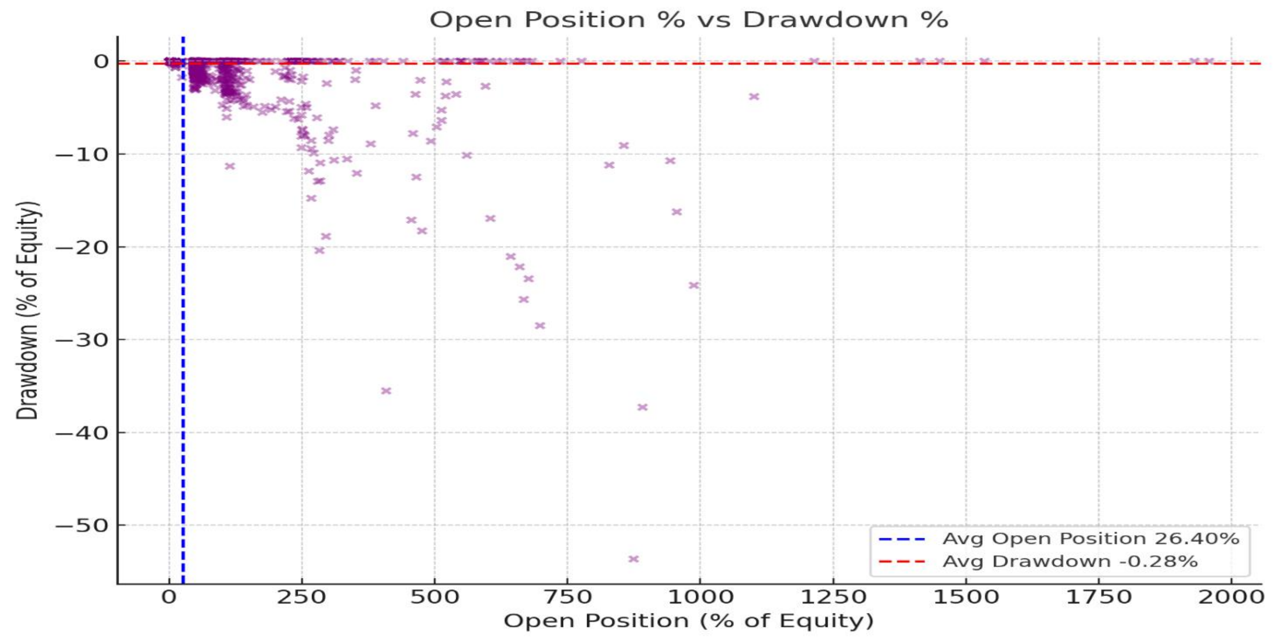


Dislocation Response Analysis

- Sortino and MAR spikes during market dislocations highlight defensive characteristics
- Strategy demonstrates resilience during periods of market stress and uncertainty
- Systematic risk management provides protection during adverse market conditions

Trend vs Consolidation Examples

- Rules maintain consistency across trending and consolidating market conditions
- Systematic discipline prevents emotional decision-making during regime changes
- Robustness across different market environments demonstrates strategy reliability



Partnership Models

Execution-Only / Strategy-as-a-Service

Flexible partnership models designed to accommodate different institutional requirements while maintaining the core non-custodial execution framework and transparent fee structures.

- Execution-only services for clients with existing infrastructure and risk management capabilities
- Full Strategy-as-a-Service for comprehensive systematic gold trading implementation
- Non-custodial model maintains investor control while providing professional systematic execution

Transparent Terms & Reporting

Customizable fee options and reporting cadence agreed upfront to meet specific institutional, family office, or retirement plan context requirements.

- Transparent fee structures with multiple options tailored to client size and requirements
- Reporting cadence and analytics depth agreed upfront to match client preferences
- Tailored solutions for institutions, family offices, and retirement plan contexts

Contact & Next Steps

CMA Technologies Contact Information

Ready to discuss partnership opportunities, pilot allocations, or comprehensive due-diligence packages. Connect with our quantitative team to explore systematic gold strategy implementation.

Digital Presence

Website: cmatech.co | LinkedIn: CMA Technologies QUANT & ALGO | Email: info@cmatech.co for inquiries

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Call to Action

Partnership discussion | Pilot allocation opportunities | Comprehensive due-diligence package available upon request