ARANA SYSTEMATIC EQUITY RESEARCH

Defensive *Small Cap* Composite

STANDARDIZED SYSTEMATIC U.S. SMALL-CAP RESEARCH LETTER

RESEARCH OVERVIEW

As of March 31, 2026

Backtest inception: 03/31/2001

RESEARCH PUBLICATION MODEL FRAMEWORK

75% — CORE ENGINE

Systematic Equity Model

15-name U.S. small-cap research output · biweekly publication cadence · volatility exit rule

25% — DEFENSIVE ALLOCATION

Static Defensive Allocation

15% U.S. fixed-income ETF exposure + 10% precious-metals ETF exposure

25Y BACKTEST CAGR	25Y BACKTEST MAX DRAWDOWN	25Y BACKTEST SHARPE	25Y BACKTEST BETA VS R2000
25.4%	−16.9%	1.58	0.48
Russell 2000 shown for context only	Russell 2000 shown for context only	Sortino shown for context	Russell shown for context only

Hypothetical backtest only · unaudited simulation · not live trading or client performance.

HYPOTHETICAL 25Y BACKTEST PERFORMANCE · MARCH 2001 – MARCH 2026

25Y Annualized Return (CAGR)	25.4%
Sortino Ratio	2.26
Sharpe Ratio	1.58
25Y Max Drawdown	-16.9%
25Y Beta (vs R2000)	0.48
Negative Years	1 / 25
25Y Russell 2000 CAGR	8.6%

METRIC	BALANCED	RUSSELL 2000
25Y CAGR	25.4%	8.6%
Sharpe	1.58	0.43
Sortino	2.26	0.58
25Y Max Drawdown	-16.9%	-59.1%
25Y Beta	0.48	1.00
Negative Years	1 / 25	7 / 25

STANDARDIZED RESEARCH PUBLICATION CONTEXT

Publication format	Standardized
Review cadence	Biweekly
Customization	None
Account-specific sizing	Not provided

RESEARCH CONTEXT

Defensive Small Cap Composite is presented as an impersonal research publication. Materials are standardized and are not tailored to any reader, account, mandate, or portfolio.

The publication does not provide personalized investment advice, account-specific sizing, trade execution instructions, implementation guidance, or portfolio-management services. It does not instruct readers to buy, sell, allocate to, or implement any security/model output.

SELECTED HISTORICAL STRESS PERIODS

2002 · DOT-COM BUST	2008 · FINANCIAL CRISIS	2018 · Q4 SELL-OFF	2022 · RATE SHOCK
+0.6%	+8.3%	+18.7%	−0.2%
R2000: −20.4%	R2000: −34.2%	R2000: −11.1%	R2000: −20.5%

> Selected stress periods illustrate model behavior in major market disruptions; they are not representative of all outcomes. See full record below.

PERFORMANCE BY CALENDAR YEAR (%)

	2001*	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026**
MODEL	20.8	0.6	64.0	32.3	17.8	47.7	33.2	8.3	54.7	37.6	2.2	47.2	37.4	17.2	22.1	21.9	25.2	18.7	21.6	18.0	38.0	-0.2	10.4	34.7	20.5	7.8
BENCHMARK	11.2	-20.4	47.6	18.1	4.5	18.3	-1.8	-34.2	28.5	26.9	-4.4	16.7	38.7	5.0	-4.5	21.6	14.6	-11.1	25.4	20.0	14.5	-20.5	16.8	11.4	12.7	0.9
EXCESS	9.6	21.0	16.4	14.2	13.4	29.5	34.9	42.4	26.2	10.7	6.7	30.5	-1.3	12.2	26.6	0.4	10.6	29.8	-3.8	-2.1	23.4	20.3	-6.5	23.3	7.8	6.9

(*) From 03/31/2001 | (**) Q1 2026 only (to 03/31/2026) | Backtest returns before any publication access fee; any publication access fee, if applicable, would reduce returns if treated as an implementation cost. Implementation costs for any reader who independently uses or replicates the model output may differ materially and are solely the reader's responsibility | Backtest costs: variable slippage (Portfolio123 model) + $1 commission per trade (applied to equity model) | Periodic underperformance is normal in systematic processes.

NO-COST 3-ISSUE SAMPLE SEQUENCE

> *Defensive Small Cap Composite may be made available through a no-cost 3-issue sample sequence. Sample readers receive the same standardized biweekly research publication over six weeks, together with the research overview and methodology materials. Ongoing quarterly publication access follows the same standard terms and schedule for all subscribers. The sample sequence is for evaluating the publication, process, cadence, and documentation only; it is not personalized investment advice and is not tailored to any reader, account, mandate, or portfolio.*

RESEARCH OVERVIEW

Defensive Small Cap Composite combines a systematic 15-name U.S. small-cap research output with a permanent defensive allocation framework. The 75% equity model produces standardized research output; the 25% allocation is designed to moderate drawdown exposure through 15% U.S. fixed-income ETF exposure and 10% precious-metals ETF exposure — no tactical decisions, no market timing. The publication may be evaluated through three standardized biweekly sample issues before any ongoing quarterly publication access is considered.

The equity-model volatility exit rule applies only to the 75% equity sleeve; the 25% defensive allocation remains structurally separate.

Over the backtest period, the combined framework showed lower beta and smaller drawdowns than the Russell 2000, with returns driven primarily by the systematic equity model and moderated by the static defensive allocation. Selected historical periods are included for research context only and should not be interpreted as indicative of future performance.

Framework	75% Equity Model + 25% Defensive Overlay
Defensive Overlay	15% U.S. fixed-income ETF + 10% precious-metals ETF
Publication cadence (equity model)	Biweekly
Universe (equity model)	~400-800 US listed stocks (fully filtered)
Market Cap Range	Small/mid-cap US equities ($100M min. $200M-$2B typical)
Liquidity Filter	Volume & bid-ask spread filters (proprietary thresholds)
Sector Exposure	Defensive bias; cyclical sectors excluded
Research output	15 names, shown on an equal-weight model basis
Equity Model Exit Rule	Proprietary volatility threshold
Model turnover	~596%
Backtest Costs	*Variable slippage + $1/trade broker fee*
Simulation platform	Portfolio123

Arana Systematic Equity Research

Ricardo Arana
ricardo@aranasystematic.com
aranasystematic.com