Introduction to Systematic Tactical Asset Allocation
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Philosophy, History, Our Work

1. What is passive investing?
2. What is tactical asset allocation? Our contrarian belief
3. The new era of passive investing - a revised history
4. Basics of systematic tactical asset allocation
    a. Global asset diversification
    b. Using trend as a risk-control
    c. Tailoring a portfolio to desired risk level
        i. Aggressive vs defensive asset universes
        ii. Asset rotation
5. Global Enhanced Alpha: Diversifying assets, parameters, and models

What is passive investing?

Systematic, repeatable, and rules-based. "Buying and holding" is a repeatable rule that leaves you immune to discretionary trading errors and mistakes in judgement or predictions.

Discretionary management, in contrast, is the freedom to trade or invest based on whatever seems like the best idea at the time. It can be rational, but it isn't strictly replicable, as the investment parameters are not defined.

Discretionary managers can deliver outstanding short-term performance, but it is an *exceptional* few who are able to repeatedly beat a relevant benchmark over a long and relevant time horizon.

You only truly understand your own investment style if you can define it by IF / THEN statements.

If you can define it, you should do so and take the emotions and guesswork out of the equation.

Your *model* may not be passive, but *you* should be.

Index funds are systematic investment algorithms

The investor may be passive, but the index is not. Indices do not take a random sample of the market, but select securities and their allocations through active processes.

Index managers define *parameters* such as market cap, share price, and profitability.

Index funds effectively use momentum: Many stocks go to zero, but indices systematically replace decliners with stocks on the upswing, protecting fund investors from the full brunt of declining positions.

However, most indices were designed for reporting, not for investing (share price weighting, anyone?).

Indices outperform active investors not because their parameters are so great, but because most active investors are so terrible.

Systematic Tactical Asset Allocation: Evidence-based passive investing

Index investors are already benefiting from algorithms, but we can use better algorithms based on *the factors proven to drive investment returns (such as value, trend, and momentum).*

STAA means any repeatable, rules-based process for adjusting portfolio allocations by asset class.

Advantage of focusing on the asset class, rather than individual securities:

Securities of the same type are highly correlated and efficiently priced in relation to one another.

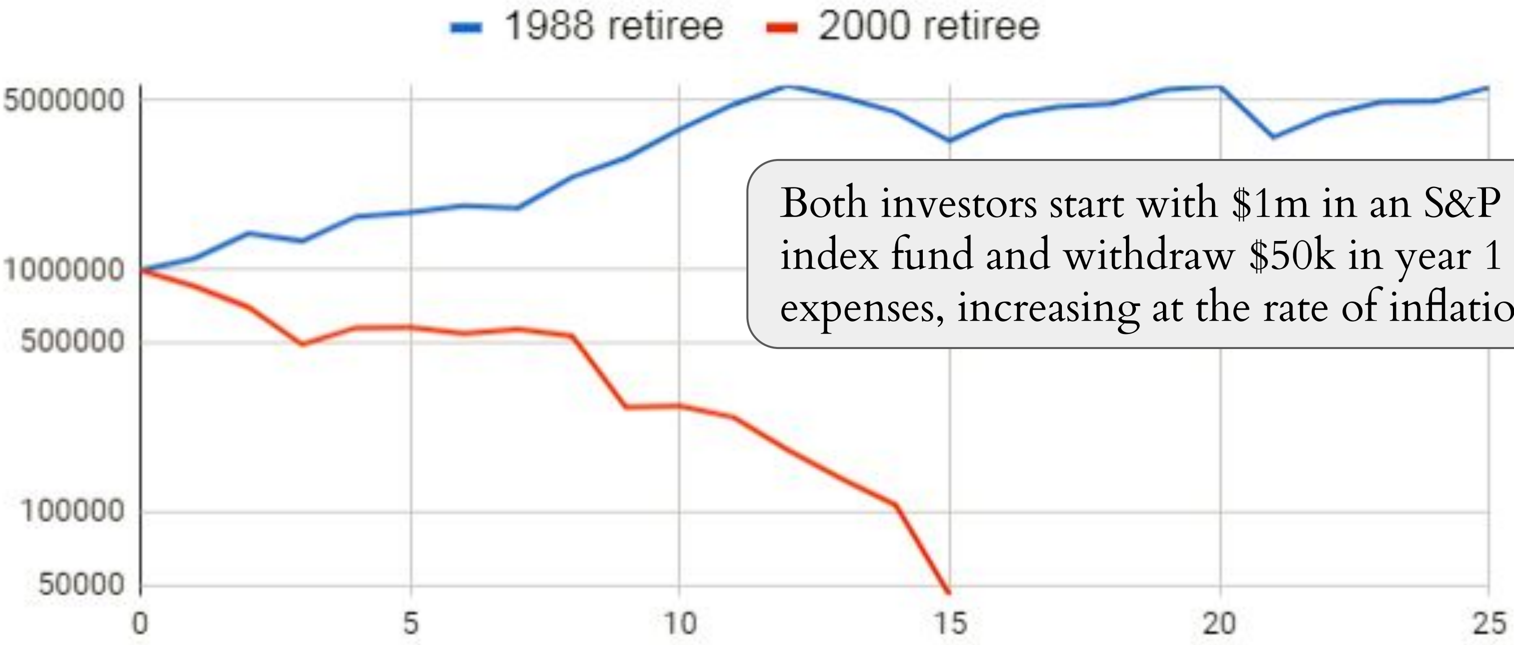
In a bear market almost all stocks go down, but bonds and gold may rally.

A portfolio of uncorrelated assets results in lower drawdowns and steadier returns.

Goal of STAA: Lower drawdowns and steadier returns through changing investment climates

The Problem with Passive Equity Investing: *Uneven returns make investment planning unreliable*

Same investment plan and withdrawal rate. Only difference is retirement date.



Both investors start with $1m in an S&P 500 index fund and withdraw $50k in year 1 for expenses, increasing at the rate of inflation.

***Systematic investing rule #1**: Diversify by asset class*

Example: Five-asset "Know-Nothing Portfolio" delivers comparable returns with less risk than equities

Low-cost ETFs

SPY – S&P 500

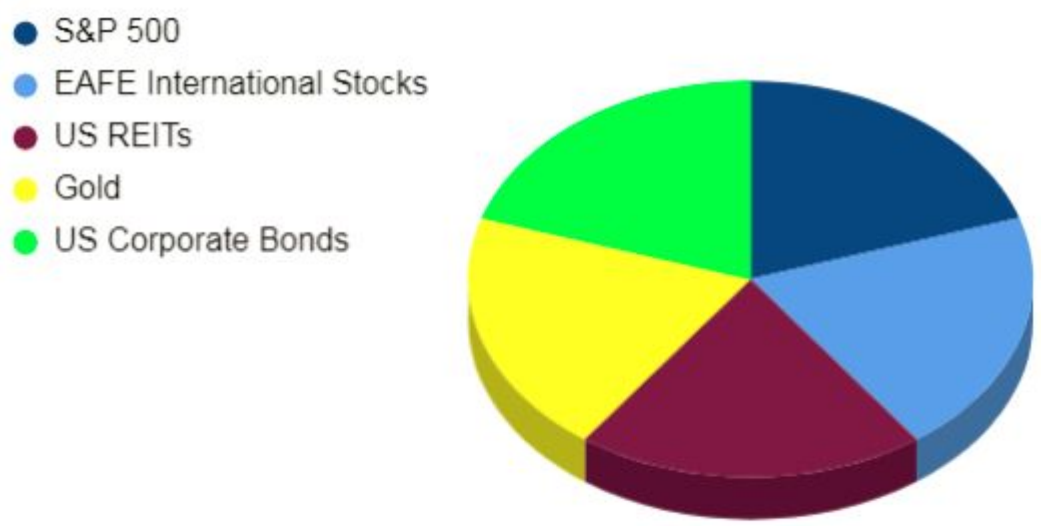
EFA – Foreign Stocks

VNQ – Real Estate Investment Trusts (REITs)

IAU – Gold

LQD – US Corporate Bonds

1 / N ("one over n") equal allocation



Systematic investing rule #1*: Diversify by asset class*

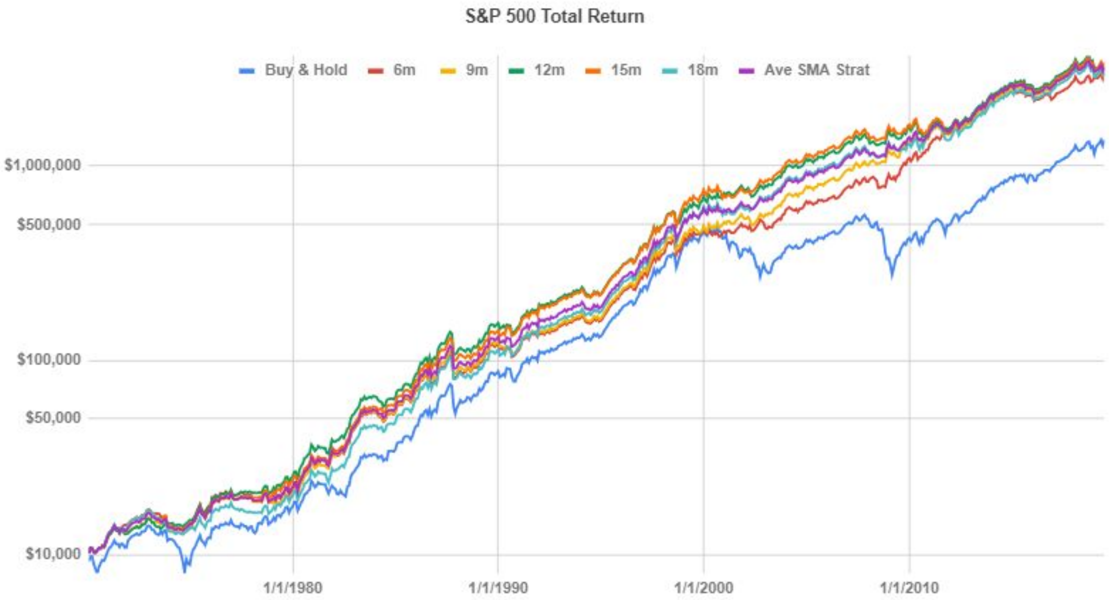
5-Asset **"Know-Nothing Portfolio"** delivers comparable returns with less risk than **S&P 500**

Systematic investing rule #2: *Use trend to cut losing positions*

Systematic Stop-loss: Only invest in an asset class when last monthly close is above n-month simple moving average. Example 1: S&P 500

Trend is ***parameter stable***

Highly effective with SMAs from 6-18 months.

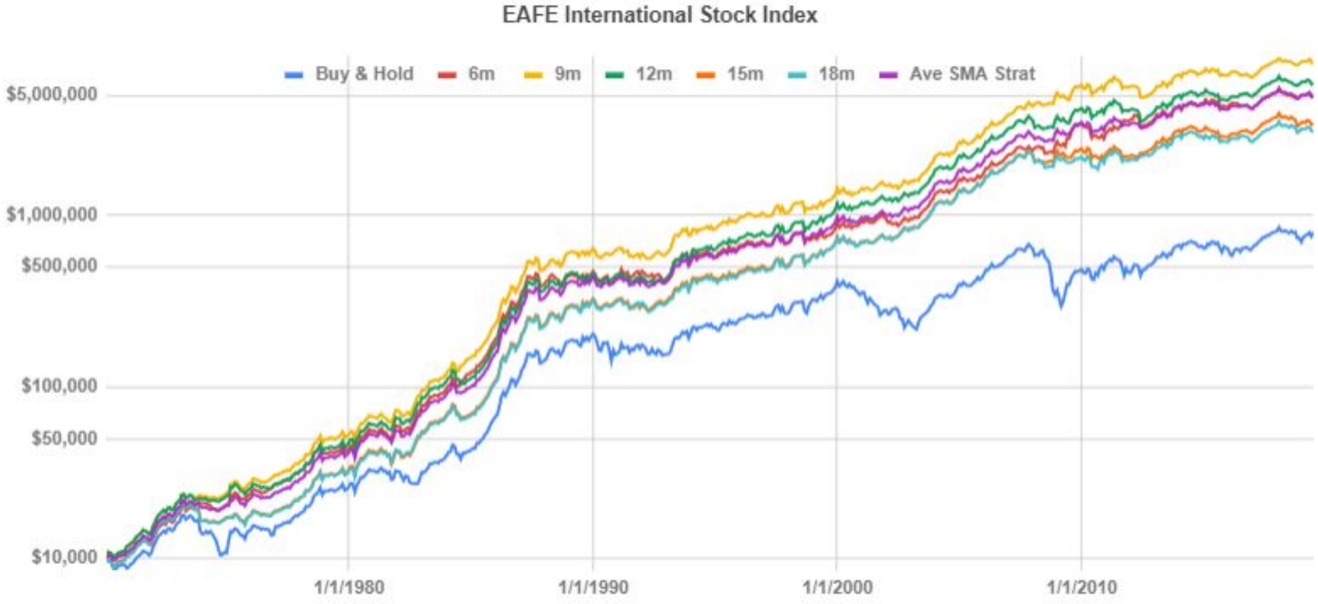


***Systematic investing rule #2**: Use trend to cut losing positions*

Example 2: EAFE International Stocks

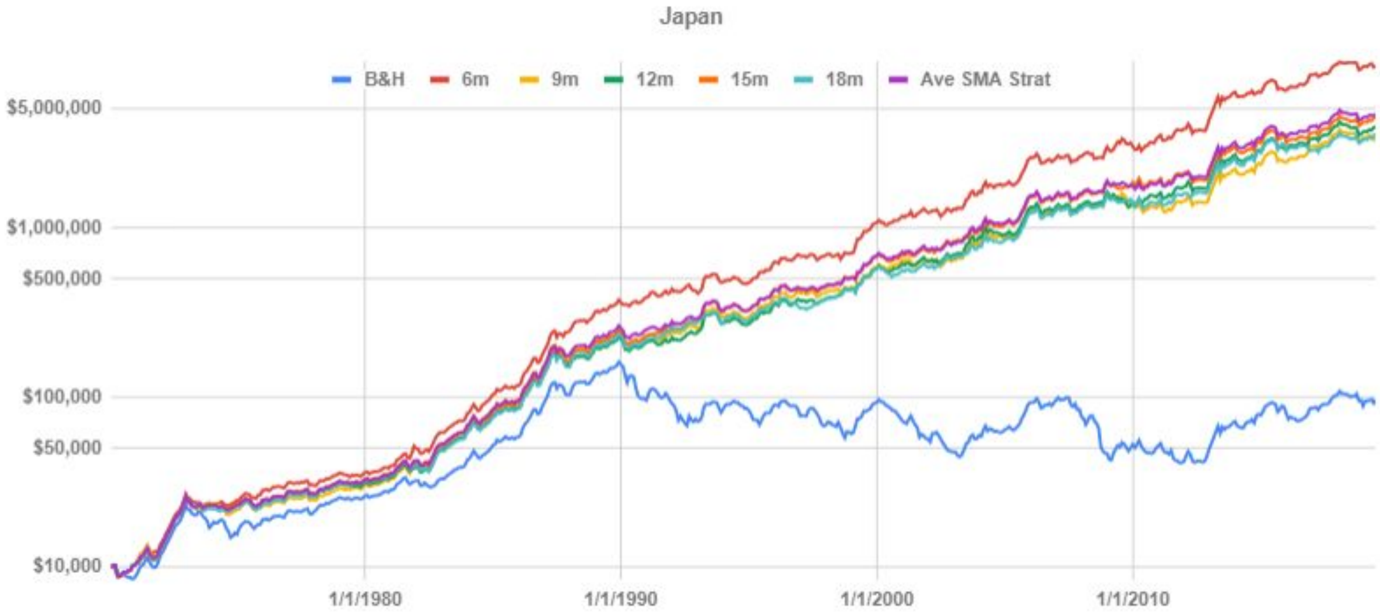
SMA rule is **universally applicable.**

Works well on all classes of risk assets.



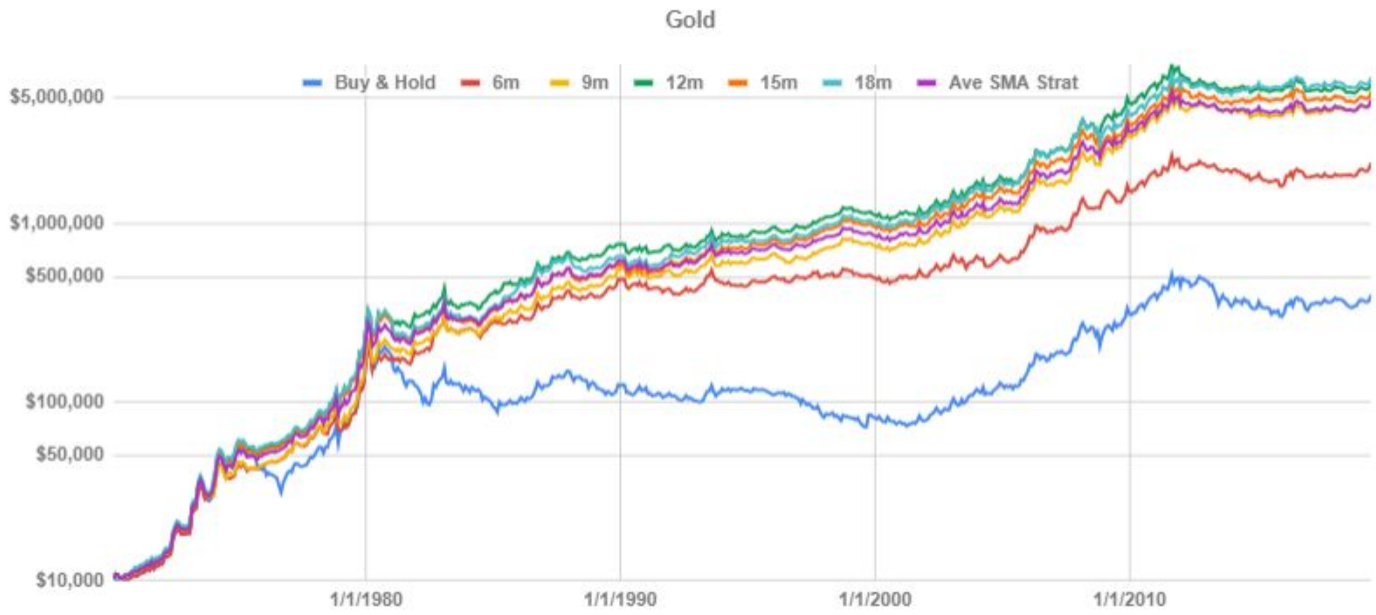
Systematic investing rule #2*: Use trend to cut losing positions*

Example 3: Japanese Stocks



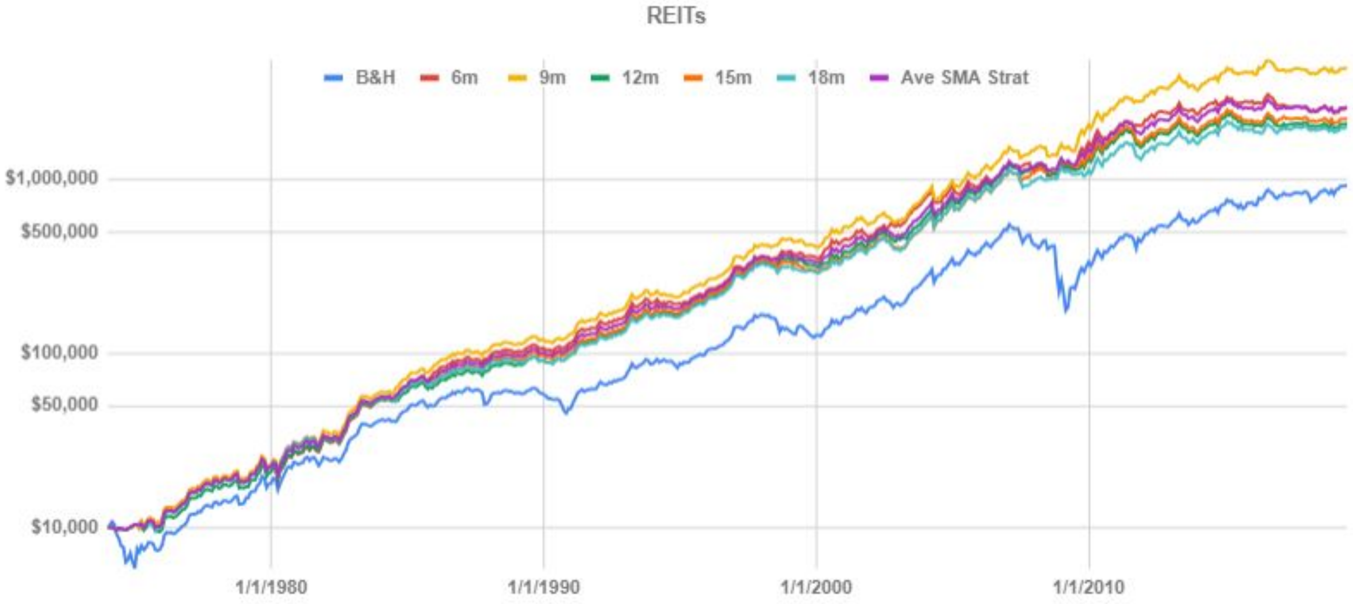
Systematic investing rule #2*: Use trend to cut losing positions*

Example 4: Gold



***Systematic investing rule #2**: Use trend to cut losing positions*

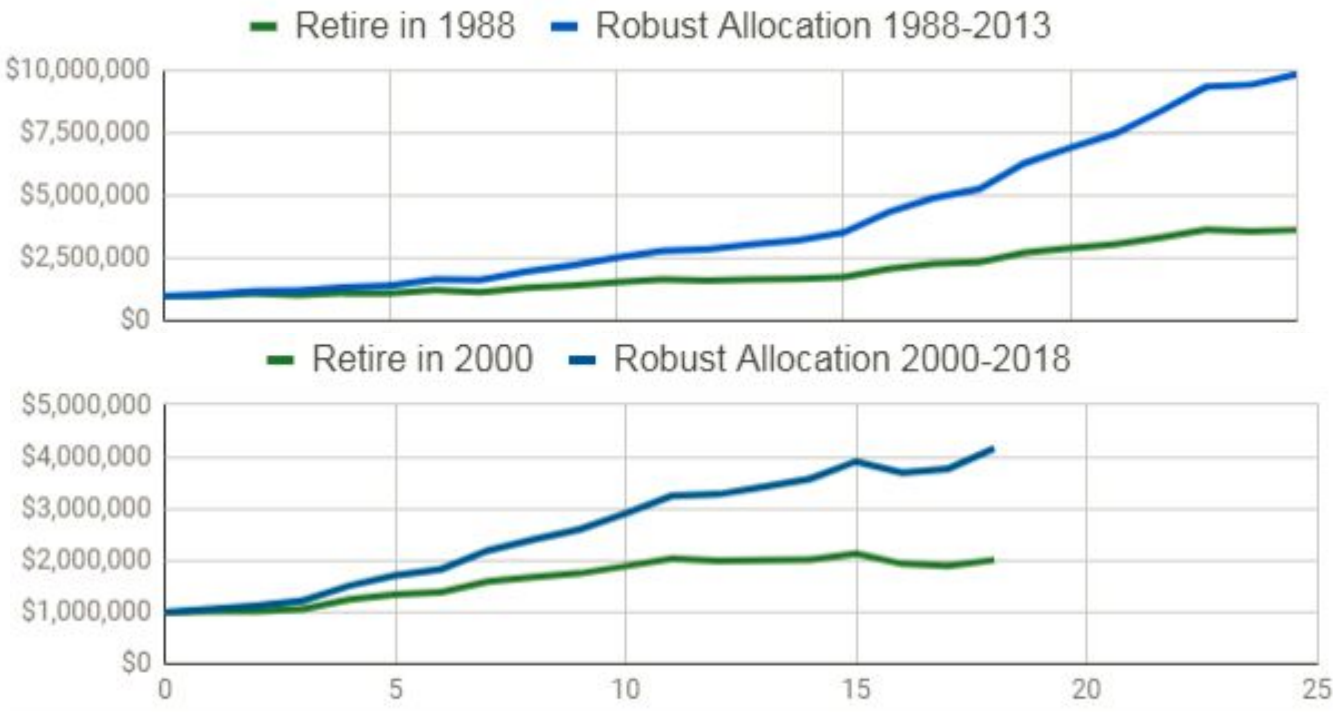
Example 5: REITs



Better parameters, better results:

Returns are calculated from historical index data, not actual trading. Figures for models include estimated fund fees and are adjusted for inflation. *Stop-losses set at 12-month simple moving average, monthly basis. No chart or backtest should be the sole basis for making an investment decision.

Better parameters, better results: Worry-free retirement



- Know-Nothing Portfolio without withdrawals
- Know-Nothing Portfolio after withdrawals of 5% in first year, increasing at rate of inflation

Let's recap the basics of systematic tactical asset allocation:

Diversify meaningfully:

1. Liberal allocations to asset classes other than US equities
2. Limit allocation to any single asset class

Use quantitative risk controls (make the momentum factor work for you).

1. Trend-informed stop-losses (as shown above)
2. Relative momentum-informed asset rotation (following slides)

Advanced: Tailoring a systematic portfolio to your specific risk and return targets

2 knobs to turn:

1: What assets are made available?
- Aggressive investment universe: Dominated by equities, REITs, commodities
- Defensive investment universe: Dominated by Treasuries, quality bonds, some gold

2: How concentrated can the portfolio get in any one asset class?
- Aggressive model: Can be all stocks/REITs at times.
- Defensive model: Might be max 20% stocks/REITs or none at all. Always owns some fixed income.

Tailoring the asset universe: *More equities = higher potential returns*

Bond-heavy universe vs equity-heavy universe

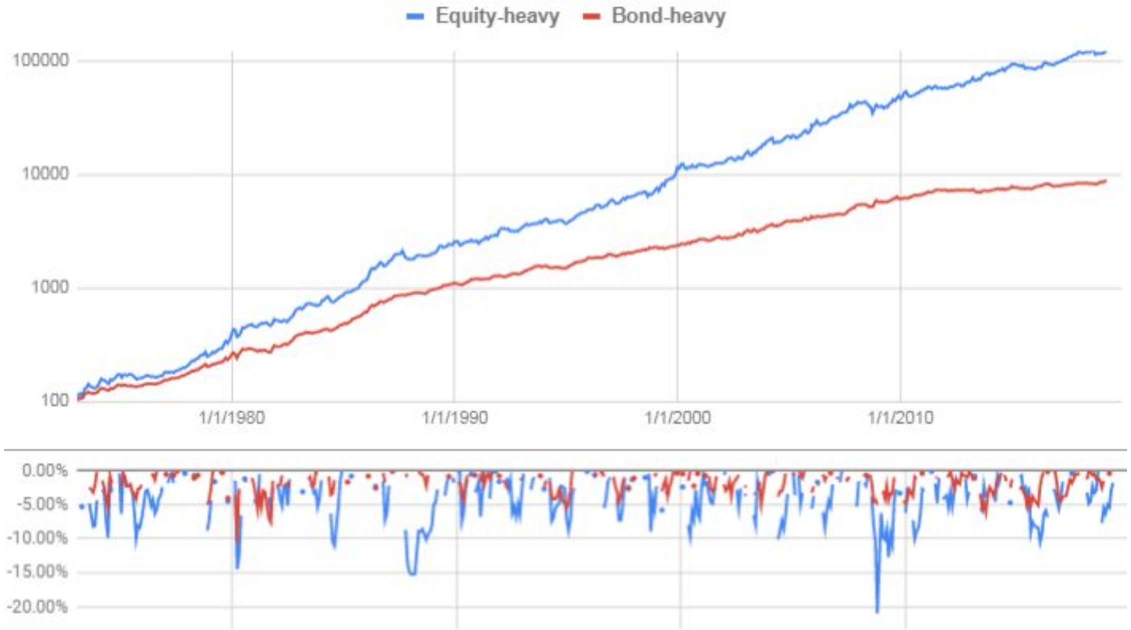
Returns and volatility increase with maximum equity allocation

Aggressive universe:

50% equities
25% commodities
12.5% REITs
12.5% Bonds

Defensive Universe:

62.5% notes & bonds
25% commodities
12.5% equities



Asset rotation*: Invest only in the strongest performing assets*

Example: **Hold top *N* of 5** assets, as ranked each month by recent momentum

Returns (and volatility) increase with concentration

Example of a systematic portfolio we manage: "Widows and orphans"

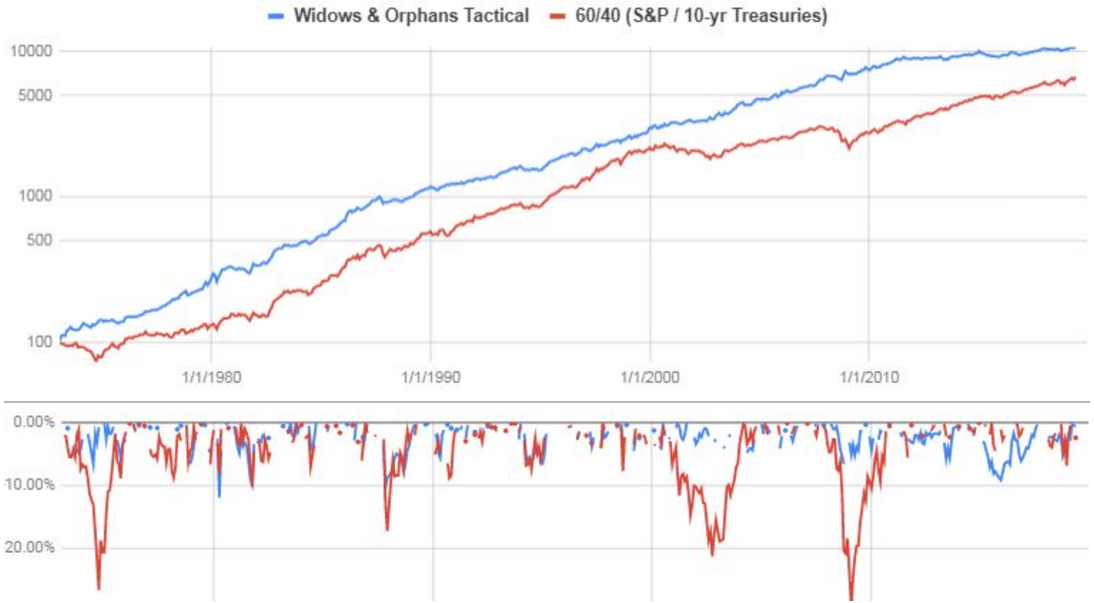
Bond heavy universe, with alternative assets for inflation protection:

T-bills, T-notes, T-bonds, corporate bonds, foreign bonds, gold, commodities, US & foreign stocks.

Return:
Tactical: 10.6% (net of fees)
60/40: 9.6%

Sharpe:
Tactical: 0.81
60/40: 0.52

Max drawdown:
Tactical: 11.9%
60/40: 26.3%



Returns prior to 2018 are from historical data, not actual trading. Figures include fees. No chart or backtest should be the sole basis for making an investment decision.

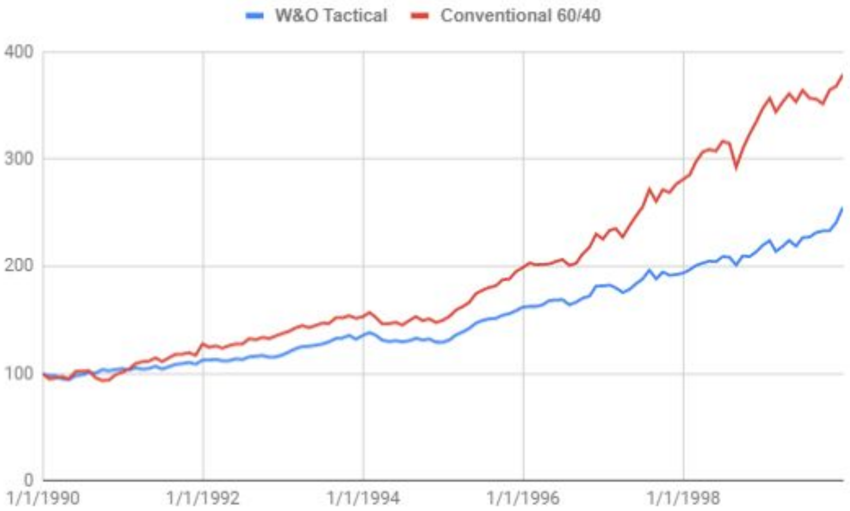
What's the catch? FOMO

Systematic, diversified portfolios will underperform equities during bull markets.

The price of long-term outperformance is frustrating short-term underperformance.

Widows & Orphans Portfolio
Vs. 60/40 in bull markets

1990s



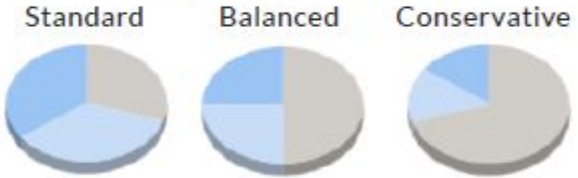
2010s

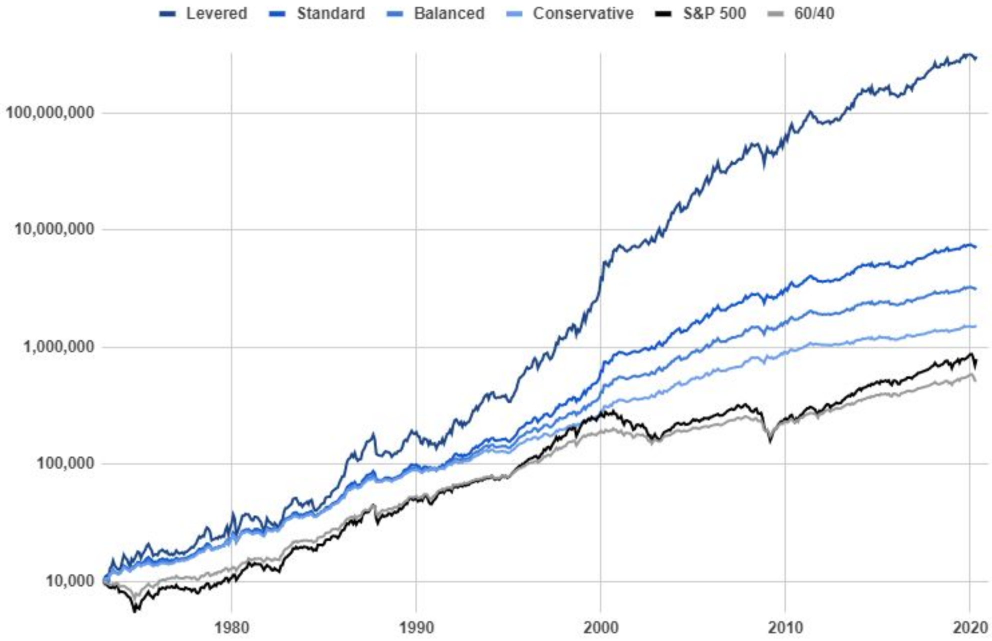
Our GEA indices: a total portfolio solution, diversifying assets, parameters, and models

Defensive, aggressive, and alternative sub-models models are combined in differing proportions to create different risk levels.

Sub-Model	Dominant assets
Defensive	US Treasuries, global bonds, gold
Alternative	Global equities, REITs, commodities
Aggressive	High-momentum US equities

Available in three risk levels





Returns prior to 2018 are from historical data, not actual trading. Returns assume reinvestment of interest and dividends. Monthly client returns may differ slightly from reported figures due to variations in trade execution. All strategies may be leveraged to client preference. Leveraged figures are calculated pro-forma assuming margin rates of overnight LIBOR+1.05%, as charged by our custodian for balances of $100,000 to $1m. Do not rely on past performance alone for investment decisions.

GEA Strategies offer better absolute and risk-adjusted historical returns than conventional stock and bond portfolios

Strategy (to 3.12.20)	$10,000 becomes	CAGR	Maximum loss	Sortino ratio
GEA Conservative	$1,474,000	11.2%	-12.9%	1.4
GEA Balanced	$3,127,000	12.9%	-14.4%	1.3
GEA Standard	$6,997,000	14.9%	-16.9%	1.3
GEA Leveraged	$266m	24.0%	-36.5%	1.0
S&P 500	$672,000	9.3%	-50.8%	0.5
60/40 Portfolio*	$497,304	8.6%	-32.3%	0.77

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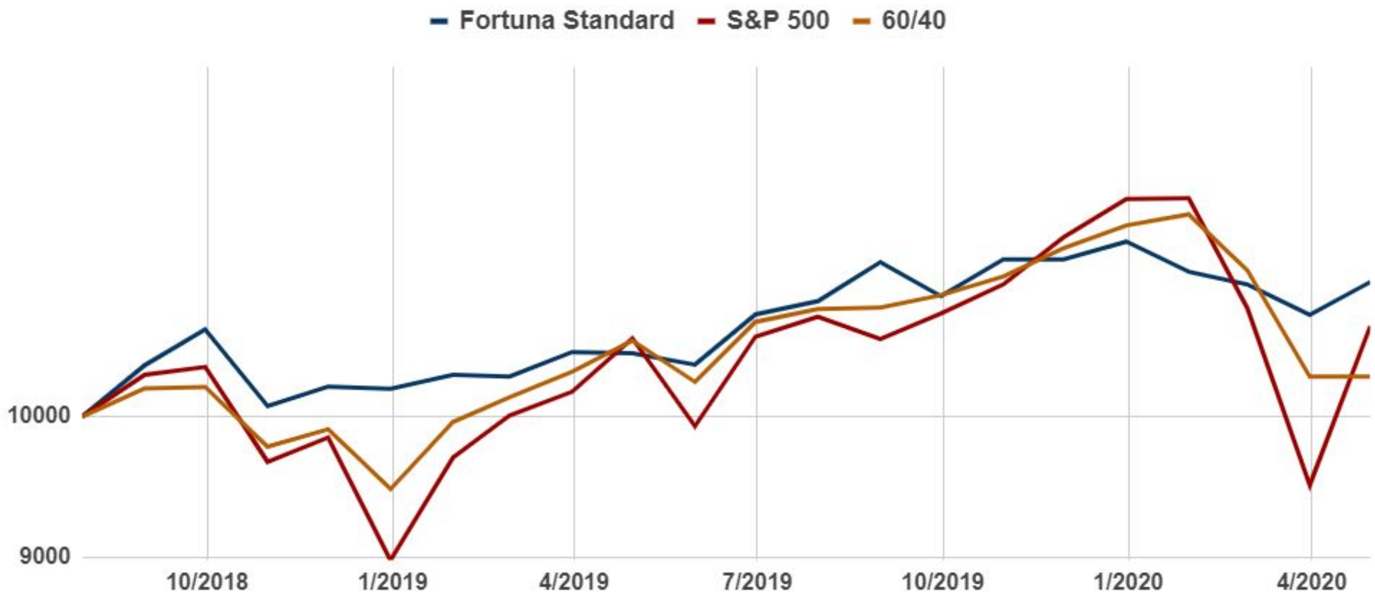
Live track record of GEA – better returns with less downside

All Fortuna figures are net of the following: management fees, commissions, ETF fees. Data is from 1973–2020. Fortuna returns are from actual client accounts managed under Fortuna's GEA Standard index rules. 60/40 is 60% S&P 500 and 40% Barclay's Aggregate Bond Index rebalanced monthly (all figures include reinvested dividends).



In sum

Systematic asset allocation is about controlling the risks that matter.

Defining everything as IF / THEN statements ensures that you understand and follow your process.

Asset class diversification is inherently robust, and less volatile than most individual asset classes.

Systematic stop-losses keep drawdowns manageable.

By diversifying assets, parameters, and models, we can give ourselves the best chance of success in a future of unknown unknowns.

Our GEA strategies are among the best products available for investors seeking to limit volatility while growing their capital.

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We offer a suite of asset allocation portfolios via separately managed accounts and LP structures.

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The S&P 500 and 60/40 portfolios are presented here as market proxies. All returns for indices and strategies include reinvested capital gains and dividends. All strategy returns prior to 2018 are test results calculated from historical price data using the quantitative rules that we employ in each respective strategy, and they include estimates of fees and costs. Historical model data is not from actual client trading, but calculated from historical prices. All Fortuna strategy figures are net of the following: our management fees (1.5% standard, 2.5% for GEA Ultra), commissions, ETF fees. Benchmark returns do not include commissions or management fees. Monthly client returns may differ slightly from reported figures due to variations in trade execution. Charts, models and backested figures are not a sufficient basis for investment decisions.