

JULEX CAPITAL

TAA - Performance during difficult periods

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How does TAA perform when . . .

Interest rates are rising - fast

Inflation is rising - fast

During bull markets

During bear markets

An examination of the last 102 years

How does TAA perform when . . .

Interest rates are rising - fast

Inflation is rising - fast

During bull markets

During bear markets

International Stocks

7 European countries

2 countries from Asia and Australia

Bonds

6 categories of U.S. Treasuries

2 types of U.S. corporate bonds (investment grade and high yield)

U.S. Stocks

7 categories of U.S. stocks

Commodities

3 precious metals

1 type of diversified agricultural

- **Once each month**
 - Identify the eight asset categories that are trending the most strongly
 - Equal weight them

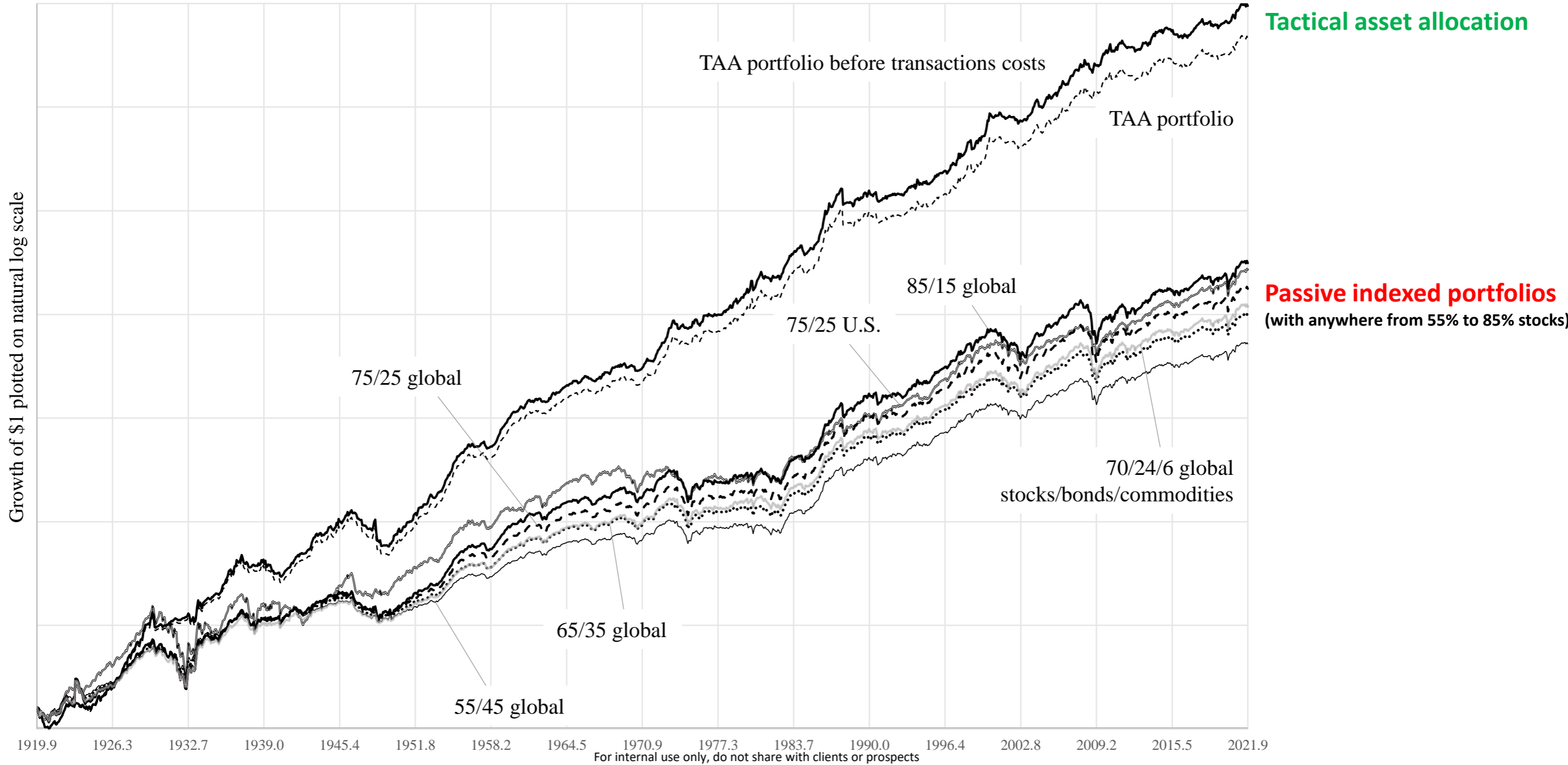
- **Results based on data spanning Jan 1919 through Nov 2021**

Benchmarks used for comparative purposes

	55/45 global stocks/bonds	65/35 global stocks/bonds	75/25 global stocks/bonds	85/15 global stocks/bonds	75/25 U.S. stocks/bonds	70/24/6 global stocks/bonds/commodities
Stocks	55% global stocks (equally weighted across 16 stock indices)	65% global stocks (equally weighted across 16 stock indices)	75% global stocks (equally weighted across 16 stock indices)	85% global stocks (equally weighted across 16 stock indices)	75% U.S. stocks (equally weighted across 7 stock indices)	70% global stocks (equally weighted across 16 stock indices)
Bonds	45% U.S. bonds (equally weighted across 8 bond indices)	35% U.S. bonds (equally weighted across 8 bond indices)	25% U.S. bonds (equally weighted across 8 bond indices)	15% U.S. bonds (equally weighted across 8 bond indices)	25% U.S. bonds (equally weighted across 8 bond indices)	24% U.S. bonds (equally weighted across 8 bond indices)
Commodities						6% commodities (equally weighted across 4 commodity indices)

Using the trend as your friend

Growth of \$1 in inflation-adjusted terms, first invested back on 11/30/1919



Return is over and above inflation

Statistics over entire time period (102 years) using inflation-adjusted monthly returns

	TAA portfolio	55/45 global stocks/bonds	65/35 global stocks/bonds	75/25 global stocks/bonds	85/15 global stocks/bonds	75/25 U.S. stocks/bonds	70/24/6 global stocks/bonds/commodities
Real return	10.75	5.70	6.16	6.60	7.01	6.90	6.31
Correlation with TAA portfolio	1	0.63	0.64	0.63	0.63	0.57	0.65
Annualized standard deviation	11.68	9.14	10.41	11.72	13.05	14.28	11.11
Return per unit of volatility	0.92	0.62	0.59	0.56	0.54	0.48	0.57

Next, let's consider sub-periods

Interest rates

Inflation

Bear markets

Bull markets

When inflation is rising - fast

Statistics over entire time period (102 years) using inflation-adjusted monthly returns

		TAA portfolio	55/45 global stocks/bonds	65/35 global stocks/bonds	75/25 global stocks/bonds	85/15 global stocks/bonds	75/25 U.S. stocks/bonds	70/24/6 global stocks/bonds/commodities
10% of the time when inflation was rising the fastest	Real return	-0.47	-7.46	-7.29	-7.13	-6.99	-8.66	-6.63
	Annualized standard deviation	13.6	9.9	11.0	12.1	13.3	13.9	11.4
20% of the time when inflation was rising the fastest	Real return	1.69	-3.45	-3.37	-3.31	-3.27	-2.76	-3.20
	Annualized standard deviation	12.9	8.9	9.8	10.8	11.9	13.6	10.2
30% of the time when inflation was rising the fastest	Real return	1.69	-1.32	-1.26	-1.22	-1.20	-0.99	-1.23
	Annualized standard deviation	12.5	8.6	9.6	10.7	11.8	13.3	10.2

When interest rates are rising - fast

Statistics over entire time period (102 years) using inflation-adjusted monthly returns

		TAA portfolio	55/45 global stocks/bonds	65/35 global stocks/bonds	75/25 global stocks/bonds	85/15 global stocks/bonds	75/25 U.S. stocks/bonds	70/24/6 global stocks/bonds/commodities
10% of the time when interest rates were rising the fastest	Real return	5.13	-3.27	-2.00	-0.72	0.56	-2.77	-0.62
	Annualized standard deviation	12.4	8.1	9.0	10.0	11.1	11.7	9.6
20% of the time when interest rates were rising the fastest	Real return	4.30	-3.34	-2.57	-1.81	-1.06	-5.14	-1.69
	Annualized standard deviation	13.1	7.7	8.8	9.9	11.1	12.1	9.5
30% of the time when interest rates were rising the fastest	Real return	5.49	-2.19	-1.48	-0.78	-0.09	-4.06	-0.57
	Annualized standard deviation	13.3	8.1	9.1	10.2	11.4	12.4	9.8

When both inflation and interest rates are rising - fast

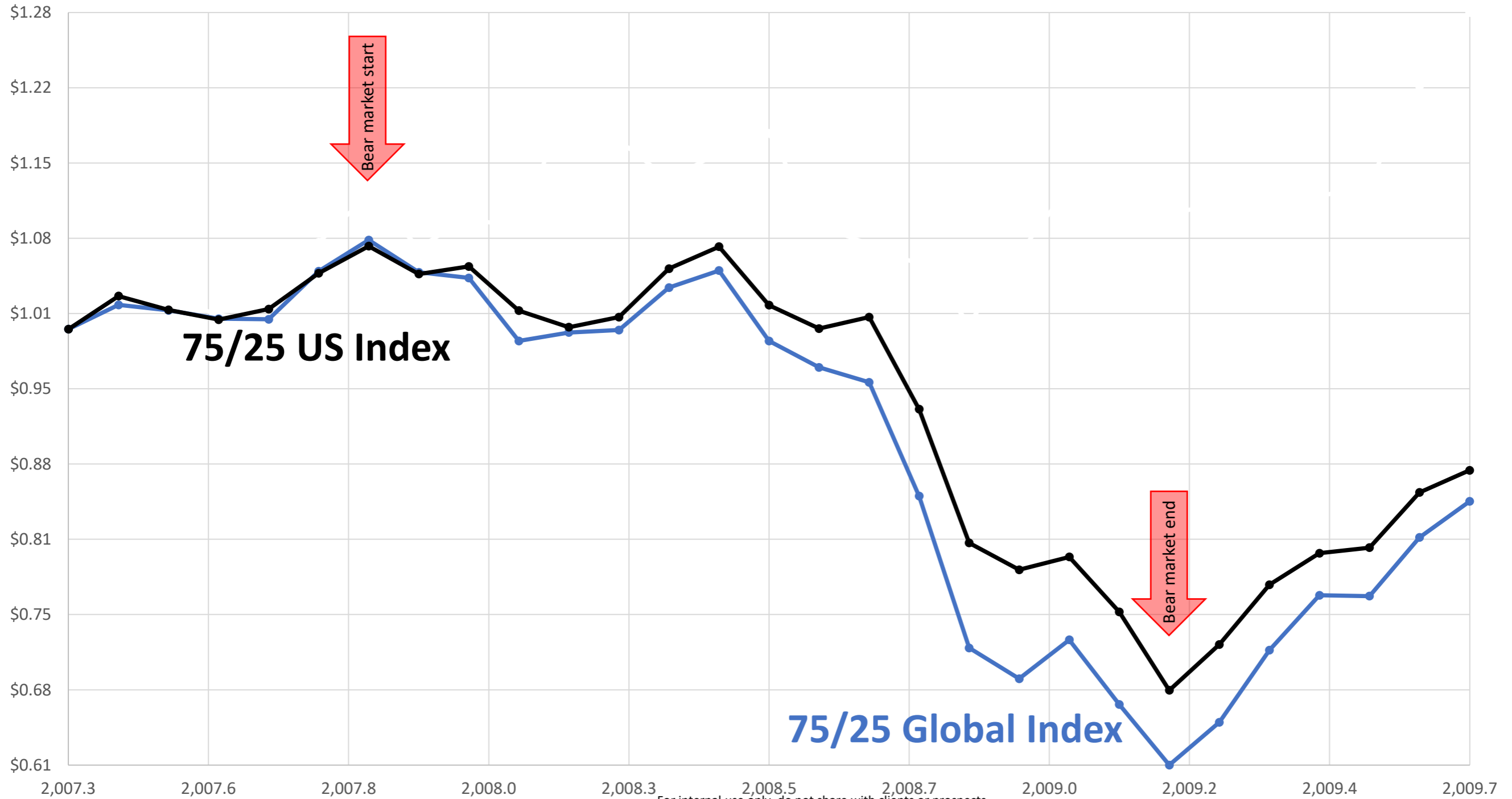
Statistics over entire time period (102 years) using inflation-adjusted monthly returns

		TAA portfolio	55/45 global stocks/bonds	65/35 global stocks/bonds	75/25 global stocks/bonds	85/15 global stocks/bonds	75/25 U.S. stocks/bonds	70/24/6 global stocks/bonds/ commodities
10% of the time when BOTH interest rates and inflation are rising the fastest	Real return	2.22	-6.11	-5.00	-3.89	-2.78	-7.12	-3.83
	Annualized standard deviation	12.4	8.5	9.5	10.6	11.7	12.6	10.1
20% of the time when BOTH interest rates and inflation are rising the fastest	Real return	4.14	-4.16	-3.36	-2.56	-1.78	-5.75	-2.32
	Annualized standard deviation	13.1	8.3	9.4	10.5	11.7	12.4	10.0
30% of the time when BOTH interest rates and inflation are rising the fastest	Real return	4.81	-2.01	-1.26	-0.52	0.22	-3.57	-0.30
	Annualized standard deviation	13.1	7.9	8.9	10.0	11.1	12.1	9.6

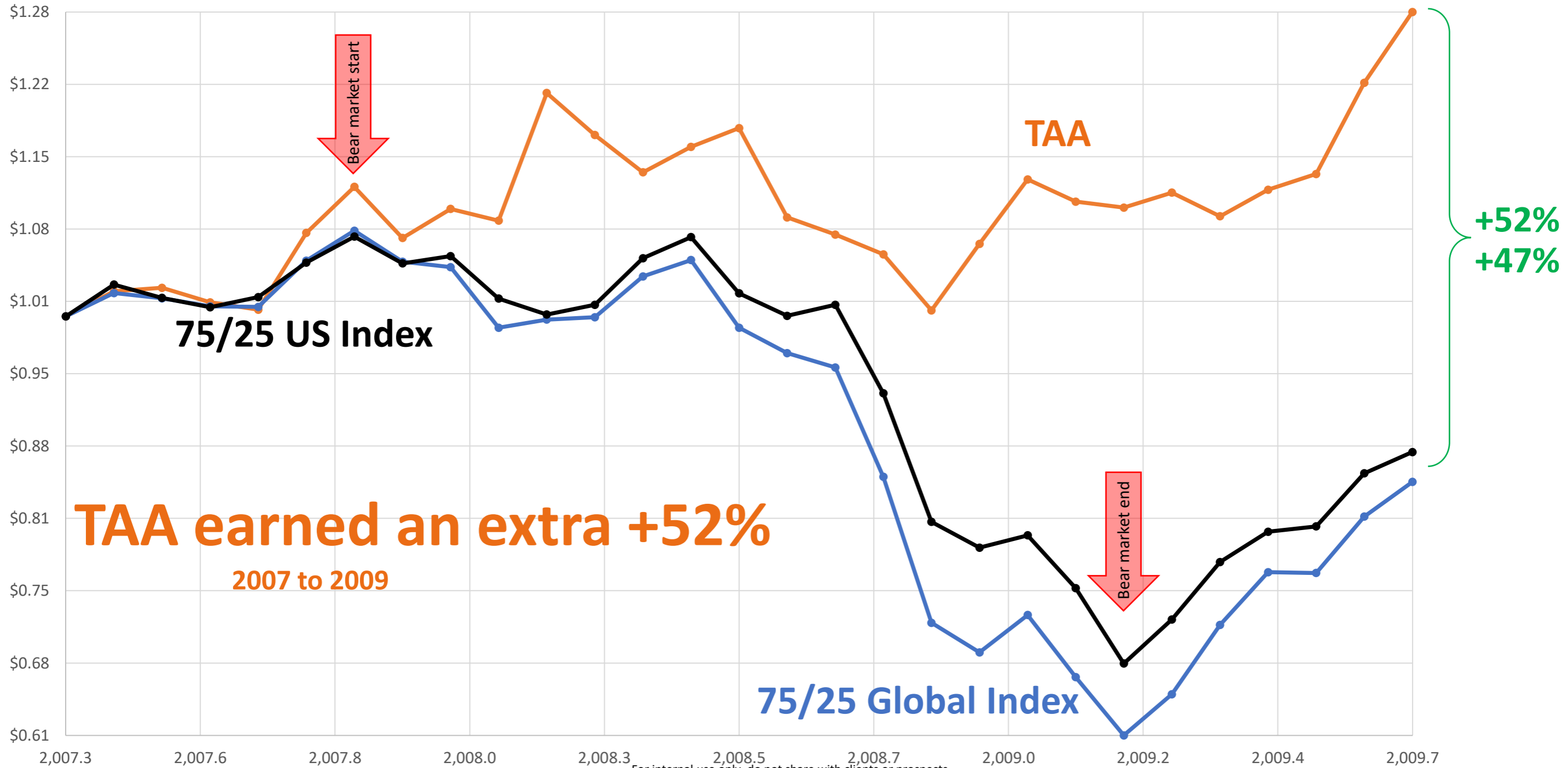
Consider a specific bear market

The bear market that corresponded with The Great Recession

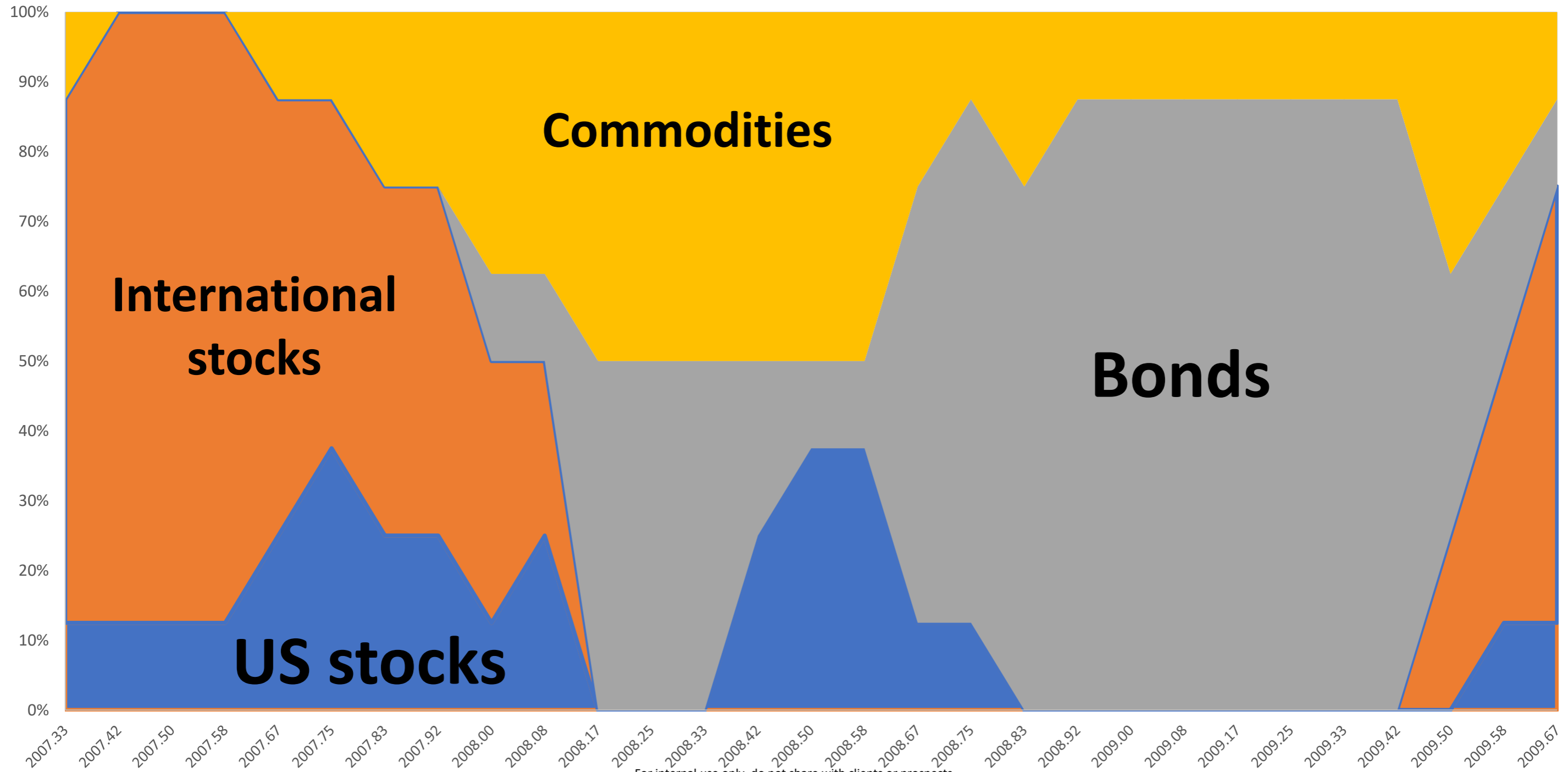
Bear market “avoidance” . . . using tactical asset allocation



Bear market "avoidance" . . . using tactical asset allocation



How did it achieve that result? . . . meaningfully moving the asset mix



Performance during bull and bear markets (as defined for the S&P 500 Index)

Market environment	Statistic	TAA portfolio	55/45 global stocks/bonds	65/35 global stocks/bonds	75/25 global stocks/bonds	85/15 global stocks/bonds	75/25 U.S. stocks/bonds	70/24/6 global stocks/bonds/commodities
For all periods ending during a BULL market	Median inflation-adjusted return (in %) for a 12.5-year period	11.16	5.62	6.02	6.45	6.91	7.24	6.21
	Probability of earning more than 4.25% (annualized inflation-adjusted) for a 12.5-year period	97.3	64.8	70.0	71.5	72.7	74.4	72.5

Performance during bull and bear markets (as defined for the S&P 500 Index)

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For all periods ending during a BULL market	Median inflation-adjusted return (in %) for a 12.5-year period	11.16	5.62	6.02	6.45	6.91	7.24	6.21
	Probability of earning more than 4.25% (annualized inflation-adjusted) for a 12.5-year period	97.3	64.8	70.0	71.5	72.7	74.4	72.5
For all periods ending during a BEAR market	Median inflation-adjusted return (in %) for a 12.5-year period	9.89	5.30	5.36	5.84	6.17	5.32	5.58
	Probability of earning more than 4.25% (annualized inflation-adjusted) for a 12.5-year period	100.0	74.7	75.3	75.3	81.3	67.3	74.0

Winners Repeat, Losers Repeat

Rob Brown, PhD, CFA, Chief Investment Officer and SVP for Integrated Financial, Inc.

ABSTRACT

This article presents a tactical asset allocation (“TAA”) proof-of-concept portfolio. It is intended to successfully harvest the non-iid statistical attributes of stocks, bonds, commodities, and currencies, both domestic and international. In other words, it has as its objective to benefit from markets’ propensity to trend from month to month, and during both bull and bear market environments. The proof-of-concept portfolio relies on a simple quantitative rule that allows for rigorous evaluation over the last 102 years. The results presented herein, suggest that TAA is an approach worthy of serious consideration. Moreover, the article suggests that a necessary condition for TAA success lies in correctly specifying its rather differentiated investment objective - one that may be unrelated to comparisons with popular passive index benchmarks. Such fixed-weight benchmarks have correlations with TAA strategies that are so low as to make commonly used statistical comparisons irrelevant, i.e., not statistically significant. Our industry has done a remarkably good job of mischaracterizing, mis-selling, and over-promising all-things TAA. And doing so with a profound willingness to compare or “evaluate” TAA portfolios using inappropriate and/or dysfunctional comparative measures - serving to guarantee inevitable dissatisfaction. This article attempts to correct these misspecifications by more properly associating TAA with a specific real world client need.

KEY TAKEAWAYS

- The TAA portfolio earned an inflation-adjusted 10.8% over the aggregate time period (102 years). Whereas, a comparable passive index earned a lesser 6.6% (one with a similar standard deviation, a 75/25 global stock/bond mix).
- TAA’s performance advantage resulted even after subtracting unusually high transaction costs from the TAA portfolio, while assuming that the comparable passive index could rebalance cost-free.
- The TAA portfolio’s greater relative success in achieving the stated investment objective did not diminish with the passage of time. If anything, it may have improved during the most recent time period (14.3% of the cases examined drawn from the data spanning 1919-2021).
- The causality underlying TAA’s relative success is attributable to three behaviors: trending, bear market longevity, and presence of episodic eras. Trending results from the time it takes for information to be reflected in portfolios and the herding behaviors of market participants.

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Why DIY investing doesn't work

Friday

January 14th

11:00 a.m. EASTERN

All data and statistics were provided by Global Financial Data, Inc. (unless otherwise indicated in the exhibit)

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