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## RESEARCH ARTICLE

# Short-termism - Selecting/abandoning investments at the wrong time for the wrong reason

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### ABSTRACT

Short-termism drives our industry's hiring of new investment strategies and the firing of existing. Investors/advisors all too often, focus and base their decisions on the last "15-years," falsely claiming that they're considering the "long-run." This is unusually true today, with the S&P 500 having returned almost 13% per annum over and above inflation since Feb 2009. The negative impact of this behavior is felt most severely by retirement savers due to the duration, size, and their heightened sensitivity to left-hand tail-risk (no retiree can tolerate running out of money, and will do almost anything to avoid such an outcome).

The objective of this article is to present a twelve-step process that if implemented correctly should mitigate the lion's share of this problem. To make the proposed solution understandable, immediate, and resonate, we use the strawman of TAA (Tactical Asset Allocation) as the investment strategy/approach under review/scrutiny. TAA was selected because it most clearly represents the challenge. TAA's unusually easy to define, has a clearcut documented history, data is readily available, and it classically represents the problem examined herein, i.e., TAA quintessentially represents the challenge of decisions based on recent performance.

#### Key takeaways

- When evaluating a strategy, it's necessary to first precisely define the strategy, most are ambiguous and highly confused, our industry often goes to great lengths to confound and confuse
- If it doesn't work for the simple, then it won't work for the complex, show how an overly simplified version of the strategy would have worked (and worked well) over the long span of time
- Why are investors and their advisors/consultants making mistakes in the hiring and firing of investment approaches (behavioral bias, emotion, and a lack of historical understanding)
- Each investment strategy requires its own unique time period to germinate, sprout, grow, mature, and be successfully harvested, consider the Chinese proverb - If you have a year plant rice, ten years plant trees, one hundred years educate children
- Is the problem with the strategy being evaluated, or is the problem with the S&P 500 Index (is the S&P non-representative and non-repeatable)

**Keywords:** Retirement saving; Performance benchmarks; Time series properties; Investment time horizon; Behavioral bias; Bear market bounce back; Left-hand tail-risk

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## 1. Introduction

Short-termism drives our industry's hiring of new investment strategies and the firing of existing. Investors/advisors all too often, focus and base their decisions on the last "15-years," falsely claiming that they're considering the "long-run." The negative impact of this behavior is felt most severely by retirement savers due to the duration, size, and their heightened sensitivity to left-hand tail-risk (no retiree can tolerate running out of money, and will do almost anything to avoid such an outcome).

The objective of this article is to present a twelve-step process that if implemented correctly should mitigate the lion's share of this problem. To make the proposed solution understandable, immediate, and resonate, we use the strawman of TAA (Tactical Asset Allocation) as the investment strategy/approach under review/scrutiny. TAA was selected because it most clearly represents the challenge. TAA is unusually easy to define, has a clearcut unambiguous history, data is readily available, and it classically represents the problem examined by this article, i.e., TAA quintessentially represents the challenge of decisions based purely on recent performance.

Investing for a future retirement or during the retirement years is different from almost all other investment circumstances. Why? Three reasons:

- **Longer** - Saving in preparation for retirement could last for 40+ years (perhaps ages 22 through 65). Saving drawdown during retirement could last an additional 30 years (perhaps ages 65 to 95). The aggregate investment time period could be 70+ years.
- **Larger** - The retirement drawdown will be the single largest expenditure faced by an individual, couple, or family (I'm restricting myself here to those circumstances where a financial advisor or investment consultant are involved).
- **Left-hand tail risk sensitivity** - Retirees are in a unique circumstance, i.e., they can't go back to work or delay retirement, face rapidly rising healthcare costs, and have an extreme fear of running out of money (given the consequences to their lifestyle if such unfolds). For this reason, retirees are significantly more sensitive to left-hand tail risk than other investors with similar investment holding periods.

So, what's the problem? The three attributes described above make retirement investing inherently more susceptible to short-termism. Short-termism is the adoption or abandonment of investment approaches (strategies) based on short-term results. For example, basing one's decision on the last fifteen years (2009-2024). It's commonly contended that such behavior burns between 200 and 300bps in performance per annum over the long-term (e.g., during the 70+ years comprising retirement accumulation and disbursement). If true, such a burn would have catastrophic consequences for the retiree's standard of living.

What's to be done? The objective of this article is to provide a twelve-step framework for evaluating an investment approach (strategy) . . . that if applied diligently, will mitigate the above stated problem. To get a feel for the importance of this topic, consider five common investment approaches. These five strongly support the earlier observation that short-termism has historically burned 200 to 300bps per annum.

- **Smallcap (vs largecap)** - Jan '69 to Dec '74 smallcap<sup>1</sup> underperformed largecap by -58% (or -13.8% per year for about 6 years). As a consequence, many abandoned their smallcap allocations/managers . . . or migrated to managers who falsely advertised themselves as smallcap

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<sup>1</sup> Smallcap and largecap are based on the Kenneth R. French data library. Smallcap is defined as the 30% of the market with the smallest market capitalizations and largecap as the 30% with the largest market caps.

(but weren't). As a consequence, these investors missed the Dec '74 to Jul '83 period when smallcap outperformed by +274%.

- **Value (vs growth)** - Sep '09 to Aug '20 value<sup>2</sup> underperformed growth by -58% (or -7.7% per year for about 11 years). As a consequence, many abandoned their value allocations/managers . . . or more commonly migrated to managers who were falsely advertising themselves as value (but were anything but). As a consequence, these investors missed the Aug '20 to Dec '22 period when value outperformed by +72%.
- **International (vs US)** - Jan '02 to Oct '07 U.S. underperformed international<sup>3</sup> by -92% (or -12.0% per year for about 6 years). As a consequence, many fired U.S. managers and shifted assets to international. As a consequence, these short-term focused investors missed the Oct '07 to Oct '22 period when U.S. outperformed international by +177%.
- **Commodities (vs S&P)** - Nov '08 to May '20 the S&P 500 outperformed diversified commodities<sup>3</sup> by +1,116%. As a result, those driven by short-term results dumped their commodity managers and allocations. As a consequence, these behaviorally biased investors suffered during the May '20 to Sep '22 period when the S&P 500 underperformed commodities by -82% (or -52.3% per year for 2 1/3 years running).
- **TAA (vs S&P)** - Feb '09 to May '13 TAA (Tactical Asset Allocation<sup>4</sup>) underperformed its comparative benchmark by -29% (or -7.8% per year for over 4 years). As a consequence, many fired their TAA managers, abandoning the strategy. As a consequence, these investors missed out on TAA's relative outperformance of +58% during the period May '13 to Sep '22.

Why is this happening? Most investor decisions suffer from three deficiencies: behavioral bias, raw emotion, and an extreme lack of historical understanding, i.e., what's normal and typical and what's not. This last deficiency is near universal and fundamentally overarching.

One could suggest that these data prove the case for adopting and maintaining permanent unvarying allocations . . . but that's not what happens in practice. Instead, the 200bps 300bps annual burn results from abandoning and selecting investments based on short-term results, e.g., what happened over the last 15 years.

We can't boil the ocean, so this article adopts a simplified structure. We use a single highly representative strategy to serve as the example, the goat, i.e., TAA (Tactical Asset Allocation). Why TAA?

- Unusually easy to define . . . in contrast to something like real estate which is more of an ecosystem than it is an asset category or strategy (just far too diverse)
- Clearcut unambiguous history . . . in contrast with real estate, whose history depends critically on the niche selected
- Classically represents the problem examined by this article
- Data readily available
- Sucked big time since "2009" . . . being abandoned by investors/advisors due to behavioral bias, emotion, and failure to understand history

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<sup>2</sup> Value and growth are based on the Kenneth R. French data library. Value is defined as the 30% of the market with the lowest P/B ratio and growth as the 30% with the highest P/B ratio.

<sup>3</sup> Data provided by Global Financial Data, Inc.

<sup>4</sup> The definition of the TAA portfolio and its comparative benchmark will be described later in this article

- Performed awesomely in prior periods and over the long-run
- Quintessentially represents the problem of decisions based purely on recent performance
- Hiring and firing for exactly the wrong reasons, the wrong understandings, all at the wrong times
- Firing because it doesn't work (it actually does) . . . hiring because it solves all of my problems (no it actually doesn't)

These nine attributes make TAA ideal for this article's objective. The remainder of this article proceeds through the twelve-step process, one at a time, in the order that we recommend they be considered/completed.

## 2. How is the strategy defined?

This is an important first step since strategies as simple as value/growth or smallcap/largecap are plagued by ambiguity. TAA is defined by five inherent attributes (for accounts smaller than \$10 million):

- The building blocks of any TAA portfolio are mid-level asset categories, e.g., US-energy, US-financials, US-technology, Germany, Japan, India, Brazil, 90-day Treasuries, 20-year Treasuries, High-yield bonds, Investment grade corporates, Diversified commodities, etc.
- Asset shifts are made in size, e.g., moving from 100% stocks to 50% or even 0%,
- Making such shifts quickly, e.g., all within a single month,
- High transaction costs, and
- Asset selection is driven by trending and momentum<sup>[1,2]</sup>

To address this article's objective, a specific TAA model must be specified. This is so that the performance of said model can be examined using monthly returns since Jan 1919 (when quality data first became available). The criteria underlying this model include:

- Based 100% on historical data, no forecasts or projections,
- Quantitative rules-based,
- The rules never change, nor are they adaptive,
- So simple, that any high school student could precisely replicate the results,
- Utilizes/accesses 33 asset categories (8 slices of U.S. stocks, 15 international countries, 9 slices of U.S. bonds, and 1 version of diversified commodities)
- Imposes punishing transactions costs on the portfolio,
- Was not optimized to deliver an attractive long-term result over the aggregate period,
- Has the explicit investment objective to minimize left-hand tail risk (defined as the 99.6<sup>th</sup> percentile outcome) over any and all possible 7.5-year investment time periods, and
- Is in strong alignment with TAA strategies offered within the industry today.

The construction of the TAA portfolio<sup>5</sup> follows the methodology utilized by Brown 2018, Brown 2022, Brown 2024a, and Brown 2025. In brief, it selects the ten asset categories that trended the most strongly over the last eleven months. Assets are equal weighted, except for fixed-income which is weighted differently in order to best serve the 7.5-year investment time period (the portfolio's objective).

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<sup>5</sup> Exact specifications are available upon request, reach out to the author

### 3. Where did it originate and why?

Why is this question important? Because if you can't explain where it came from and why, you stand little chance of understanding the strategy, much less evaluating its worthiness. The reason something exists and its origins say more than almost everything else put together, about what it is and what it is not . . . one can't move forward without these understandings. To state the obvious, one can't evaluate a cow, without first understanding what a cow is and why it exists.

TAA started as an institutional investment strategy when Bill Fouse (founder of Mellon Capital Management) introduced it back in 1972. Bill was the original quant within our industry. He only popularized TAA after his founding of Mellon Capital in 1983. Important side note, Bill also invented the index fund in 1971.

Although Bill invented the index fund as a result of his appreciation for how few active managers added value, he equally understood how major markets (stocks, bonds, cash, domestic, international) were driven by behavioral bias, emotion, long-cycle valuation mistakes, and consequent trending behavior. It was this later understanding that drove Bill and his team of cutting-edge quants to create the original institutional TAA strategy.

These observations are important because they identify TAA as a purely rules-based quant strategy, one based on the available data. And seeking to take advantage of behavioral bias, emotion, and the shockingly long periods of time required for major market segments to bring their relative fundamental valuations into alignment.

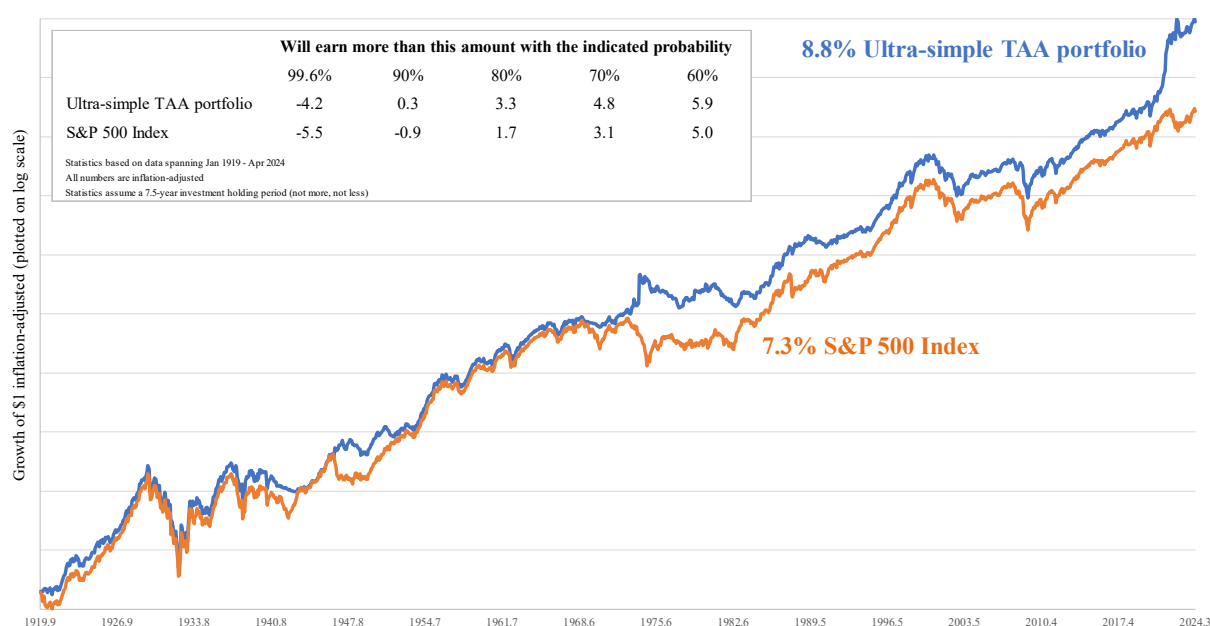
### 4. Does an ultra-simple version work across time?

If it doesn't work for the simple, then how can it work for the complex? This question's important because we desire strong evidence that the strategy is inherently viable (at least over long-span of history, more on the present day later in this article). A useful test is to take a frightening simple version of the strategy and see if it worked over time, i.e., a version so simple, that no one would ever adopt it in practice.

Addressing this need could take numerous directions. To proceed, I adopt one. Consider a simple binary portfolio, it's either 100% S&P 500 or 100% ultra-diversified commodities<sup>6</sup>. The switch to commodities (and back again) occurs whenever inflationary surprise is present. Specifically, today's CPI Index must be more than 2.062% above its eleven-month average level, at which point the portfolio moves completely from the S&P 500 to commodities. This is about as simple as it gets for a TAA model. Exhibit 1 provides the results.

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<sup>6</sup> Monthly total returns provided by Global Financial Data, Inc.



**Figure 1.** Ultra-simple TAA model using only S&P 500 and commodities (binary model)

Based on returns spanning Jan 1919 through Apr 2024, the S&P 500 returned 7.3% over and above inflation. The simple TAA model generated 8.8%. Of greater importance than these 125-year averages are the percentile outcomes for shorter periods. Every investor has a different time horizon, however to proceed, we must adopt one. Throughout this article, I assume that the investor has needs that arrive between five and ten years in the future. I take the mid-point of this interval, 7.5 years, and use that length interval for all analysis.

The table within Exhibit 1 shows five different percentile outcomes for all possible 7.5-year investment time periods (there are 1,253 unique such intervals). This presentation is necessary because the time series properties of asset class returns are so extreme as to make analysis based on simple means, standard deviations, and correlation coefficients highly misleading.

Based on the over-simplified TAA model, the strategy works both in the long-run (125 years) and in the short-run (7.5 years). But yet, those who have adopted or potentially considered the use of TAA, today complain that it doesn't work, or worked in the past but not in the present. All too often the basis for such complaints is behavioral bias and emotion. Let's turn next to this issue

## 5. What causes short-termism?

We can't overcome short-termism if we don't first understand what causes it. This article argues that it results from behavioral bias, emotion, and an extreme failure to understand history. Exhibit 2 attempts to identify and describe the most prominent forms that behavioral bias takes within the investments industry.

<p><b>Trend chasing</b></p> <p>Risk tolerance strongly dependent on past performance</p> <p>Past performance will continue into the future</p> <p>Higher (lower) the market, the greater (lower) your allocation to that market</p> <p>Wait to buy until after it's gone up . . . then wait to sell until after it's gone down</p>	<p><b>Mental accounting</b></p> <p>Treating varying sources of wealth/income differently and inconsistently</p> <p>Example - Emotionally tied to certain stock, e.g., elderly investor won't part with large holding in the stock of a bank because it had been started by a family member</p> <p>Denys the fungibility of money</p> <p>Example - Money earned from a job viewed/treated differently from money received from an inheritance</p>	<p><b>Media response</b></p> <p>Accepts media dialogue without adequate filters or due consideration</p> <p>Allows the irrelevant and unfounded to displace the relevant and consequential</p> <p>Embraces propaganda more readily than accurate, well-founded, balanced news or data</p> <p>Unable to distinguish between propaganda, data, news, information, and reliable observations</p> <p>Failure to adequately understand the structure of the investment industry and its motivations/behaviors</p>
<p><b>Recency - Hot hand fallacy</b></p> <p>FOMO - Fear of Missing Out</p> <p>Your current success becomes the deciding factor for future decisions</p> <p>Today's winner will be tomorrow's winner</p>	<p><b>Diversification</b></p> <p>Confusing the number of positions (or securities) with actual risk reduction</p> <p>Failure to understand the multi dimensionality of risk and its specific sources</p> <p>Seeking to reduce risk . . . but simply acquiring multiple sources of the exact same risk</p> <p>Example - Home bias</p>	<p><b>Regret</b></p> <p>Pursue behaviors designed to avoid regretting (based on ex-post knowledge) decisions made in the past</p> <p>Example-Not selling an already existing investment until after it has regained everything that it lost since initial purchase</p> <p>Treating errors of commission more seriously than errors of omission</p> <p>Example - Dollar cost averaging</p>
<p><b>Loss aversion</b></p> <p>Lack of patience</p> <p>Risk tolerance level inconsistent with investment time horizon serving time specific needs</p> <p>Unbalanced preference for loss mitigation or avoidance</p> <p>Inability to give an investment the time it requires to germinate, sprout, grow, mature, and be successfully harvested</p>	<p><b>Anchoring</b></p> <p>Resistance to new (or old) information not previously considered</p> <p>Avoidance of the new, unexpected, opposing, or challenging</p> <p>Tying yourself to an initial perspective</p> <p>Overreliance on the familiar and already accepted</p>	<p><b>Herding</b></p> <p>Examples - Bernie Madoff, Enron, WorldCom, Tyco , Meme stocks, SPACs, Crypto</p> <p>Finding solace and comfort by operating anonymously well inside the crowd, i.e., running with the herd</p> <p>Going with the group because you believe that the majority cannot be wrong or standing with the majority is a comforting position</p> <p>Decisions are based on herd behavior rather than the unbiased analysis of all information</p>
<p><b>Narrow framing (confirmation bias)</b></p> <p>Hear only things that confirm/support already existing perception</p> <p>Example - Buying TIPS bonds because you read that they protect against inflation</p> <p>Seek information confirming current view while avoiding or rejecting conflicting views</p> <p>Make decisions without considering important information and all of the implications</p>	<p><b>Optimism (overconfidence)</b></p> <p>Believe they have more knowledge/understanding of a certain topic than they actually do</p> <p>Example - Cognitive decline that inevitably comes with the passage of time</p> <p>Misinterpret beginner's luck</p> <p>Lack of humility</p>	

**Figure 2.** Eleven most common investment-related behavioral biases

All eleven biases drive short-termism. But three stand out in particular. Regret causes us to focus on what could have been (in the past), if we had only known before the fact. Unfortunately, our investments are all about what will happen in the future. Embracing regret causes us to fight that last war and therefore lose the next.

Recency bias causes us to place undue emphasis on what worked so well over the “last year”. We feel we should be invested in the S&P 500 because it has beaten all other indices over the last twelve months (that we’re aware of). And media response bias causes us to give credence to news stories that come across our view, without adequate filters, due consideration, or skepticism.

These eleven behavioral biases are powerful dysfunctions. We can’t overcome them (overcome short-termism) unless we first identify and understand their causality, i.e., one can’t treat the flu, if one doesn’t first understand its causality. They cause us to focus on the wrong data, misinterpret, and engage in emotion-driven decision-making. Let us next turn to the question of benchmark selection and ask the question, could our behavioral biases be causing us to adopt the wrong comparative index?

## 6. Are we comparing to a non-representative and non-repeatable benchmark?

So many view the S&P 500 Index as “the market” and as such is representative and repeatable. But is it? Could we be comparing against a benchmark that’s the exact opposite, i.e., it’s not the aggregate stock market, it’s not representative, and it’s not repeatable. Many have presented just this argument [3-5]. The contention here is that comparing to a purely U.S. equity benchmark may be problematic. And is most likely the result of a failure to understand history, compounded by behavioral biases such as regret, trend chasing, recency, and media response described above.

Consider that no nation (over the last 800 years) has ever dominated for very long. No exceptions. And the transition from one nation to the next (for leadership and dominance) has been driven by changing comparative advantage, national priorities, and the rapid growth of calcifying bureaucracy[6]. Exhibit 3 provides a view to this issue, examining the period since 1250.

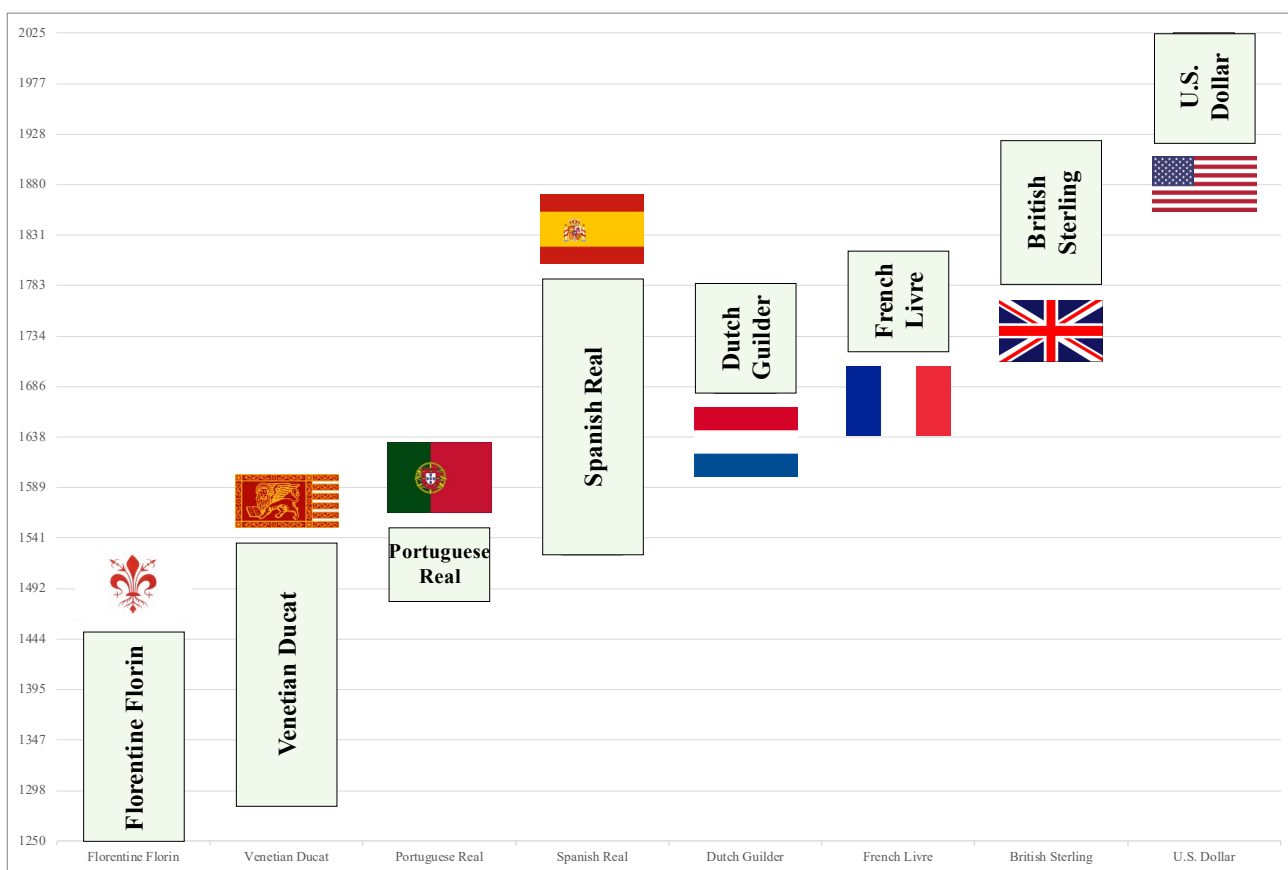


Figure 3. Major Global Reserve Currencies Since 1250

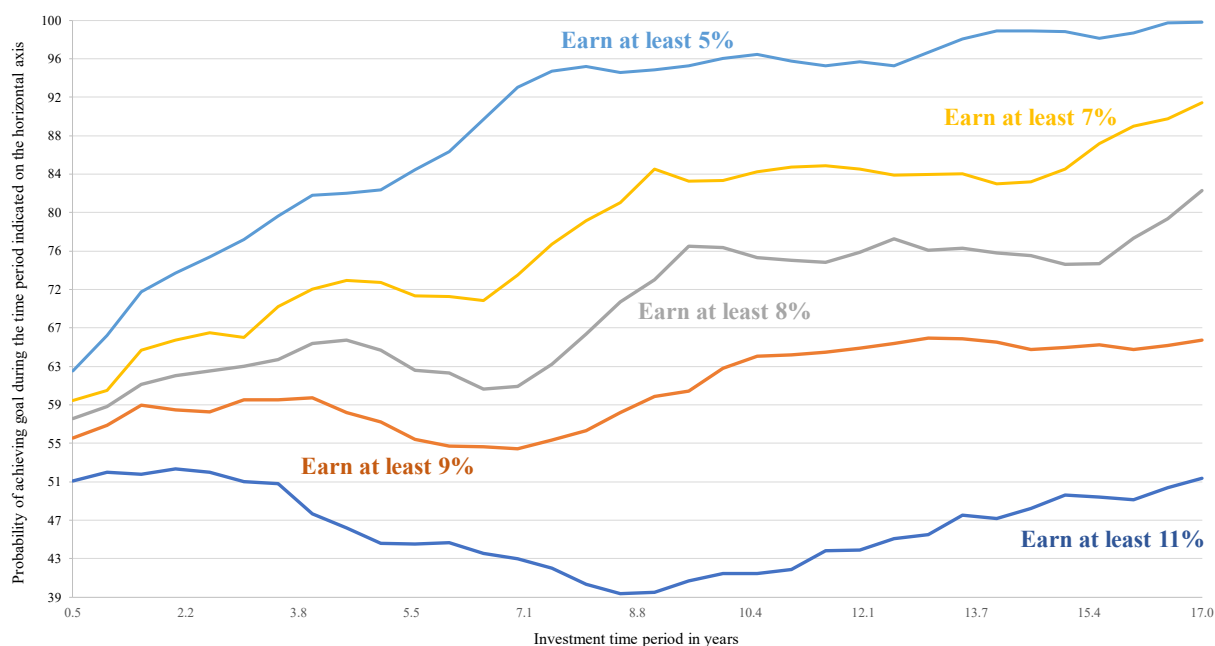
The U.S. Dollar is today’s global reserve currency. But so have many others since 1250. No nation has ever been able to maintain its respective global hegemony for long. Eventually, the inexorable sands of time grind away every nation’s relative comparative advantage, whether for external or purely internal reasons. History shows no exceptions. In the case of the U.S., it has followed a breathtaking path during the post-industrial era (i.e., post WWII), but it is difficult, in the context of history, to paint a picture by which such unparalleled dominance continues unendingly into the future<sup>[7]</sup>. This observation provides a basis for avoiding comparisons to the S&P 500 Index. But let’s next identify appropriate return and timeframe expectations.

## 7. What are appropriate time/return expectations?

Venture capital, stocks, bonds, and cash all have different investment time horizons, i.e., the months, years, or decades required for them to sprout, grow, mature, and be successfully harvested. They also differ with respect to reasonable return expectations. A well-known Chinese proverb best capture this duality:

- If you have one year . . . plant rice
- If you have ten years . . . plant trees
- If you have one hundred years . . . educate children.

TAA is no different. Exhibit 4 provides the answer.



**Figure 4.** Each asset has a different realistic goal and time period to get there (maturation cycle)

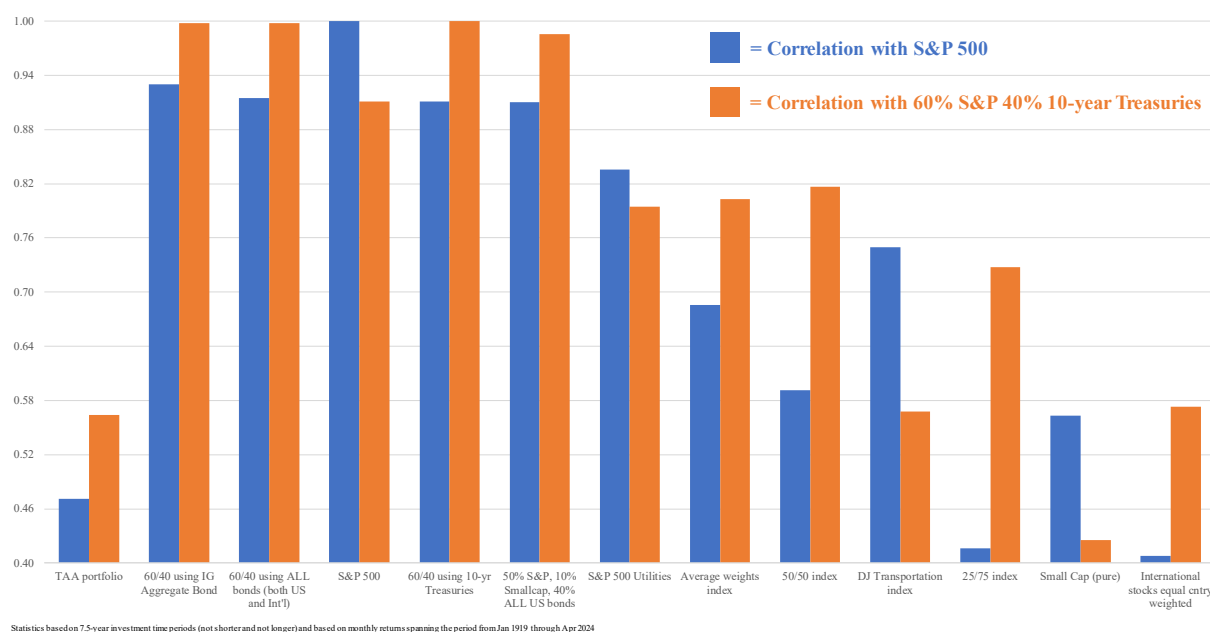
The vertical axis shows the probability of achieving the stated objective. While the horizontal identifies the investment holding period. Each colored line corresponds to a different return objective. For example, the dark blue line at the bottom identifies the investor's likelihood of earning at least 11% annualized (above inflation) for different length investment time horizons.

Obviously, for TAA, minimum return objectives of 8%, 9%, or 11% (gray, orange, and dark blue lines) are unreasonable. The probability of success is just too low. In contrast, a return objective of earning at least 5% above inflation feels quite appropriate (the light blue line at the top of the exhibit). Moreover, note how something special happens around seven or eight years, i.e., the probability of success reaches an attractive if not compelling level. One might draw from these results that the appropriate time horizon for this TAA portfolio is 7.5-years and to earn at least 5% over and above inflation. This observation is important if one compares TAA's performance to that of other popular commonly used performance benchmarks. Such comparisons only make sense, if TAA correlates with such metrics. Let's consider this issue next.

## 8. Does it correlate or march to a different drummer?

The purpose of a performance benchmark is to draw useful observations about the strategy being evaluated. This requires that the two are sufficiently similar. If you evaluate your cow by comparing it to a

horse, the conclusions that you draw are likely to be harmful and counterproductive. In the case of investment comparisons, this requires that we compare a strategy to a benchmark with which it strongly correlates. Exhibit 5 provides the data for TAA.



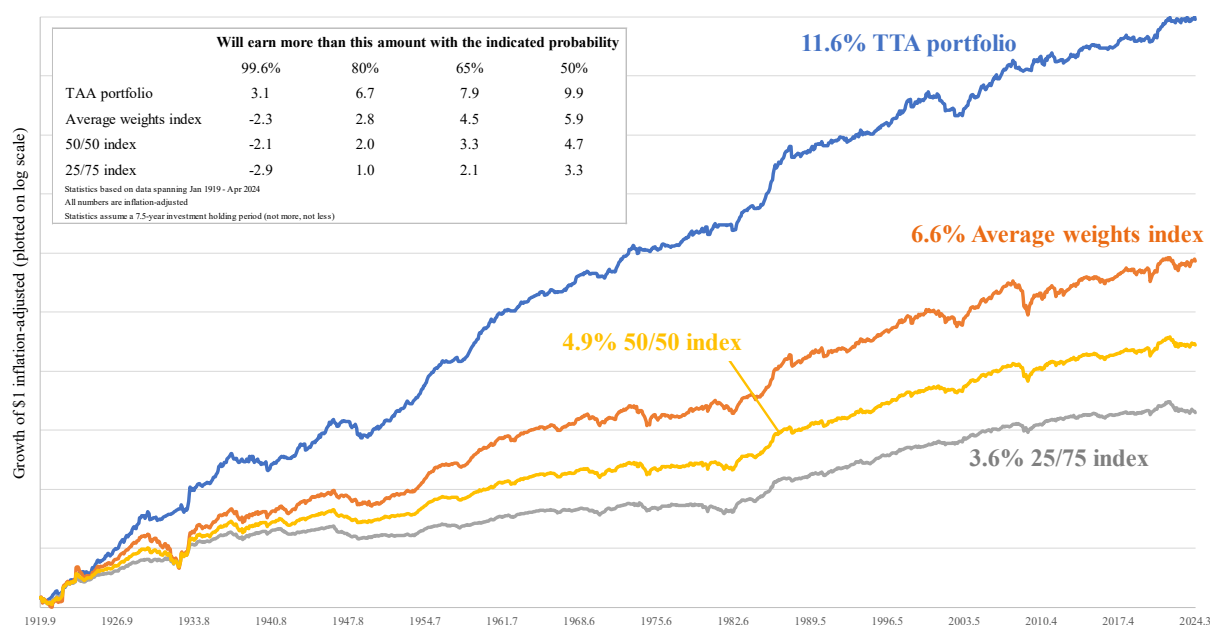
**Figure 5.** TAA marches to a different drummer

The only popular benchmarks that correlate with the S&P 500 less than TAA, are a 25/75 stock/bond mix and international stocks. Similarly, the only benchmark that correlates with a 60/40 mix less than TAA is U.S. smallcap. Bottom line, TAA does not correlate with any popular commonly used benchmark, and therefore should never be compared against such metrics. Doing so is harmful and inherently misleading. I can't emphasize this enough. Judging the worthiness of your cow based on its ability to run faster than your horse is simply dysfunctional. TAA just marches to a different drummer. So, what might be an appropriate comparison?

## 9. What are appropriate comparative benchmarks?

The TAA model presented herein adopted a 7.5-year investment time horizon. In other words, it attempted to deliver attractive results during any possible 7.5-year period. For this reason, one might consider comparing it to traditional fixed-weight 25/75 or 50/50 stock/bond blends. Many investors have adopted such blends for time intervals of this length (whether right or wrong, just observing that doing so is common and accepted). For this reason, this article shows results against these two benchmarks in all subsequent exhibits.

Unfortunately using such fixed-weight metrics guarantees that they will have different risk-level characteristics than the TAA portfolio over the 125-year period examined herein. This will cause the benchmark or the TAA portfolio to gain an unfair advantage (leading to false and misleading conclusions) during either rising or falling market conditions. This problem can be easily neutralized by developing an average-weights portfolio benchmark. Such a benchmark adopts the average weights of the TAA portfolio over its entire 125-year existence. As a consequence, one is not inherently more or less aggressive than the other, as a consequence, one will not inherently do better or worse than the other during bull or bear market environments. Exhibit 6 provides the results.



**Figure 6.** TAA versus three appropriate comparative benchmarks over the long-run

Over the aggregate time period (approximately 125 years), the TAA portfolio crushed the three comparative benchmarks. Again, the average weights portfolio neutralizes any risk-level differences relative to the TAA portfolio. I further emphasize that all three comparative benchmarks<sup>7</sup> utilize the exact same indices that are contained within (or accessed by) the TAA portfolio . . . thus eliminating selection bias.

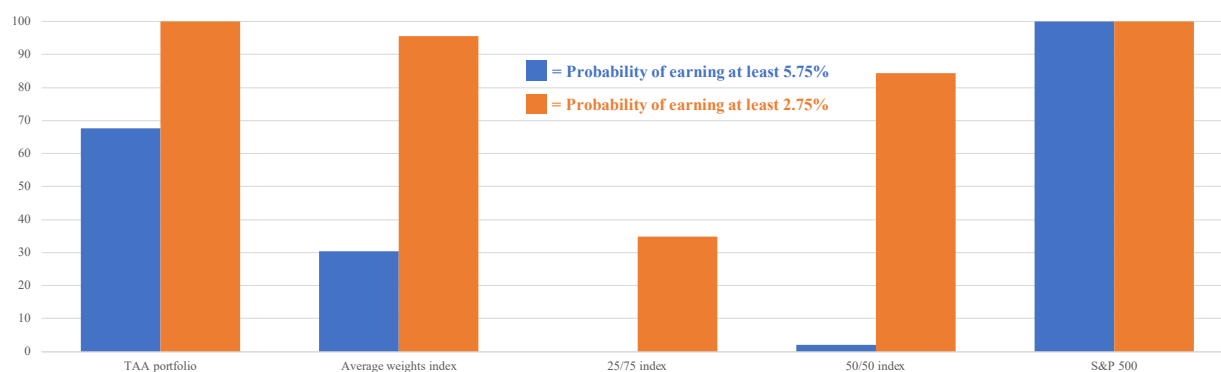
But no investor can wait 125 years for an investment result. In this article (as stated at the beginning), we're focused in on 7.5-year investment time periods. The results for which at varying percentile levels are shown in the boxed table located within Exhibit 6. As mentioned earlier, reporting means, standard deviations, and correlations is useless since the time series properties of asset class returns are so strong, i.e., referring to such summary statistics is misleading and quite harmful . . . an attribute well understood by the professionals who create and price the \$600 trillion of derivative instruments today<sup>[8,9]</sup>.

Note how the TAA portfolio crushes all three comparative benchmarks at the 99.6<sup>th</sup>, 80<sup>th</sup>, 65<sup>th</sup>, and 50<sup>th</sup> percentile levels. These data codify the strategy as inherently viable if not vibrant. But let's next return to the most recent period, the post Feb 2009 era, using the appropriate comparative benchmarks and the relevant investment time period. Again, keeping in mind that the S&P 500 crushed TAA during this period.

## 10. Reevaluating recent history using proper benchmarks

Now that we've identified three potentially plausible performance benchmarks, let's reevaluate the last 15 years (Feb 2009 to Apr 2024). Doing so, allows us to draw useful conclusions as to trouble/dysfunction with respect to the TAA strategy. Exhibit 7 provides the results. Keep in mind that we must utilize appropriate investment time periods and relevant return objectives.

<sup>7</sup> Exact specifications are available upon request, just reach out to the author



**Earn at least this amount over a randomly selected 7.5-year investment period**

Likelihood	TAA portfolio	Average weights index	25/75 index	50/50 index	S&P 500
75%	5.3	4.3	1.5	3.0	10.2
50%	6.5	5.2	2.0	3.5	11.5

Statistics based on all possible 7.5-year investment periods that both start and end strictly within/inside the time interval Feb 2009 - Apr 2024  
 Transactions costs are imposed on the TAA portfolio, but not on the four comparative benchmarks  
 All statistics in this table and the above graphic show the results as based on 7.5-year investment time periods

**Figure 7.** TAA worked over the last 15 year's (if compared to realistic/correct benchmarks)

This exhibit reports the results during the period spanning Feb 2009 through Apr 2024). Only 7.5-year investment time periods are examined. Moreover, those periods must both start and end strictly within the Feb '09 through Apr '24 period. Blue bars report the probability of earning more than 5.75% over and above inflation, while orange bars show probabilities for earning at least 2.75%.

The S&P 500 Index (far right-hand pair of bars) crushed all other portfolios. Nevertheless, when TAA is compared against its three appropriate benchmarks, it clearly outperformed during this 15.2-year period. This raises an interesting question: *“Is the problem with TAA, or is the problem with the S&P 500 Index?”*

**11. Is the problem with the S&P 500 index?**

The S&P crushed TAA since Feb 2009. This is the data. But should this then cause one to conclude that TAA failed? As related earlier, TAA has nothing to do with the S&P, it doesn't track. As a consequence, comparing TAA to the S&P is like asking whether I have a good/bad cow by comparing it to a fish . . . the two have nothing to do with each other. Sure, I wish that I'd invested my client's assets in the S&P since Feb 2009 (and so do they) . . . but that wish/hope is nothing more than the worst possible expression of behavioral bias (regret).

Perhaps the problem is not with TAA, and instead is with the S&P 500 Index. Exhibit 8 provides the data.



**Figure 8.** S&P 500's exceptional, non-representative, and non-repeatable returns (Feb 2009- Apr 2024)

This exhibit provides the after-inflation returns and return-per-unit-of-risk for twelve popular commonly used portfolios or asset categories. The S&P 500 Index delivered a higher return and a greater return/risk than any other asset category. This level of outperformance is extraordinary. Moreover, when one compares recent S&P performance versus its historical behavior, the comparison becomes even more stark (frightening).

Since Feb 2009, the S&P has returned 12.82%. But from Jan 1919 through Feb 2009, the S&P returned only 6.48%. This is a disturbing gap and it plays to the extreme power of behavioral bias, emotional, and the terrible consequences of their impact on investment decision-making. This comparison is made even worse by the observation that the U.S. during the post-industrial era (i.e., since the end of WWII) has followed a non-representative and non-repeatable path of prosperity and growth (7-10). In other words, U.S. returns prior to Feb 2009 of 6.48% are probably non-representative and non-repeatable . . . they were probably too good to be seen again (since the U.S. is not about to replicate what it achieved during the quite unique period since the end of WWII).

Bottom line, the problem is with the S&P 500 Index. Since Feb 2009, it's delivered something that at best can be described (to use a simple Midwestern term) as "interesting". The S&P has just simply been out of sink with everything else going on in the global economy. So, TAA disappointed over the last interval, or at least relative to the S&P. Can we expect a bounce back from TAA?

## 12. Should a bounce back be expected?

Consider value/growth, smallcap/largecap, domestic/international, or quality/speculation. If one examines the last 98 years of history for these four (it's hard to go back further if one insists on high quality data), then one might reasonably conclude that cycles (bulls and bears) exist and that bounce back (from extreme highs or lows) is present if not potent. But does a similar phenomenon exist for TAA? Exhibit 9 provides one answer.

Start	End	Length of interval (years)	Outperformance above comparative benchmark		Volatility (annualized in %)	Percentage of months that were positive
			Cumulative (%)	Annualized (%)		
Dec 1920	Feb 1923	2.2	-33.5	-17.1	20.0	54
Feb 1923	Jun 1932	9.3	295.4	15.9	11.1	69
Jun 1932	Jan 1934	1.6	-31.7	-21.4	13.6	37
Jan 1934	Mar 1938	4.2	52.8	10.7	6.6	70
Mar 1938	Jul 1940	2.3	-28.5	-13.4	11.5	39
Jul 1940	Feb 2009	68.6	5193.6	6.0	7.5	63
Feb 2009	May 2013	4.2	-29.1	-7.8	10.8	45
May 2013	Sep 2022	9.3	58.4	5.1	9.7	56
Sep 2022	?	?	?	?	10.6	53
Typical period of underperformance (median)		2.2	-30.4	-15.3	12.6	42

Statistics based on the level of outperformance (or underperformance) of the TAA portfolio after transactions costs relative to its comparative benchmark  
Comparative benchmark is defined as the "Average Weights" benchmark defined earlier in this article

**Figure 9.** Periods of out- and under-performance relative to comparative benchmark

This exhibit shows TAA outperformance relative to its appropriate benchmark, i.e., the average weights portfolio described previously. Each row corresponds to a different bull or bear market cycle for TAA (again, relative to its benchmark). Green-shaded areas show bulls, and white bears. When one digs into the ex-post causality underlying the four bear market episodes, it's found that these periods experienced diminished trending and momentum, accompanied by enhanced whipsaw (all forces that work against TAA success).

The bull and bear cycles for value/growth, smallcap/largecap, domestic/international, and quality/speculation are characterized by growing fundamental valuation disparities. If one continues to stretch a rubber band further and further, eventually it snaps back. One logically anticipates bounce back from such valuation-driven cyclical extremes. TAA cycles are different, and it's difficult to understand how any bounce back could be anticipated. Fundamental valuation disparities have not been necessarily associated with trending, momentum, and whipsaw.

The period since Sep 2022 remains highly ambiguous. Is it a TAA bear market or is TAA just taking a breather, neither outperforming nor underperforming. The final step when evaluating any strategy is to ask and answer whether the strategy's value has diminished with the passage of time . . . or does it remain as robust as ever?

### 13. Has the strategy's relative attractiveness diminished over time?

There are numerous methods for addressing this concern. One of the more powerful, is to take the long-run (i.e., 1919 to the present) and break it into six (or seven or eight) equal-length time periods. For each sub-era, ask whether the strategy achieved its stated objective, and doing so in the context of comparative/relevant performance benchmarks.

This article uses TAA as the demonstration portfolio. The specific TAA portfolio examined herein has an investment time period of 7.5-years, so that is the time interval that must be examined (not shorter and not longer). Moreover, this TAA portfolio (and most commercially available TAA portfolios) seeks to mitigate left-hand tail-risk as defined by the 99.6<sup>th</sup> percentile outcome (as opposed to maximizing expected return, or some other objective). Exhibit 10 provides the results.

<b>Probability of earning at least 2.75% (annualized)</b>				
All 7.5-year investment time periods ending between	TAA	Benchmark using TAA's average long-term weights	25/75 benchmark	50/50 benchmark
Apr 1927 - Jun 1943	100	97.9	90.2	96.4
Jun 1943 - Aug 1959	100	64.4	20.1	42.3
Aug 1959 - Oct 1975	100	91.8	50.0	68.0
Oct 1975 - Dec 1991	100	60.3	41.8	53.6
Dec 1991 - Feb 2008	100	99.5	100	100
Feb 2008 - Apr 2024	100	78.9	62.9	86.1

<b>Probability of earning at least 5.75% (annualized)</b>				
All 7.5-year investment time periods ending between	TAA	Benchmark using TAA's average long-term weights	25/75 benchmark	50/50 benchmark
Apr 1927 - Jun 1943	100	74.2	69.1	70.6
Jun 1943 - Aug 1959	88.1	37.6	0	17.5
Aug 1959 - Oct 1975	100	60.3	0	29.9
Oct 1975 - Dec 1991	96.4	44.3	36.1	38.1
Dec 1991 - Feb 2008	85.1	79.4	41.8	72.7
Feb 2008 - Apr 2024	76.8	29.9	0	10.3

<b>Median annualized return</b>				
All 7.5-year investment time periods ending between	TAA	Benchmark using TAA's average long-term weights	25/75 benchmark	50/50 benchmark
Apr 1927 - Jun 1943	16.1	7.3	6.5	7.2
Jun 1943 - Aug 1959	9.2	4.1	0.6	2.1
Aug 1959 - Oct 1975	12.2	6.2	2.7	4.2
Oct 1975 - Dec 1991	10.7	5.2	1.9	3.0
Dec 1991 - Feb 2008	8.3	7.5	5.5	6.5
Feb 2008 - Apr 2024	7.0	4.8	3.1	3.9

All statistics are based on and assume a 7.5-year investment time period

Statistics based on data spanning Jan 1919 through Apr 2024

Transactions costs have been subtracted from the TAA portfolio, but not from the three comparative benchmarks

Each of the above six time periods is based on 194 unique 7.5-year investment time periods

**Figure 10.** Has TAA's relative edge diminished over time?

The first table shows the probability of earning at least 2.75% over and above inflation for a randomly selected 7.5-year time interval. Notice how the TAA portfolio experienced 100% likelihood of success unlike the three comparative benchmarks (which actually did quite poorly). The second table shows the same results, but for a minimum 5.75% return. Observe how the TAA portfolio had a significantly higher probability of success than all three comparative benchmarks. In other words, TAA's comparative advantage has not diminished with the passage of time.

Finally, the last table shows the median result (for a randomly selected 7.5-year investment period). Notice how the TAA portfolio significantly outperformed all three comparative benchmarks in all six time segments. Again, TAA's comparative advantage did not diminish with the passage of time.

## 14. Conclusions

Retirement investing is different. It entails a longer time period, a greater sum of money, and a greater emphasis on left-hand tail-risk. These differentiating attributes cause it to be more susceptible to the perils of behavioral bias, emotion, and an inadequate understanding of long-run history.

This article has as its objective to lay out a twelve-step process designed to mitigate these three perils and thereby better protect retirement investing. These steps can be applied to any investment strategy/approach (with slight modifications for history). To make these steps real and immediate, I use a specific example throughout the article, i.e., Tactical Asset Allocation (TAA). TAA was chosen because it provides a highly representative example and provides unusually bright/clean data.

The essential conclusions are:

- **Definition** - Carefully define the strategy, most are ambiguous and highly confused, the industry often goes to great lengths to confound and confuse
- **Origin** - If you don't understand why something exists, then you've got zero chance of evaluating it, start by identifying when and why the strategy came into existence
- **Simple** - If it doesn't work for the simple, then it won't work for the complex, show how an overly simplified version of the strategy would have worked (and worked well) over the long span of time
- **Short-Termism** - Why are investors and their advisors/consultants making mistakes in the hiring and firing of investment approaches (it's behavioral bias, emotion, and lack of historical understanding)
- **Non-Representative Non-Repeatable** - Are we comparing to an index that was driven by a unique set of economic events that no one will ever see again
- **Chinese Proverb** - If you have a year plant rice, ten years plant trees, one hundred years educate children
- **Different Drummer** - Judging the veracity of your cow by measuring it against your horse results in harmful conclusions, don't compare a portfolio to an index that it doesn't correlate with
- **Appropriate Benchmarks** - What are the correct comparative performance benchmarks that actually serve to inform instead of confuse
- **Recent History** - Reinterpreting recent history (the last 15 years) using correct comparative benchmarks
- **S&P 500 Index** - Is the problem with the strategy being evaluated, or is the problem with the S&P 500 index
- **Bounce Back** - Many strategies experience bounce back from extreme disappointment, is this strategy one of them or not
- **Diminishment** - Has the strategy's attractiveness diminished over time, or is it as vital as it's ever been

## Conflict of interest

The authors declare no conflict of interest

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