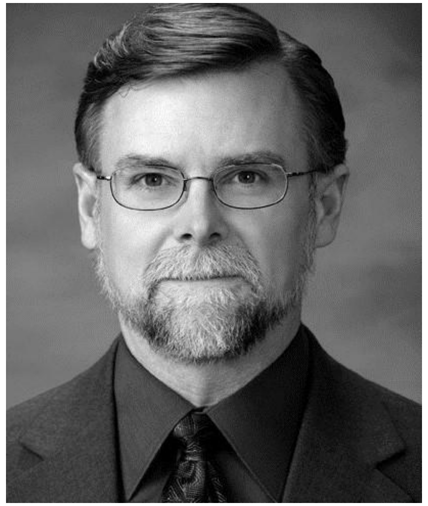
What do TAA rough spots look like?

Rob Brown, PhD, CFA

Julex Capital Advisory Board Member, Website www.robbrownonline.com



40 Grove Street, Suite 140, Wellesley, MA 02482
Phone 781-489-5398
Email info@julexcapital.com
Web www.julexcapital.com

> ***"Fear is the most contagious disease you can imagine. It makes the virus look like a piker." (A piker is one who gambles with small amounts of money.)"***
>
> Warren Buffett

What do TAA rough spots look like?

Does TAA fail?

When . . . and under what conditions?

How best do I prepare my client for those inevitable future failures?

And . . . . do I partially mitigate this problem by timing when I use (and don't use) TAA?

Does TAA fail?

Yes . . . But, it’s still probably better than the alternative

Nevertheless . . . Success requires setting and maintaining correct client expectations

Client-facing compliance-approved piece

PERSPECTIVES ON TACTICAL ASSET ALLOCATION (AKA SECTOR ROTATION)

Why doesn't BlackRock offer TAA?

If TAA is so good, then why doesn't everyone offer it?

First off, BlackRock, Nationwide, Invesco, and Fidelity all offer TAA products. Nevertheless, the investment industry widely appreciates that TAA is not commercially viable, i.e., it won't sell well. How do we understand this seeming contradiction? As we explore this question, keep in mind the distinction between a product selling well in a commercial setting . . . and that same product being the best possible investment solution for an individual investor. The two have little if any overlap. Let's begin.

To address this question in a substantive fashion, we must examine a specific example, one that anyone could replicate with ease and simplicity. We'll call our specific example the thought-experiment portfolio. It's a passive portfolio built from the 31 asset categories shown in the graphic below using these weighs: 33.0% US stocks, 39.4% international stocks, 8.9% US Treasury bonds, 4.2% US investment grade corporate bonds, 1.6% international bonds, 2.1% gold, and 10.8% other commodities. Over the last 102 years (ending 1/31/2021) this portfolio would have delivered 14.5% per annum. That's pretty good.

But there's a bit more to the portfolio's construction. Since it's a TAA portfolio, it overweights recent winners and underweights recent losers - that's what TAA does. Specifically, it reconstitutes itself once each month, selecting the seven asset categories (drawn from the 31 shown below) that trended most strongly over that last eleven months (with a slight bias against last month's winners). These seven are then equal-weighted. This portfolio construction technique is the very essence of quite literally all TAA portfolios.

7 U.S. stock sectors	9 International stock sectors	1 Industrial and agricultural commodities	1 Inflation protection	5 U.S. Treasury bond sectors	4 Specialized bond sectors	4 Precious metal sectors

Ranging from Industrials to Energy	Ranging from the United Kingdom to Japan	Ultra diversified industrial and agricultural commodities	Treasury Inflation-Protected Securities bonds	Ranging from very short-term U.S. Treasury bonds to ultra long-term	Ranging from liquid investment grade corporates to international bonds	Ranging from gold to palladium

Ultra simplistic TAA model - confirm it yourself

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Probability of beating the S&P over a randomly selected time window

The short-term - in a sales setting, buyers of investment products have an unrelenting tendency to compare to the S&P 500. Worse, yet, they make this comparison over short time periods. The dysfunction of this behavior is the topic for another day. For the moment, let's just accept it as an unfortunate aspect of consumer behavior. So how does the thought-experiment portfolio perform relative to the S&P 500, in the short-run? The answer is:

Investment time period	Probability (likelihood) of outperforming the S&P 500 Index
1 month	54%
3 months	52%
6 months	51%
1 year	54%
3 years	63%
5 years	68%
7 years	70%
7.5 years	71%

But, TAA is still probably better than something else - 98% probability

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Perhaps you have an investment time horizon of just 7½ years. What then? Well, the data provides an answer. If you only have 7½ years, then investing in the S&P 500 would have given you a 98% probability of earning more than **-2.4%** per annum. In contrast, the thought-experiment portfolio would have delivered a 98% probability of generating more than **+5.3%** per annum.

Which would you rather have? Which do you prefer, **-2.4%** or **+5.3%**?

Or . . . if you only have 7½ years, then investing in the S&P 500 would have provided a 95% likelihood of earning more than **-0.4%** per annum. In contrast, the thought-experiment portfolio would have given a 95% likelihood of generating more than **+6.6%** per annum.

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When . . . and under what conditions?

When there’s nothing to work with

When extreme whipsaw

When hyper-short bear market

1st way . . . that TAA fails

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- There are no return opportunities
- All of the risk mitigating asset categories are failing too

- This is seriously rare . . . . but does happen
- Maybe <u>once</u> over the last 102 years

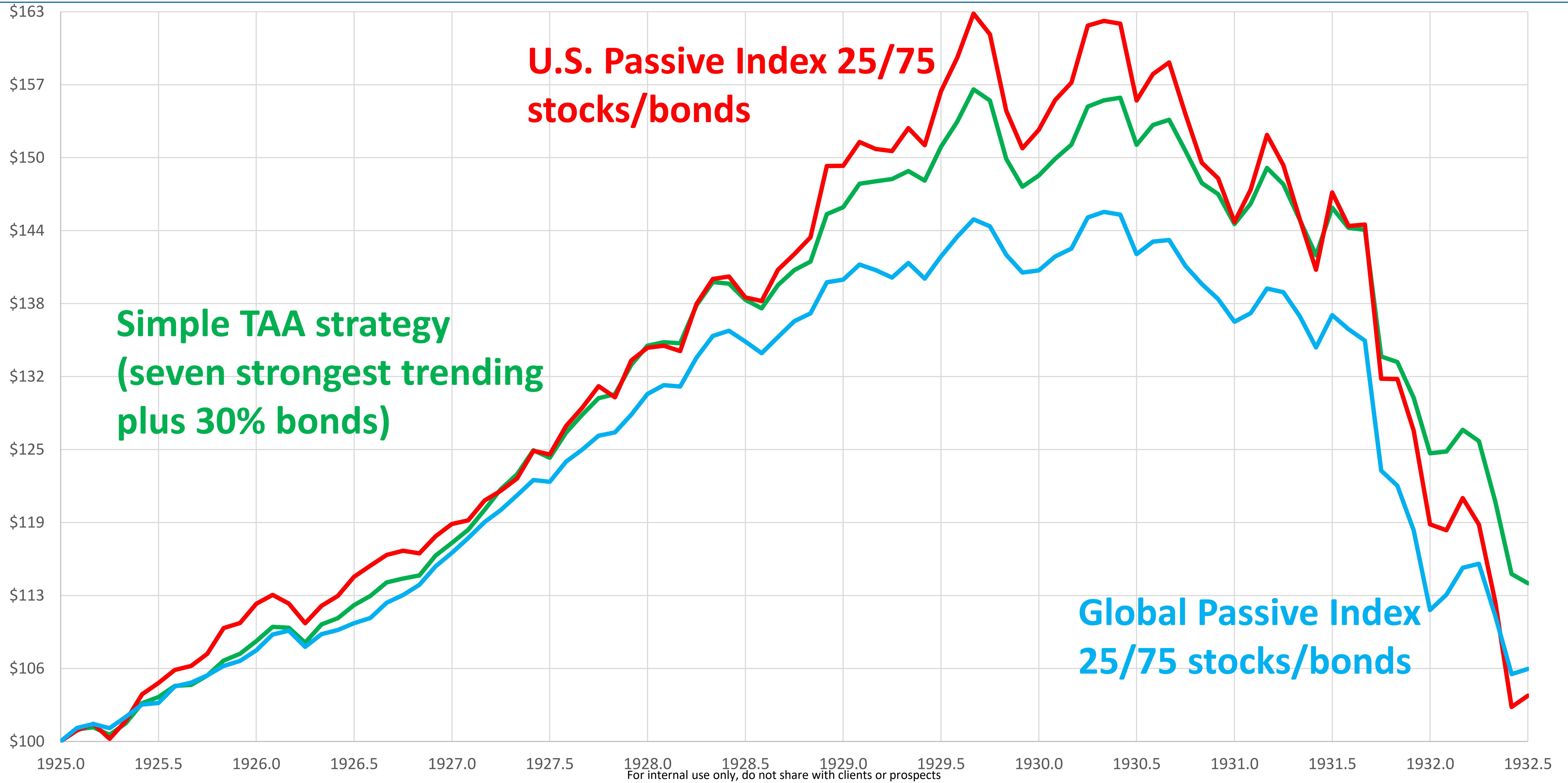
- I'm taking over <u>7 ½ years</u> . . . . not over <u>7 ½ months</u>

Perhaps only example out of last 102 years

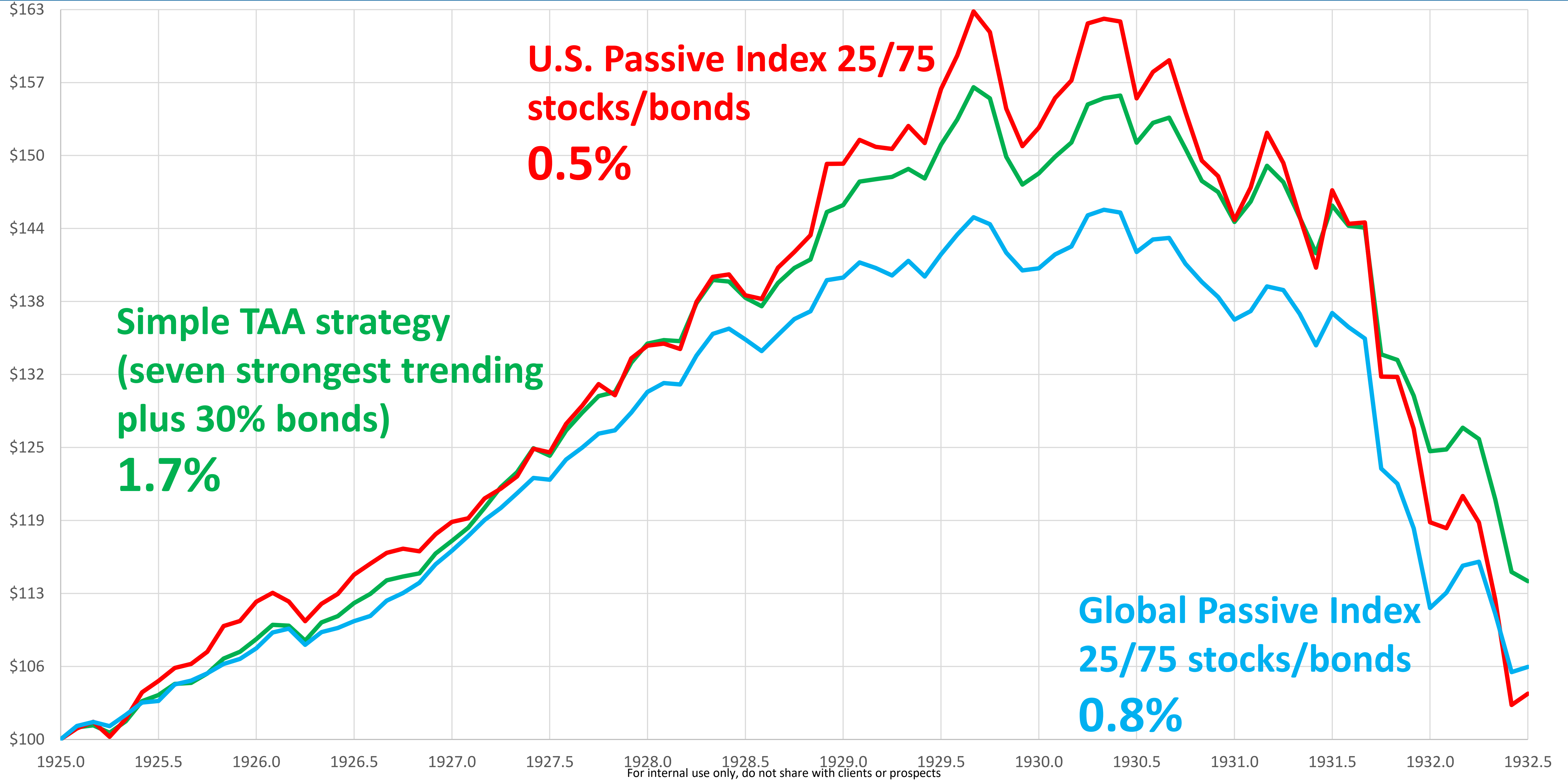
- 1924/1925 to 1932

- Hangover from the roaring twenties
- The Great Depression
- Growing European and Pacific tensions
- Beginning of the Eight Year Dust Bowel
- Series of fiscal policy mistakes

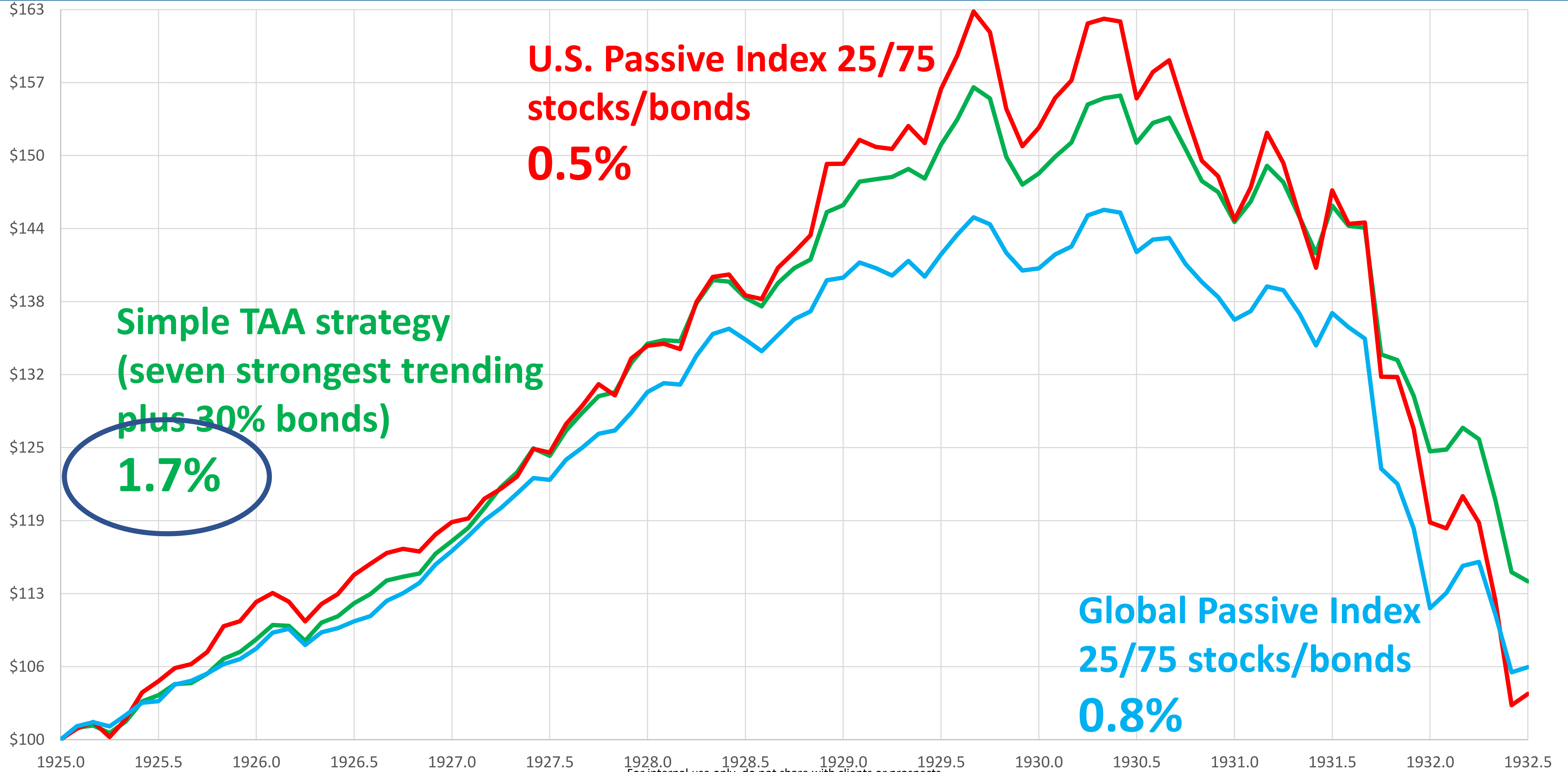
Worst ever 7 ½ years . . . drawn from the last 102 years



Worst ever 7 ½ years . . . drawn from the last 102 years



Worst ever 7 ½ years . . . drawn from the last 102 years



2nd way . . . that TAA fails

- When extreme whipsaw unfolds

- Over the last 102 years
  - This has been a short-term problem
  - It has never been a long-term problem

- It has never lasted long enough . . . where it undermines TAA returns over a reasonable time period

- A reasonable time period is >= 7 ½ years

3^{rd} way . . . TAA fails

- When we experience a hyper-short bear market
- Rare
- Once out of the last 102 years

One hyper-short bear over the last 102 years

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History of BEAR markets for inflation-adjusted stocks

	Cumulative percentage loss, unannualized	Duration in months	Start date	End date	Volatility, annualized standard deviation of monthly returns	Percentage of monthly returns that were negative	Annualized return during BEAR market
	-30	15	Aug 1853	Nov 1854	26.6	73	-25.1
	-31	10	Dec 1856	Oct 1857	18.3	90	-36.4
	-35	8	Jul 1864	Mar 1865	30.3	63	-47.1
	-32	15	Mar 1876	Jun 1877	7.6	93	-26.2
	-37	14	Sep 1906	Nov 1907	13.3	86	-32.7
	-27	24	Oct 1912	Oct 1914	10.8	63	-14.8
	-48	49	Nov 1916	Dec 1920	15.7	59	-14.8
	-79	33	Aug 1929	May 1932	36.8	64	-43.7
	-50	13	Feb 1937	Mar 1938	30.3	77	-47.1
	-39	31	Sep 1939	Apr 1942	19.0	58	-17.3
	-37	21	May 1946	Feb 1948	14.1	71	-23.4
	-35	19	Nov 1968	Jun 1970	14.4	74	-24.1
	-52	21	Dec 1972	Sep 1974	14.8	86	-34.2
	-30	3	Aug 1987	Nov 1987	27.7	100	-76.3
	-47	25	Aug 2000	Sep 2002	17.4	64	-26.4
	-52	16	Oct 2007	Feb 2009	18.6	75	-42.1
Median BEAR market	-37.2	17.5			17.8	74	-29.6
Mean BEAR market	-41.4	19.8			19.7	75	-33.2

One hyper-short bear over the last 102 years

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	Cumulative percentage loss, unannualized	Duration in months	Start date	End date	Volatility, annualized standard deviation of monthly returns	Percentage of monthly returns that were negative	Annualized return during BEAR market
	-30	3	Aug 1987	Nov 1987	27.7	100	-76.3
	-47	25	Aug 2000	Sep 2002	17.4	64	-26.4
	-52	16	Oct 2007	Feb 2009	18.6	75	-42.1
Median BEAR market	**-37.2**	**17.5**			**17.8**	**74**	**-29.6**
Mean BEAR market	**-41.4**	**19.8**			**19.7**	**75**	**-33.2**

No . . . 2020 was not a bear market

- Market fell for just 33 calendar days

- Then fully recovered over the next several weeks
- No excesses were washed out
- No change in investor attitudes was experienced

Bonus - 4th way . . . TAA fails

- TAA will fail . . . and fail miserably . . . if trending goes away, disappears

- This won’t happen . . . because of what causes trending in the first place

- Second . . . . recent evidence shows trending is live and stronger than ever

Client-facing compliance-approved piece on trending is alive and well

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PERSPECTIVES ON TACTICAL ASSET ALLOCATION (AKA SECTOR ROTATION)

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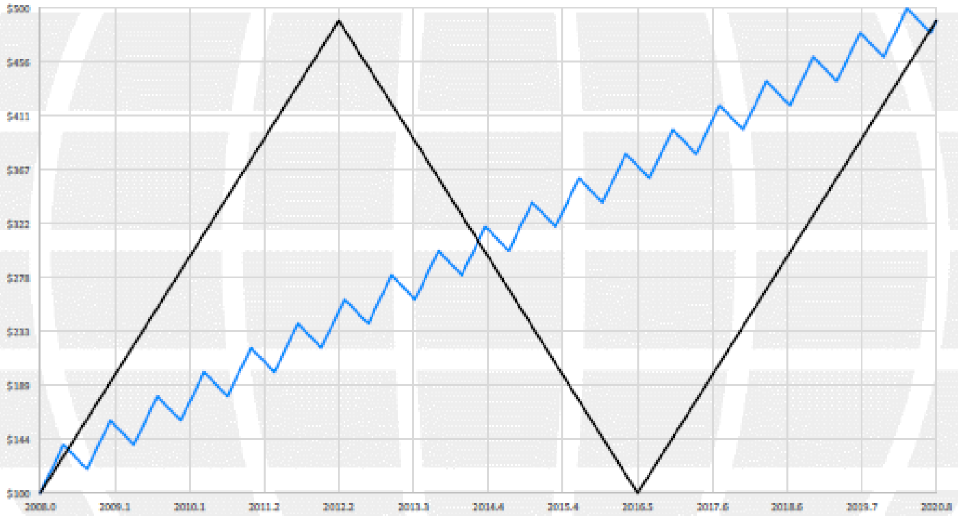
Sometimes people just don't fact-check

Some have falsely claimed that market cycles are getting shorter

Tactical Asset Allocation (TAA) relies on trending or momentum for its success. Some have falsely claimed that market cycles are getting shorter, and therefore TAA no longer has the inherent advantage that it once did. Let's fact-check this claim in order to determine its truth or falsehood.

But first, let's work to better understand this issue. The following graph shows two different market paths. Each starts and ends at the same spot, and therefore both generate the same total return after many years.

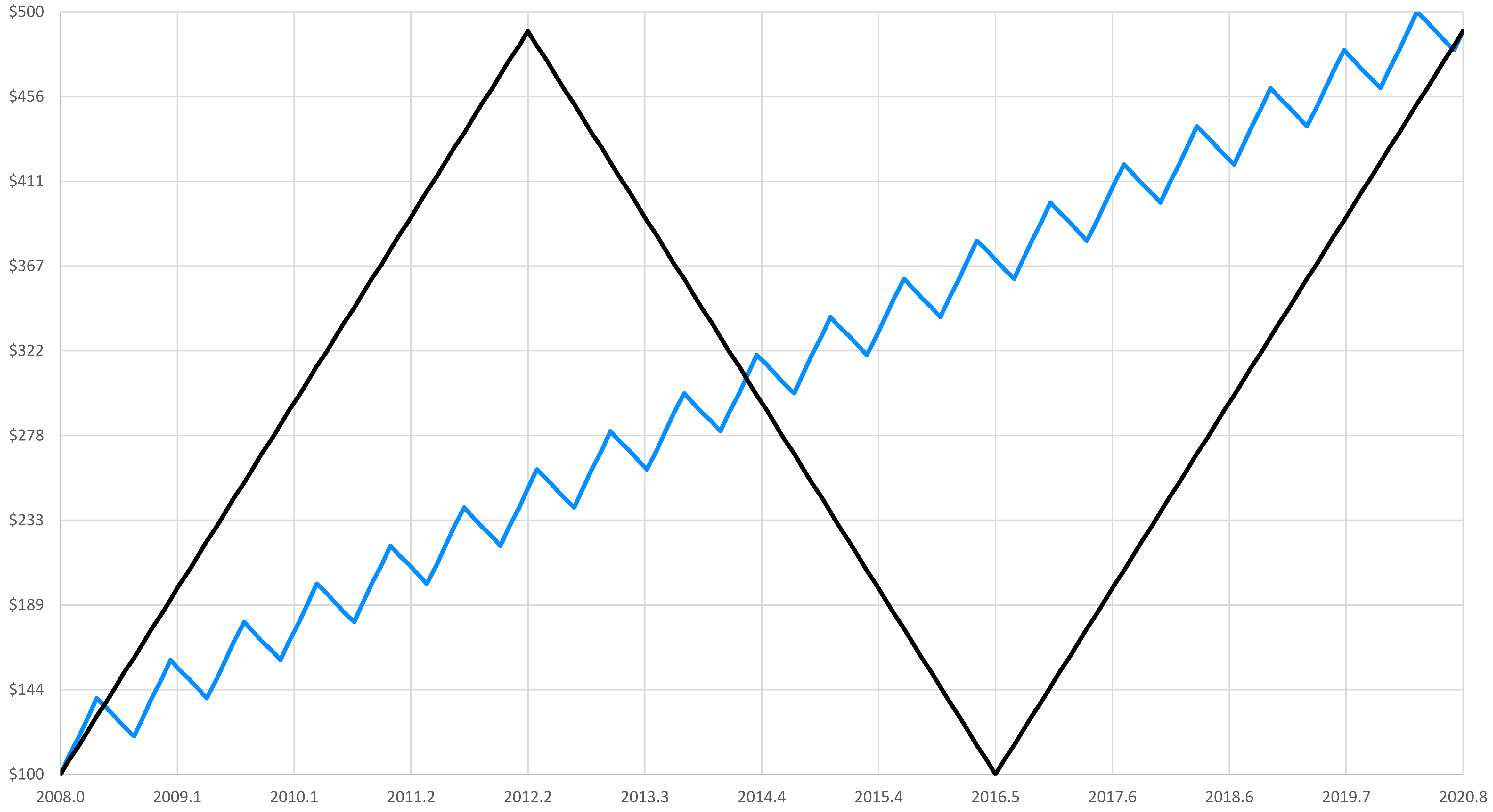


The **black line** represents a market experiencing long extended cycles (bulls and bears). In contrast, the **blue line** shows a lack of market cycles, and instead just whipsaws back and forth as it moves ever higher. TAA has a large inherent advantage if the market follows the **black line**, and is meaningfully disadvantaged if it follows the **blue**. Why is this? Because TAA's reliance on trending allows it to adopt a more beneficial dynamic asset mix, since the trends last for such extended periods of time (with the **black line**).

Are stock market cycles shorter today?

There have been 16 bull markets for U.S. stocks since 1853. The table below shows the typical (median), average (mean), and the current still ongoing bull markets.

Trending is in large measure about bulls and bears



Current stock bull is longer than normal

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	Cumulative percentage gain, unannualized	Duration in years	Start date	End date	Volatility, annualized standard deviation of monthly returns	Percentage of monthly returns that were positive	Annualized return during BULL market
Median BULL market	176.7	5.1			12.3	67	20.8
Mean BULL market	342.2	8.6			15.8	67	20.2
Current BULL market, not yet ended	**479.2**	**12.1**	**Feb 2009**	**?**	**14.1**	**68**	**15.6**

For greater detail and full disclosure, visit www.robbrownonline.com

Just ended bond bull was longer than normal

	Cumulative percentage gain, unannualized	Duration in years	Start date	End date	Volatility, annualized standard deviation of monthly returns	Percentage of monthly returns that were positive	Annualized return during BULL market
Median BULL market	379.2	20.7			5.2	70	6.1
Mean BULL market	534.4	25.6			4.7	70	5.9
BULL market just ended	**1007.6**	**38.8**	**Sep 1981**	**Jul 2020**	**6.8**	**61**	**6.4**

For greater detail and full disclosure, visit www.robbrownonline.com

Just ended commodity bear was longer than normal

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	Cumulative percentage loss, unannualized	Duration in months	Start date	End date	Volatility, annualized standard deviation of monthly returns	Percentage of monthly returns that were negative	Annualized return during BEAR market
Median BEAR market	-38.1	32.0			12.6	67	-16.4
Mean BEAR market	-46.3	44.6			12.6	72	-23.7
BEAR market just ended	**-70.6**	**108.0**	**Apr 2011**	**Apr 2020**	**15.5**	**56**	**-12.7**

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How best do I prepare my client for those inevitable future failures?

You can't invest in the past . . . only in the future
High returns are always followed by low returns
Tracking
Measuring success

You can't invest in the past

- You can't invest in the past

- Only in the future

- If your client thinks that you'll earn the same returns in the future as in the past . . . then you will fail

- Which is a different issue . . . from demonstrating that you
  - Deliver success
  - Deliver value
  - Know how to deliver a successful future investment experience

High returns are always followed by low returns

- Setting solid client expectations
- Helps prevent disappointment . . . . and unhappiness
- Historically, high returns have always been followed by low returns
- Just another way of observing . . . . over-priced assets have to correct

Tracking . . . TAA doesn't track

- TAA doesn't track
- If you fail to manage your client expectations to this issue . . . they will become unhappy
- This doesn't mean the returns will be lower
  - Unless something like a raging S&P bull unfolds
  - And no one has the ability to predict such a thing in advance
  - No one

Measuring success

- Several issues

- Reasonable investment time period
- Suitable return objective

- Is the portfolio following the process
- Did the process work in the past . . . during different environments

Bonus - TAA is not about never losing money

- TAA is often mis-sold
- Sometimes sold as a mechanism to never lose money
- That’s so much carnival barker nonsense

- Instead, it’s about earning a suitable return over a reasonable time period
- And . . . doing it far more confidently than other approaches

But, TAA is still probably better than something else - 95% probability

Perhaps you have an investment time horizon of just 7½ years. What then? Well, the data provides an answer. If you only have 7½ years, then investing in the S&P 500 would have given you a 98% probability of earning more than **-2.4%** per annum. In contrast, the thought-experiment portfolio would have delivered a 98% probability of generating more than **+5.3%** per annum.

Which would you rather have? Which do you prefer, **-2.4%** or **+5.3%**?

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Which would you rather have? Which do you prefer, **-0.4%** or **+6.6%**?

And . . . . . do I partially mitigate this problem by timing when I use (and don’t use) TAA?

Yes . . . but . . . Herein lies the Great Trap

If not right now . . . then what are you waiting to see

Don’t use it after the bear market has hit bottom . . . and client is about to fire you

Does timing the use of TAA help?

- Yes . . . It does help mitigate TAA's weaknesses
- But . . . herein lies the trap
  - Timers of market tops and bottoms always fail
  - But, here, you'd be timing the use of a strategy (not markets themselves)
  - Don't outsmart yourself
- Nevertheless . . . I am an advocate
- EASY
  - Sept 1974
  - March 2009
  - Today ?

Answer in a single picture

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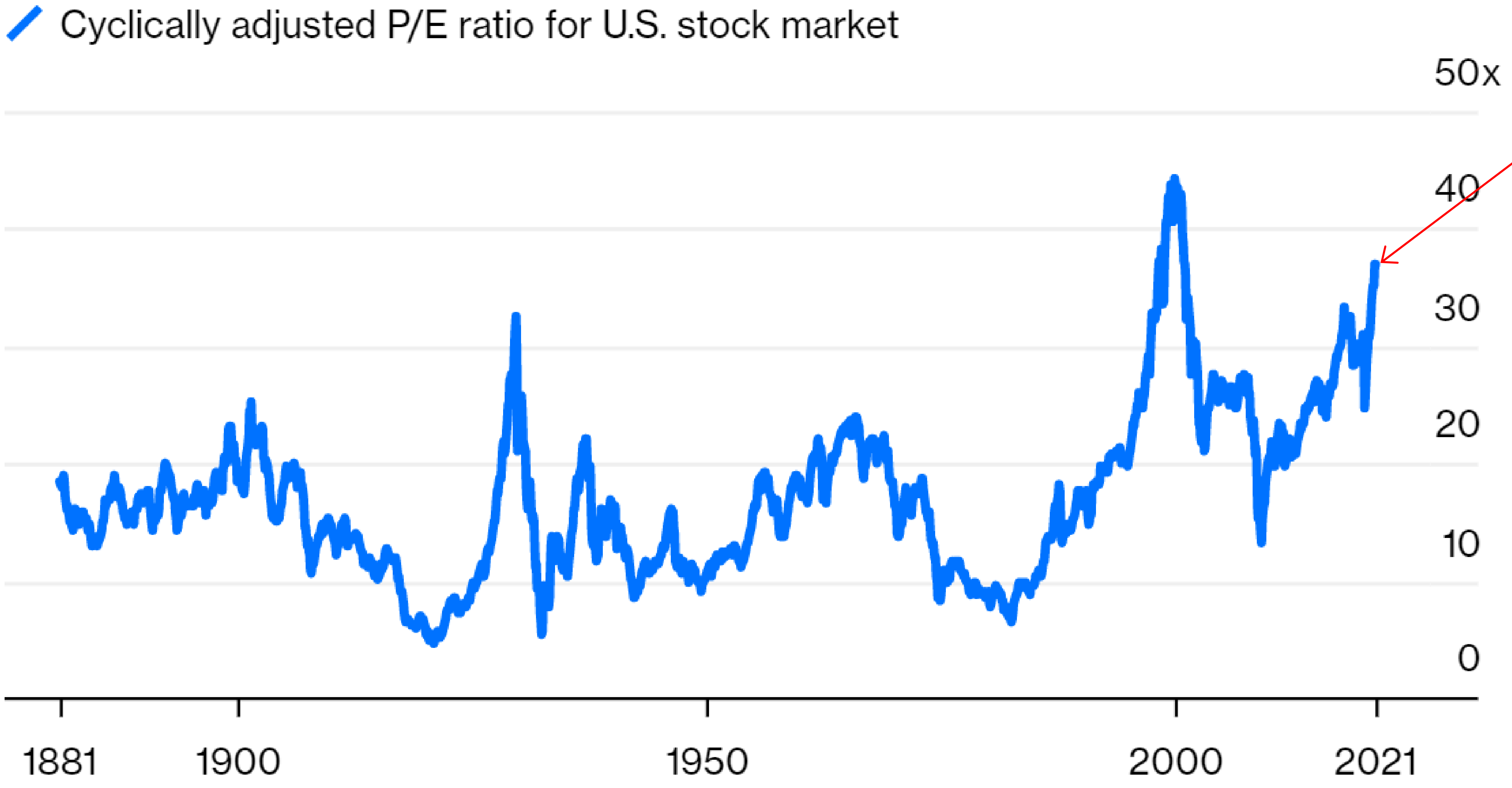
Things Have Changed

The U.S. stock market was cheaper on the eve of the Roaring '20s than at any time before or since



Today, the market is the 2nd most expensive in 140 years

Source: Robert Shiller

Client-facing collateral

Investment Library collateral

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Read More

Which Portfolio is Lower Risk?

We care most about risk when the sky is falling

When the market is going up, we don't care about risk. But when it's collapsing, we do. Since 1920, there have been nine stock bear markets. Let's compare how four hypothetical portfolios performed during these nine traumatic events.

Read More

But Has TAA Worked Better Than Bonds?

Investment Library collateral

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PERSPECTIVES ON TACTICAL ASSET ALLOCATION (AKA SECTOR ROTATION)

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What happens when interest rates rise?

How does TAA perform during rising/falling interest rate environments?

To answer this question, we must:

- Identify a time period to examine,
- Specify how we define rising and falling interest rate environments,
- Identify a simple transparent TAA portfolio that anyone could replicate, and
- Provide comparative passive index benchmarks.

PERSPECTIVES ON TACTICAL ASSET ALLOCATION (AKA SECTOR ROTATION)

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Time - Can be your best friend

Matching a need - with an investment portfolio

I've determined how much I plan to spend (and gift) during years 10 through 15 (in the future). To support this plan, my portfolio will be invested for 12 ½ years (on average), the midpoint of this interval.

Many would suggest that an appropriate and common-sense asset mix would be 50% stocks and 50% bonds given this investment time horizon. No, not necessarily today, given current market valuations, but certainly as a normal average asset mix when one's investing for 12 ½ years.

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A Pretty Good Outcome

Let's try a thought experiment - What if . . .

What if we build a passive portfolio from the 32 asset categories shown in the graphic below using the following weighs: 30.3% US stocks, 29.3% international stocks, 5.0% US Treasury bonds, 31.5% US investment grade corporate bonds, 1.4% international bonds, 1.3% gold, and 1.2% other commodities. Over the last 102 years (ending 1/31/2021) this portfolio would have delivered 11.53% per annum. That's pretty good.

PERSPECTIVES ON TACTICAL ASSET ALLOCATION (AKA SECTOR ROTATION)

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But has TAA worked better than bonds?

Is TAA versus bonds the right comparison?

Probably not. But to answer this question, we must first identify the all-important investment timeframe. I'm assuming here that the investor is targeting needs arriving between 5 and 20 years in the future. Therefore, their investment holding period or time horizon is 5 to 20 years.

For such an investor, a pure 100% bond portfolio won't work. It won't be able to generate the needed returns. Similarly, a pure 100% stock portfolio won't work. It'll be too volatile, exposing the investor to an undue likelihood of having to liquidate at an unfortunate point in time (when their account value is down).

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A Century of Evidence on Trend-Following Investi

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The way back is closed, only the path forward remains open

There are different types of change

It's a trite phrase to say *"change is the natural order of things,"* sounds too much like an excuse.

Worse yet, it serves to mask the different types of change - and how the best approach for dealing with one type of change is the worst for another.

Different types of change are distinguished by two attributes:

- Speed or pace
- Smoothness or direction

AQR

A Century of Evidence on Trend-Following Investing

Brian Hurst
Principal

Yao Hua Ooi
Principal

Lasse H. Pedersen, Ph.D.*
Principal

Fall 2014

Executive Summary

We study the performance of tren investing across global markets s extending the existing evidence by mo years. We find that trend following ha

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Financial planning - My all-critical assumption

I've deposited sufficient funds into my new 50/50 portfolio, so that my needs/wants will be met during years 10 through 15. But, to accomplish this end, I had to assume a specific rate of return, a guess about the future. I assumed that my 50/50 portfolio would earn at least 6 ¾%. This seemed like a reasonable assumption to me.

But was it reasonable? To answer this question, I turned to history, examining what stocks and bonds returned during every possible 12 ½ year time period since 1919 (the last 102 years). Essentially, I'm asking the question: *"If I were to draw a random 12 ½ year period out of history, what's the chance that I would have earned at least 6 ¾%?"*

Historical results

Let's consider three cases, each utilizing a different portfolio.

First Case - The first case is a passive portfolio allocated 50% to stocks and 50% to bonds, and is ultra-diversified across both domestic and international markets. It is a global portfolio.

Second Case - The second case is a passive portfolio allocated 50% to stocks and 50% to bonds, and is ultra-diversified across U.S. markets, it excludes all international investments. It is a domestic portfolio.

Third Case - The third case is our Thought-Experiment Tactical Asset Allocation portfolio. It starts with a passive stock/bond portfolio ultra-diversified across both domestic and international markets, but since it is a TAA portfolio, it adjusts its weightings once each month so as to over-weight recent winning asset categories and under-weight recent losing asset categories. The exact specifications for our Thought-Experiment TAA portfolio can be found in the Disclosure language at the end of this article. Over the entire time period, the portfolio delivered an average asset allocation of 24.2% U.S. stocks, 28.8% international stocks, 14.0% U.S. Treasury bonds, 27.2% investment grade highly liquid U.S. corporate bonds, 0.7% international bonds, 1.4% gold, and 3.7% other commodities.

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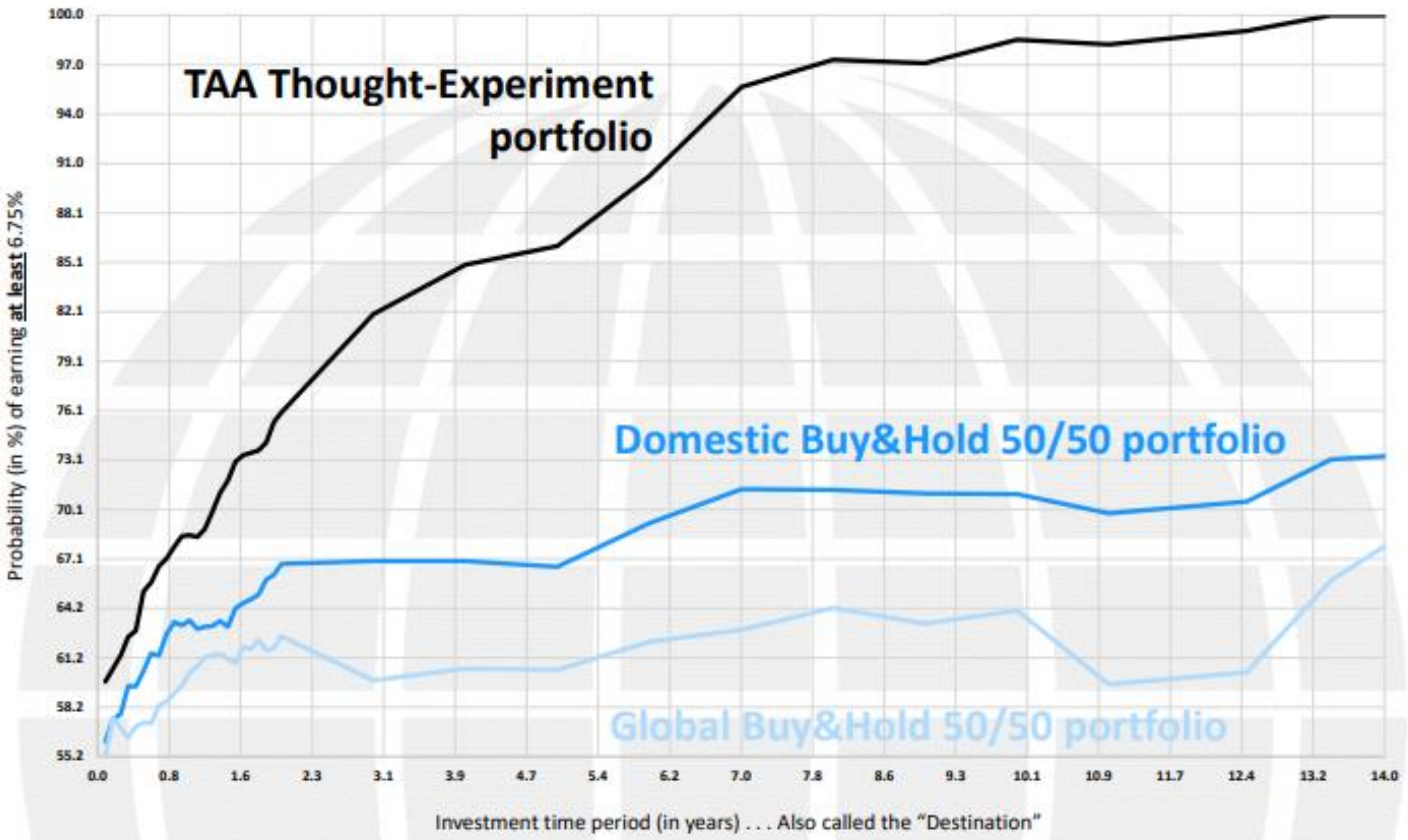

For more information contact

Jeff Megar, CFA
Email jeff.megar@julexcapital.com
Office 781-772-1378

Bob Peatman
Email bob.peatman@julexcapital.com
Cell 617-875-9316

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One of the limitations of hypothetical performance results is that they are generally prepared with the benefit of hindsight. In addition, hypothetical trading does not involve financial risk, and no hypothetical trading record can completely account for the impact of financial risk in actual trading. For example, the ability to withstand losses or adhere to a particular trading program in spite of trading losses are material points which can also adversely affect actual trading results. There are numerous other factors related to the markets in general or to the implementation of any specific trading program which cannot be fully accounted for in the presentation of hypothetical performance results and all of which can adversely affect actual trading results.

The composition of a benchmark index may not reflect the manner in which a Julex portfolio is constructed in relation to expected or achieved returns, investment holdings, portfolio guidelines, restrictions, sectors, correlations, concentrations, volatility, or tracking error targets, all of which are subject to change over time.

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