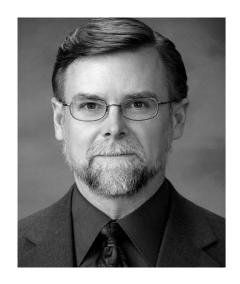
JULEXCAPITAL

Are bear markets getting shorter?

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



Are bear markets getting shorter?

And therefore . . . TAA (Tactical Asset Allocation) won't work as well?

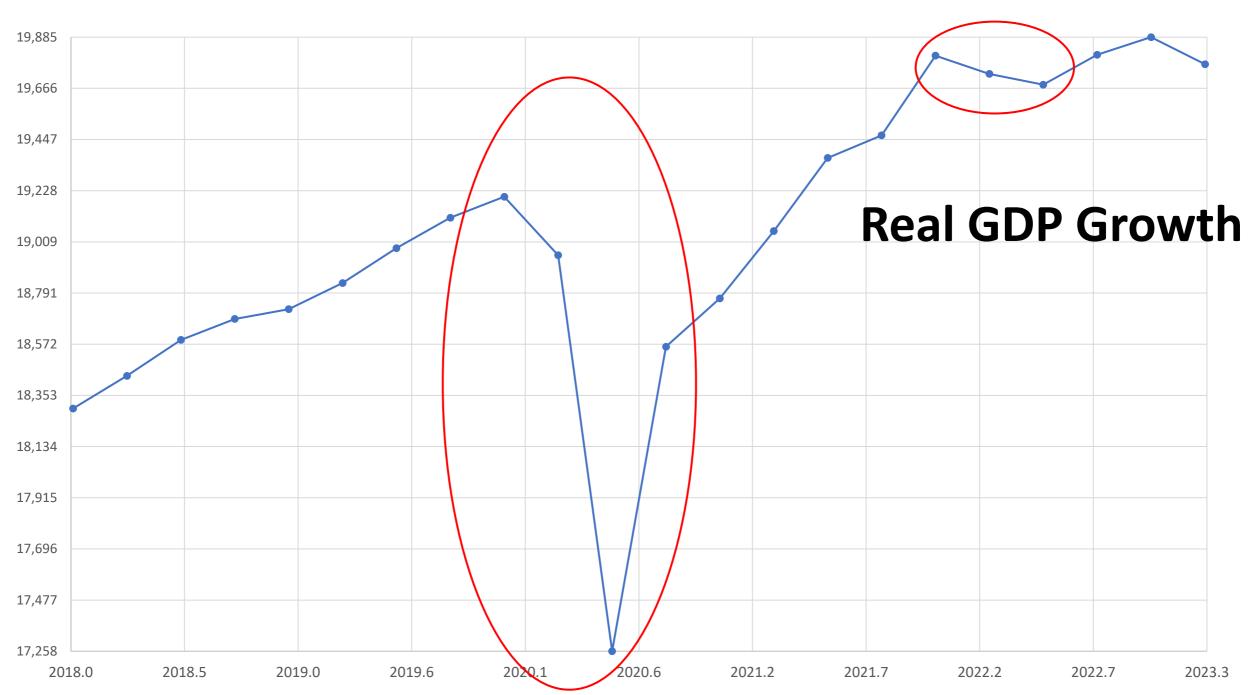


Start with U.S. recessions

Yes . . . recessions are getting shorter . . . <u>sort of</u>

Recession versus downturn



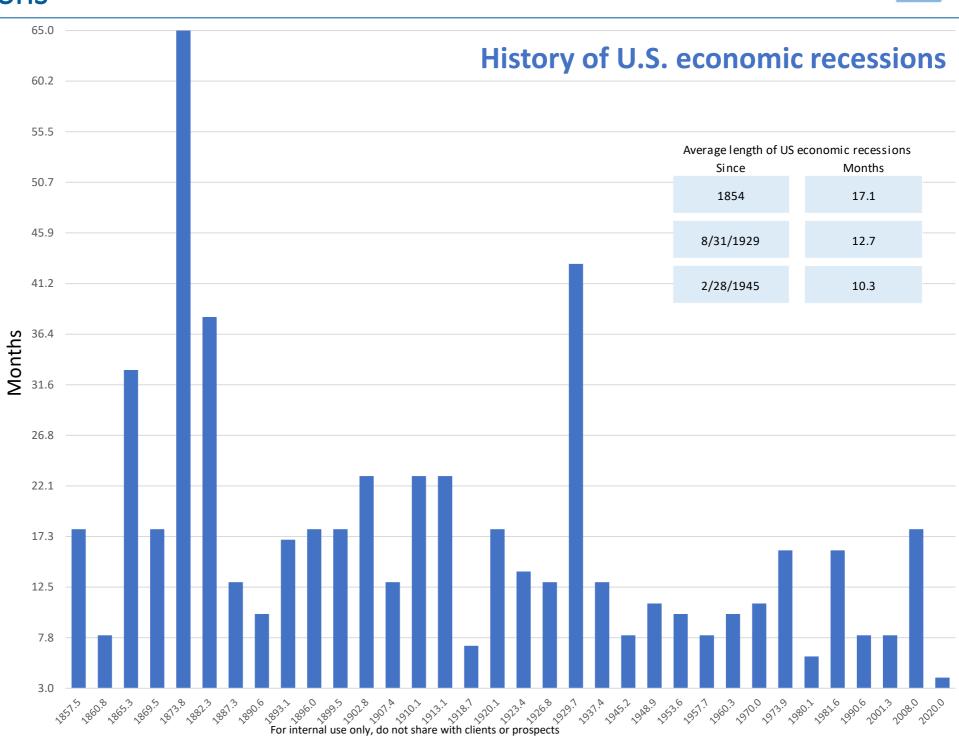




U.S. recessions as defined by the NBER

History of recessions







Average length of US	S economic recessions
Since	Months
1854	17.1
8/31/1929	12.7
2/28/1945	10.3



Average length of US economic expansions								
Since	Years							
1854	3.44							
8/31/1929	5.35							
2/28/1945	5.33							



Let's look at something different

Negative economic growth when GDP was **falling**

Periods when the U.S. economy CONTRACTED Cumulative percentage Duration Annualized growth rate Number of years to regain what

		Cumulative percentage growth, unannualized	Duration in years	Start date	End date	during	was lost during this
		-15.1	2.0	Dec 1806	Dec 1808	CONTRACTION -7.8	CONTRACTION 7.0
		-9.6	3.0	Dec 1811	Dec 1808	-3.3	1.0
		-7.4	1.0	Dec 1811	Dec 1814	-3.3 -7.4	1.0
		-17.6	5.0	Dec 1859	Dec 1864	-3.8	3.0
		-6.6	1.0	Dec 1839	Dec 1882	-6.6	1.0
		-7.5	2.0	Dec 1892	Dec 1894	-3.8	1.0
		-8.2	1.0	Dec 1907	Dec 1908	-8.2	1.0
		-5.3	2.0	Dec 1907		-2.7	1.0
					Dec 1915		
		-20.2	0.2	Dec 1918	Mar 1919	-59.4	0.8
		-4.8	0.2	Feb 1920	Apr 1920	-25.6	0.2
		-27.1	0.9	Aug 1920	Jul 1921	-29.1	2.0
		-5.5	0.2	Jun 1922	Aug 1922	-28.6	0.2
		-15.3	0.4	Feb 1924	Jul 1924	-33.0	1.0
		-4.6	1.2	Mar 1927	Jun 1928	-3.7	0.6
		-15.9	1.3	Sep 1929	Dec 1930	-12.9	6.2
		-30.5	1.2	Apr 1931	Jul 1932	-25.3	1.0
		-13.3	0.4	Oct 1932	Mar 1933	-29.1	0.2
		-24.6	0.4	Jul 1933	Dec 1933	-49.2	2.9
		-14.8	0.3	May 1934	Sep 1934	-38.0	0.3
		-6.0	0.4	Feb 1935	Jul 1935	-13.7	0.3
		-5.2	0.2	Dec 1935	Feb 1936	-27.4	0.2
		-29.6	0.8	Aug 1937	Jun 1938	-34.3	2.7
		-5.1	0.5	Nov 1938	May 1939	-9.9	0.3
		-8.4	0.3	Nov 1939	Mar 1940	-23.2	0.5
		-15.5	0.2	Jul 1945	Oct 1945	-49.0	6.2
		-14.8	0.4	Dec 1945	May 1946	-32.0	4.2
		-5.9	0.9	Aug 1946	Jul 1947	-6.4	1.1
		-6.0	1.0	Oct 1948	Oct 1949	-6.0	0.4
		-4.6	0.7	Jul 1953	Apr 1954	-6.1	0.7
		-4.6	0.2	Apr 1956	Jul 1956	-17.3	0.2
		-6.0	0.7	Aug 1957	Apr 1958	-8.9	0.6
		-4.1	0.5	May 1959	Nov 1959	-8.0	0.2
		-3.6	0.3	Oct 1974	Feb 1975	-10.5	0.8
		-3.7	0.5	Feb 1980	Aug 1980	-7.3	0.6
		-6.2	0.7	Aug 2008	May 2009	-8.1	2.7
		-16.6	0.2	Feb 2020	Apr 2020	-66.2	1.2
e	Oct 1949	-4.6	0.5			-8.5	0.7
šinc	Dec 1908	-6.0	0.4			-23.2	0.7
an	Dec 1864	-6.4	0.5			-15.5	0.8
Median since	Dec 1814	-7.0	0.5			-13.3	0.9
2	Dec 1789	-7.4	0.6			-11.7	1.0
Author	: Rob Brown, PhD, 0	CFA at www.robbrownonline.com. Sta	tistics based on da	ata provided by Glob	al Financial Data, Inc.	and are current as of November 10, 2022	

U.S. economic growth is represented by inflation-adjusted GDP (real GDP). Monthly inflation-adjusted Industrial Production was used to interpolate the monthly values for inflation-adjusted GDP

U.S. economic CONTRACTIONS and EXPANSIONS are defined such that they must satisfy both of the following criteria: (a) Last at least 2 months and (b) Grow or shrink by at least 3.620 1293 %

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For more details see www.robbrownonline.com

Periods when the U.S. economy CONTRACTED

		Cumulative percentage growth, unannualized	Duration in years	Start date	End date	Annualized growth rate during CONTRACTION	Number of years to regain what was lost during this CONTRACTION
ه	Oct 1949	-4.6	0.5			-8.5	0.7
since	Dec 1908	-6.0	0.4			-23.2	0.7
	Dec 1864	-6.4	0.5			-15.5	0.8
Median	Dec 1814	-7.0	0.5			-13.3	0.9
	Dec 1789	-7.4	0.6			-11.7	1.0

Periods when the U.S. economy CONTRACTED

		Cumulative percentage growth, unannualized	Duration in years	Start date	End date	Annualized growth rate during CONTRACTION	Number of years to regain what was lost during this CONTRACTION
٥	Oct 1949	-4.6	0.5			-8.5	0.7
sinc	Dec 1908	-6.0	0.4			-23.2	0.7
ian	Dec 1864	-6.4	0.5			-15.5	0.8
Ted	Dec 1814	-7.0	0.5			-13.3	0.9
	Dec 1789	-7.4	0.6			-11.7	1.0

Recessions have **NOT** been getting shorter . . . instead, they are exactly the same length that they've always been

BUT... they are getting milder



Consider U.S. bear markets

Stocks . . . Bonds . . . Commodities

Bear markets for inflation-adjusted U.S. stocks since 1845

	Cumulative percentage return, unannualized	Duration in years	Start date	End date	voiaumy, annualized standard deviation of monthly	Percentage of monthly returns that were POSITIVE	Annualized return during BEAR market	Number of years to regain what was lost during this bear market
	-30	1.25	Aug 1853	Nov 1854	27.6	27	-25.1	3.3
	-31	0.83	Dec 1856	Oct 1857	19.2	10	-36.4	2.9
	-35	0.67	Jul 1864	Mar 1865	32.4	38	-47.1	4.2
	-32	1.25	Mar 1876	Jun 1877	7.8	7	-26.2	2.2
	-37	1.17	Sep 1906	Nov 1907	13.8	14	-32.7	2.2
	-27	2.00	Oct 1912	Oct 1914	11.0	38	-14.8	3.0
	-48	4.08	Nov 1916	Dec 1920	15.9	41	-14.8	7.7
	-79	2.75	Aug 1929	May 1932	37.3	36	-43.7	15.7
	-50	1.08	Feb 1937	Mar 1938	31.6	23	-47.1	8.0
	-39	2.58	Sep 1939	Apr 1942	19.3	42	-17.3	4.7
	-37	1.75	May 1946	Feb 1948	14.5	29	-23.4	4.6
	-35	1.58	Nov 1968	Jun 1970	14.8	26	-24.1	4.0
	-52	1.75	Dec 1972	Sep 1974	15.2	14	-34.2	12.1
	-30	0.25	Aug 1987	Nov 1987	33.9	0	-76.3	1.9
	-47	2.08	Aug 2000	Sep 2002	17.8	36	-26.4	12.7
	-52	1.33	Oct 2007	Feb 2009	19.2	25	-42.1	5.4
	?	?	Dec 2021	?	?	?	?	?
t	-37	1.46			18.5	26	-29.6	4.4
	-41	1.65			20.7	25	-33.2	5.9

Median BEAR market Mean BEAR market

Author: Rob Brown, PhD, CFA at www.robbrownonline.com. Statistics based on data provided by Global Financial Data, Inc., San Juan Capistrano, CA 92675, at https://finaeon.globalfinancialdata.com and are current as of

Results rely on month-end stock index total returns adjusted for the All Urban Consumers Not Seasonally Adjusted Consumer Price Index as provided by the U.S. Department of Labor

Stocks are represented by the S&P 500 Total Return Index (with GFD extension). But prior to 1871 by the Dow Jones Transportation Average Return Index (with GFD Extension)

Indices are unmanaged and cannot be invested into directly. Unmanaged index returns do not reflect fees, expenses, or sales charges. Index performance is not indicative of the performance of any investment. Past performance is

Bull and bear markets are defined as moves of at least 26.92993% using month-end stock index total returns. This information in this presentation is for the purpose of information exchange. No representation or warranty is made to the reasonableness of the assumptions made. Investment advice offered through Integrated Wealth Concepts LIC (a Registered Investment Adviser), d/b/a Integrated Financial Partners, Inc.

Bear markets for inflation-adjusted U.S. stocks since 1845

	Cumulative percentage return, 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 BEAR market	Number of years to regain what was lost during this bear market
Median BEAR market	-37	1.46			18.5	26	-29.6	4.4
Mean BEAR market	-41	1.65			20.7	25	-33.2	5.9

Stock bear markets



• Median over entire time period = 1.46 years

• Median over the most recent 50% of all bear markets = 1.67 years

Bear markets for inflation-adjusted U.S. bonds since 1845

	Cumulative percentage return, unannualized	Duration in years	Start date	End date	v orathity, annualized standard deviation of monthly	Percentage of monthly returns that were POSITIVE	Annualized return during BEAR market	Number of years to regain what was lost during this bear market
	-22	2.67	Mar 1863	Nov 1865	6.1	31	-9.1	5.4
	-50	11.42	Dec 1908	May 1920	4.8	41	-5.9	18.1
	-31	16.58	Jan 1941	Aug 1957	3.3	45	-2.2	44.6
	-40	16.33	May 1965	Sep 1981	6.4	45	-3.0	19.5
	?	?	Jul 2020	?	?	?	?	?
Median BEAR market	-35	13.87			5.4	43	-4.5	18.8
Mean BEAR market	-36	11.75			5.1	40	-5.0	21.9

Author: Rob Brown, PhD, CFA at www.robbrownonline.com. Statistics based on data provided by Global Financial Data, Inc., at https://finaeon.globalfinancialdata.com and are current as of October 1, 2022

Bonds were defined as 50% intermediate-term U.S. Treasury bonds and 50% liquid high-quality U.S. corporate bonds. And were constructed using three total return bond indices provided by Global Financial Data. Intermediate-term U.S. Treasury bonds are defined by the GFD Indices USA 10-year Government Bond Total Return Index. Prior to 4/30/19 15 liquid high-quality U.S. corporate bonds are defined by a 50/50 mix of the Dow Jones Corporate Bond Return Index and the GFD Indices USA Total Return AAA Corporate Bond Index. Results rely on month-end total returns adjusted for the All Urban Consumers Not Seasonally Adjusted Consumer Price Index as provided by the U.S. Department of Labor. Indices are unmanaged and cannot be invested into directly. Unmanaged index returns do not reflect fees, expenses, or sales charges. Index performance is not indicative of the performance of any investment. Past performance is no guarantee of future results. Bear and bull markets are defined as moves of at least 20.95730035% using month-end bond index total returns. This information in this presentation is for the purpose of information exchange. No representation or warranty is made to the reasonableness of the assumptions made. Investment advice offered through Integrated Wealth Concepts ILC (a Registered Investment Adviser), d/b/a Integrated Financial Partners, Inc.

Bear markets for inflation-adjusted U.S. bonds since 1845

	Cumulative percentage return, 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 BEAR market	Number of years to regain what was lost during this bear market
Median BEAR market	-35	13.87			5.4	43	-4.5	18.8
Mean BEAR market	-36	11.75			5.1	40	-5.0	21.9

Bond bear markets



• Median over entire time period = 13.87 years

• Median over the most recent 50% of all bear markets = 16.46 years

Bear markets for inflation-adjusted commodities since 1851

	Cumulative percentage return, unannualized	Duration in years	Start date	End date	volaumy, annualized standard deviation of monthly	Percentage of monthly returns that were POSITIVE	Annualized return during BEAR market	
	-69	51.08	Aug 1864	Sep 1915	6.8	36	-2.2	107.7
	-50	3.83	May 1917	Mar 1921	12.8	41	-16.4	8.2
	-64	6.92	Jul 1925	Jun 1932	10.2	37	-13.8	11.7
	-38	1.17	Mar 1937	May 1938	10.3	14	-33.6	4.2
	-38	2.25	Mar 1947	Jun 1949	15.1	33	-18.9	3.8
	-32	2.67	Feb 1951	Oct 1953	6.4	25	-13.4	20.7
	-47	2.67	Nov 1974	Jul 1977	20.7	41	-21.3	13.5
	-37	1.17	Oct 1980	Dec 1981	11.5	14	-32.3	7.5
	-33	4.17	Sep 1990	Nov 1994	11.6	48	-9.3	6.2
	-49	1.33	Oct 1997	Feb 1999	17.4	13	-39.8	2.8
	-37	1.17	Nov 2000	Jan 2002	13.7	21	-32.3	2.2
	-67	0.67	Jun 2008	Feb 2009	22.8	0	-80.7	20.5 E
	-67	4.83	Apr 2011	Feb 2016	18.9	36	-20.4	17.2 E
	-54	1.58	Sep 2018	Apr 2020	30.3	47	-38.4	3.4
Median BEAR market	-48	2.46			13.3	34	-20.8	7.8
Mean BEAR market	-49	6.11			14.9	29	-26.6	16.4

Author: Rob Brown, PhD, CFA at www.robbrownonline.com. Statistics based on data provided by Global Financial Data, Inc., San Juan Capistrano, CA 92675, at https://finaeon.globalfinancialdata.com and are current as of

Commodities are represented by the S&P GSCI Total Return Index. But, prior to Dec 1969 the Thompson Jefferies CRB Core Commodity Total Return Index (with GFD extension) was used. And prior to Sep 1914 the USA Warren and Pearson Commodity Price Index was used

Results rely on month-end total returns adjusted for the All Urban Consumers Not Seasonally Adjusted Consumer Price Index as provided by the U.S. Department of Labor. Indices are unmanaged and cannot be invested into directly. Unmanaged index returns do not reflect fees, expenses, or sales charges. Index performance is not indicative of the performance of any investment. Past performance is no guarantee of future results

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Bear markets for inflation-adjusted commodities since 1851

	Cumulative percentage return, 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 BEAR market	
Median BEAR market	-48	2.46			13.3	34	-20.8	7.8
Mean BEAR market	-49	6.11			14.9	29	-26.6	16.4

Commodity bear markets



• Median over entire time period = 2.46 years

• Median over the most recent 50% of all bear markets = 1.33 years



What about TAA?

Has it performed more poorly in recent times?

People are making the WRONG comparison



- 95% of the problem . . . Is that people are making the wrong comparison
- And often . . . wholesalers aren't helping

EXAMPLE

- The S&P 500 did well since March 2009
- TAA has not done as well
- Therefore . . . TAA is a failure



Winners Repeat, Losers Repeat

Rob Brown

Rob Brown

is the chief investment officer and a senior vice president at Integrated Financial Partners and Integrated Wealth Concepts in Waitham, MA. rob.brown@ifpadvisor.com

KEY FINDINGS

- The TAA portfolio earned an inflation-adjusted 10.8% over the aggregate period (102.1 years), whereas a comparable passive index earned a lesser 6.7% (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 each month 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 period (14.3% of the cases examined drawn from the data spanning 1919-2021).

ABSTRACT

I present a tactical asset allocation proof-of-concept portfolio. It is intended to harvest the non-IID statistical attributes of stocks, bonds, commodities, and currencies, both domestic and international. 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 past 102.1 years. The results presented herein suggest that Tactical Asset Allocation (TAA) is an approach worthy of 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 fixed-weight 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). This article attempts to correct our industry's mischaracterization and overpromising of all things TAA by focusing on the time required for success.

actical Asset Allocation (TAA) earned a poor reputation over the past 13 years (since 3/6/2009, the recent bear market low). My objective is to mitigate a portion of the retail industry's TAA skepticism. This is an interesting topic, given the size of the retail industry, TAA's prominence within it, and forecasted future growth in TAA's market share. Direct and indirect, the retail industry is large and growing, currently estimated to be more than \$16 trillion. TAA first came into existence back in the 1980s and has grown consistently ever since, with occasional faster growth

¹Sources: ICMA (International Capital Market Association) analysis using Bloomberg Data (August 2020), Ned Davis Research, and The Visual Capitalist (https://www.visualcapitalist.com).

EXHIBIT 12
Probability of Earning More Than 4.25% Inflation-Adjusted During a Random 12.5-Year-Long Investment Period

Number of Unique 12.5- Year-Long Investment Periods that End During the Date Range Shown		TAA					35/30	40/35
to the Right	Date Range	Portfolio	65/0/35/0	75/0/25/0	35/30/35/0	40/35/25/0	26.25/8.75	18.75/6.25
154	Mar 2009- Dec 2021	100	66	66	64	65	79	77
153	Jun 1996– Feb 2009	100	98	98	98	98	99	98
154	Aug 1983– May 1996	100	81	81	81	81	81	81
154	Oct 1970– Jul 1983	100	18	19	21	24	23	26
154	Dec 1957– Sep 1970	100	99	100	99	100	100	100
153	Mar 1945- Nov 1957	84	63	78	37	43	38	44
154	May 1932– Feb 1945	100	71	69	91	90	90	86

NOTE: TAA = Tactical Asset Allocation.

EXHIBIT 12
Probability of Earning More Than 4.25% Inflation-Adjusted During a Random 12.5-Year-Long Investment Period

Number of Unique 12.5- Year-Long Investment Periods that End During								
the Date Range Shown to the Right	Date Range	TAA Portfolio	65/0/35/0	75/0/25/0	35/30/35/0	40/35/25/0	35/30 26.25/8.75	40/35 18.75/6.25
154	Mar 2009- Dec 2021	100	66	66	64	65	79	77
153	Jun 1996– Feb 2009	100	98	98	98	98	99	98
154	Aug 1983– May 1996	100	81	81	81	81	81	81
154	Oct 1970– Jul 1983	100	18	19	21	24	23	26
154	Dec 1957– Sep 1970	100	99	100	99	100	100	100
153	Mar 1945– Nov 1957	84	63	78	37	43	38	44
154	May 1932– Feb 1945	100	71	69	91	90	90	86

NOTE: TAA = Tactical Asset Allocation.

Conclusions



Recessions are not getting shorter

Bear markets are not getting shorter

• TAA is not losing its edge over traditional Buy&Hold asset allocation portfolios

For more information contact





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



Liam Flaherty
Email liam.flaherty@julexcapital.com
Office 781-489-5398



Update on all-things ESG, and a better approach

Friday

December 9th

11:00 a.m. EASTERN

Important Disclosures



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

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Some part of the investment performance shown is HYPOTHETICAL. It is based on the back tests of historical data. Hypothetical performance results have many inherent limitations, some of which are described below. No representation is being made that any account will or is likely to achieve profits or losses similar to those shown. In fact, there are frequently sharp differences between hypothetical performance results and the actual results subsequently achieved by any particular trading program.

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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