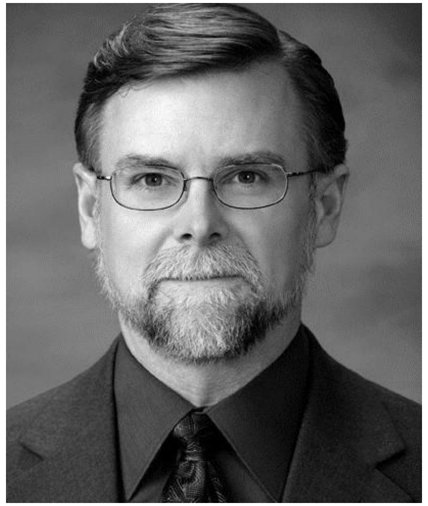
TAA performance during stock bear and bull markets

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

Tag line

- Stop managing to the last 14 ½ years
- Stop managing to what happened since March 2009
- That period was so incredibly
  - Rare
  - Exceptional
  - Non-representative
  - Never again . . . to be repeated
  - Never before seen
  - Driven by monetary/fiscal policy that would kill the patient is ever again repeated
  - Nitroglycerin works once or twice . . . at best

TAA portfolio design

Draws from a large diverse universe of asset categories

- 7 slices of U.S. stocks
- 10 international countries
- 5 different maturities of U.S. Treasuries
- 1 TIPS bond
- 1 corporate bond . . . investment grade
- 8 different commodities

- 32 different asset categories

Portfolio construction

- Once each month . . .
- 8 asset categories selected
- Those that trended most strongly over the 11 months just finished

- Weightings
  - Equal weighted
  - <u>However</u> . . . if selected, the following receive modified weights
    - Overweighted (+)
      - Cash . . . 90-day Treasuries
      - TIPS bonds
      - Oil
      - Ultra-diversified commodities
    - Underweighted (-)
      - Precious metals
      - Treasuries (other than cash)
      - Corporate bonds

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Why the overweighting/underweighting?

This portfolio is <u>ONLY</u> focused on a 7.5-year investment time period

Portfolio construction

- Once each month
- 8 asset categories selected
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- Weightings
  - Equal weighted
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    - Overweighted (+)
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      - Ultra-diversified commodities
    - Underweighted (-)
      - Precious metals
      - Treasuries (other than cash)
      - Corporate bonds

This portfolio could be 99.3% in stocks

Is this a problem, or is it dangerous?

I will revisit this question . . . shortly

Transactions costs

- Seriously important
- It was assumed significant one-way transaction costs
  - Lowest cost . . . 1 basis point for U.S. Treasury ETFs
  - Highest cost . . . 101 basis points for PALL (palladium ETF)
- These transaction costs . . . were subtracted from all of the performance results shown herein

Consistency

- The portfolio construction rules never change
- Consistent and unvarying across all time

Data and timeframe

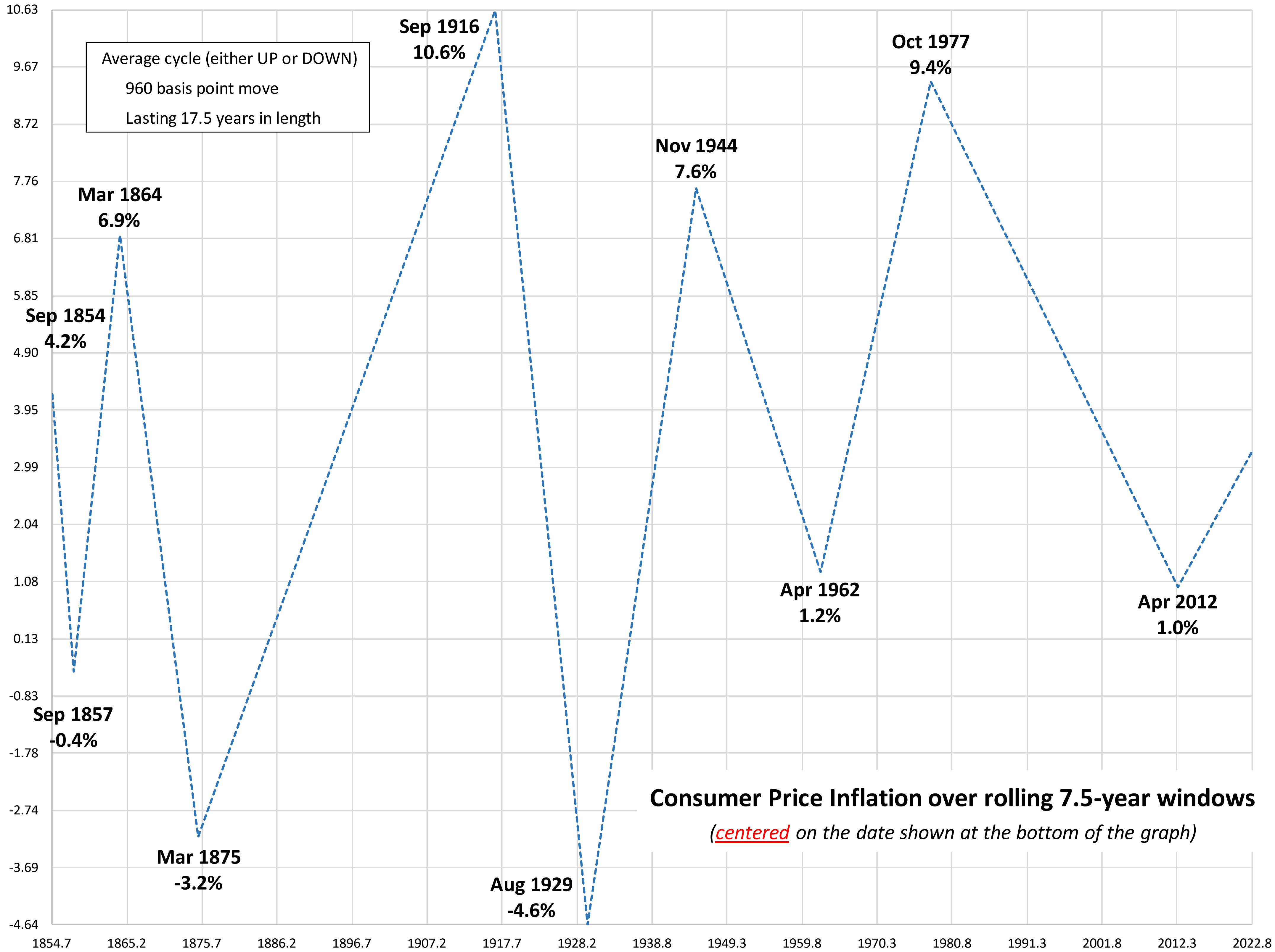
Why this is important

Time examined and data sources

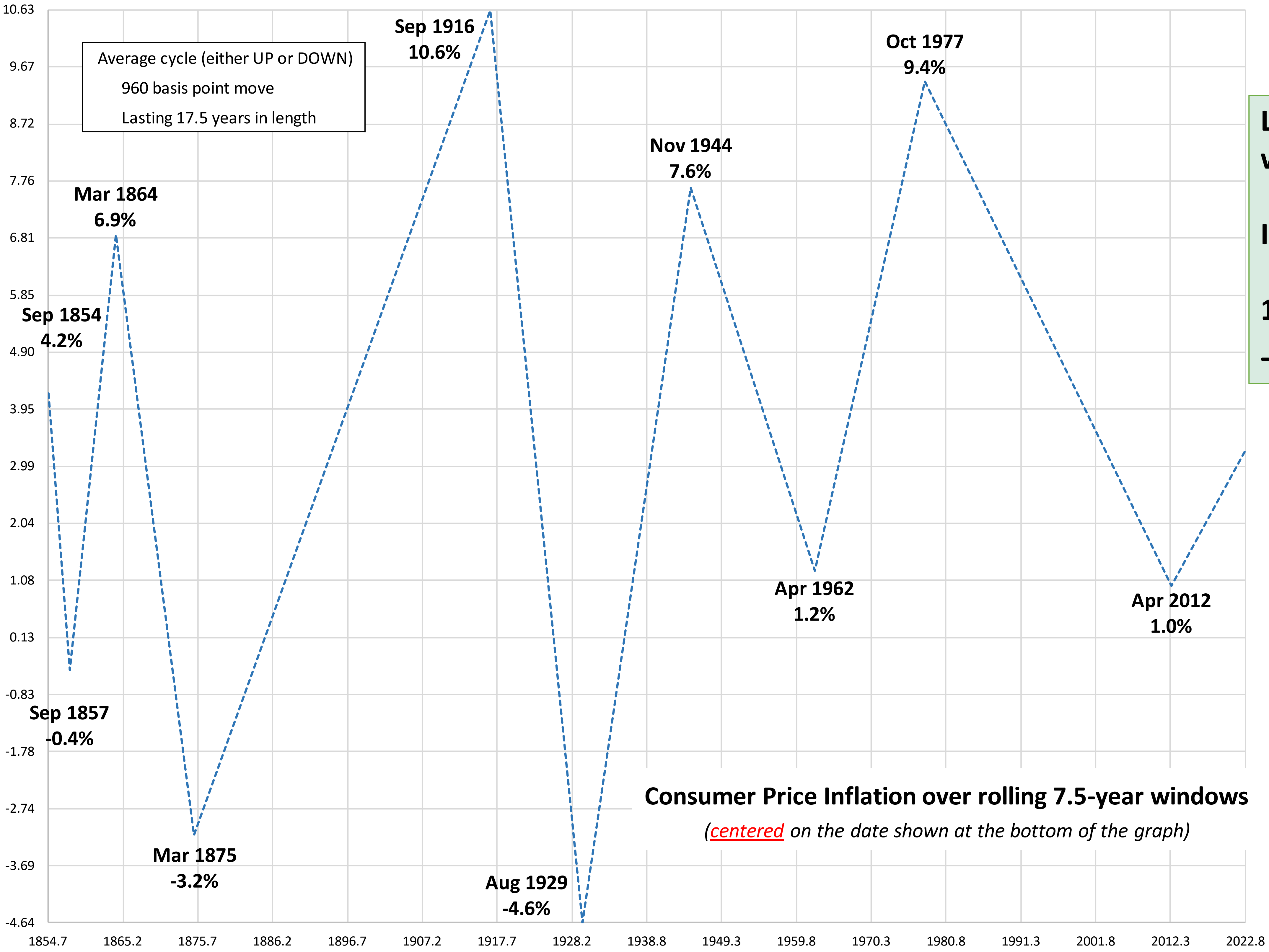
- Time period examined
  - Jan 1919 to the present
- Data sources
  - Global Financial Data, Inc.
  - Kenneth R. French Data Library at Dartmouth College
- Importance
  - Analysis is useless and highly misleading unless it includes different environments
    - War, peace, inflation, deflation, recession, growth
    - Rising/falling interest rates, inflation, energy prices
    - Restrictive and stimulative monetary and fiscal policy
    - Higher and lower corporate and individual tax rates

We must adjust for inflation

Why this is important



Average cycle (either UP or DOWN)
960 basis point move
Lasting 17.5 years in length
Sep 1854
4.2%
Sep 1857
-0.4%
Mar 1864
6.9%
Mar 1875
-3.2%
Sep 1916
10.6%
Aug 1929
-4.6%
Nov 1944
7.6%
Apr 1962
1.2%
Oct 1977
9.4%
Apr 2012
1.0%
Consumer Price Inflation over rolling 7.5-year windows
(centered on the date shown at the bottom of the graph)
10.63
9.67
8.72
7.76
6.81
5.85
4.90
3.95
2.99
2.04
1.08
0.13
-0.83
-1.78
-2.74
-3.69
-4.64
1854.7
1865.2
1875.7
1886.2
1896.7
1907.2
1917.7
1928.2
1938.8
1949.3
1959.8
1970.3
1980.8
1991.3
2001.8
2012.3
2022.8

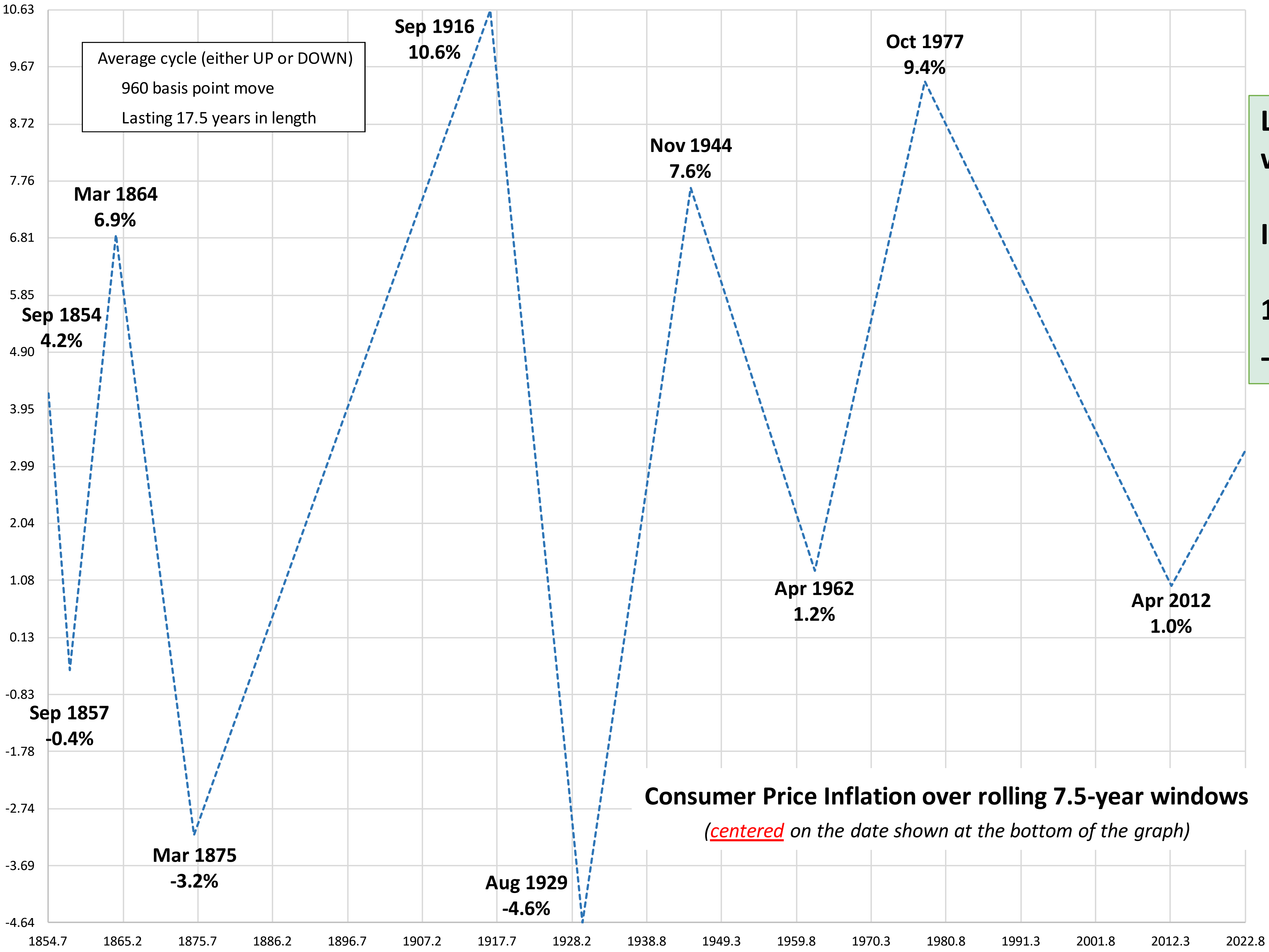


Looking at inflation over 7.5-year windows

It ran at . . .

10.6% per year in Sep 1916

-4.6% per year back in Aug 1929



Looking at inflation over 7.5-year windows

It ran at . . .

10.6% per year in Sep 1916

-4.6% per year back in Aug 1929

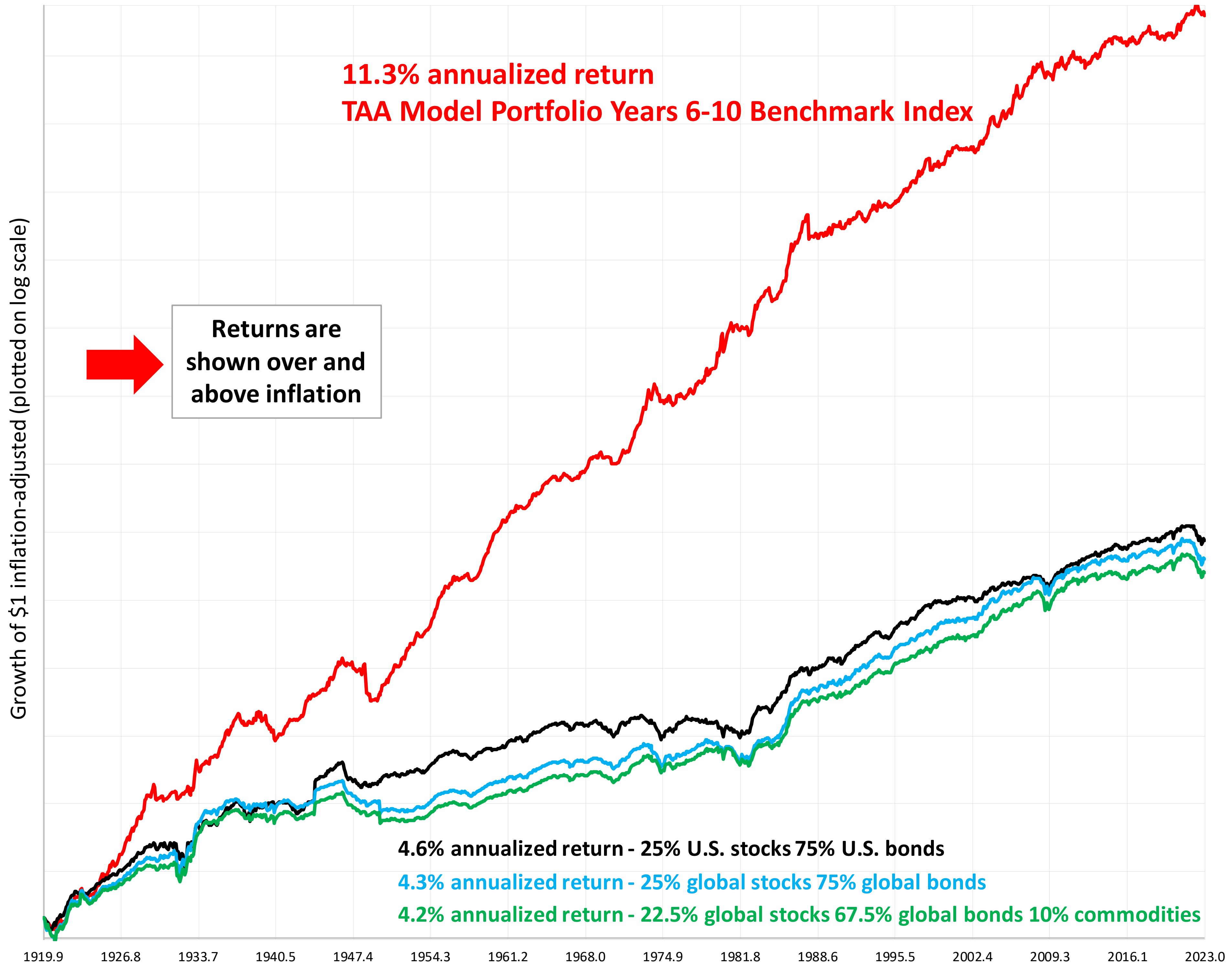
That's a staggering swing

From LOW to HIGH

Cumulative time period

The results

Large and consistent outperformance over the long-run



7 ½ year investment time periods

And nothing shorter

All about the client's needs . . . and when they arrive

- Assumption
- This investment is for the future . . . not the present
- Client is going to use this money 5 to 10 years in the future
- So we just take the mid-point of that interval

Analysis . . . and evaluation

- We examine all of the 7 ½ year periods

- And never consider the aggregate period (1919-present)

History of bear markets

For the S&P 500 Index

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
	-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	?	?	?	?	?
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

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
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The typical bear . . . lasts just 1 ½ years

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Performance during bears

Why this is the wrong question . . . the worst possible question

- The typical bear lasts 1.46 years
- But . . . no investment strategy has ever been able to “confidently” produce a result during such a short time window
- Absolutely none !!!

Why this is the wrong question . . . the worst possible question

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- Moreover
- Tactical Asset Allocation (TAA) . . . doesn’t work in the short-run

Why this is the wrong question . . . the worst possible question

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- The typical bear lasts 1.46 years
- But . . . no investment strategy has ever been able to “confidently” produce a result during such a short time window
- Absolutely none !!!

- Moreover
- Tactical Asset Allocation (TAA) . . . doesn’t work in the short-run

- AND . . . even more important
- What was your client’s investment objective?
- Herein it was assumed “*Produce a dependable result 7 ½ years in the future*”
- And never . . . during a 1.46-year bear market

Conclusion

- Asking how a TAA portfolio will perform
- During a bear market
- Is a seriously wrong question

Let’s put some flesh on the bone

- The TAA portfolio referenced herein
- Data spanning Jan 1919 through today
- We’ve had 11 bear markets

- How’d this portfolio do . . . versus several passive Buy&Hold portfolios

Let’s put some flesh on the bone

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- How’d this portfolio do . . . versus several passive Buy&Hold portfolios

- WORST outcome . . . ever
- BEST outcome
- TYPICAL outcome

Let’s put some flesh on the bone

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- WORST outcome . . . ever . . . the 3-month bear of 1987

TAA portfolio	U.S. (25/75 stocks/bonds)	Global (25/75 stocks/bonds)	Global but with 10% in commodities	TAA portfolio out/under performance
-24.3	-7.5	-3.3	-3.3	-21.0

- BEST outcome

TAA portfolio	U.S. (25/75 stocks/bonds)	Global (25/75 stocks/bonds)	Global but with 10% in commodities	TAA portfolio out/under performance
20.0	-25.3	-21.9	-14.0	41.9

- TYPICAL outcome
  - Typically . . . the TAA portfolio adds an extra **418 basis points** during a bear

Correct measurement period

The correct assessment point

Conclusion

- STOP . . . looking at individual bear markets
- RETURN . . . to your client's stated objective
- How did your chosen investment solution perform . . . in the context of your *client's objective*
- Don't let "Behavioral Bias" drag you around . . . like a dog on a leash

Results . . . performance

During ALL possible 7.5-year periods

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	TAA portfolio	U.S. (25/75 stocks/bonds)	Global (25/75 stocks/bonds)	Global but with 10% in commodities
99.6% chance of earning more than	2.1	-2.3	-5.9	-5.2
90% chance of earning more than	5.0	0.4	-0.8	-0.4
80% chance of earning more than	6.4	1.8	0.8	1.2
70% chance of earning more than	7.9	3.0	2.1	2.2
60% chance of earning more than	9.5	3.8	3.0	3.0
50% chance of earning more than	10.8	4.4	3.8	3.6

Results after inflation and assumed transaction costs

When 7.5-years STARTS at the beginning of a bear

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	TAA portfolio	U.S. (25/75 stocks/bonds)	Global (25/75 stocks/bonds)	Global but with 10% in commodities
99.6% chance of earning more than	2.5	-2.5	-6.7	-6.0
90% chance of earning more than	4.6	0.2	-0.5	0.2
80% chance of earning more than	6.6	1.1	1.1	1.1
70% chance of earning more than	8.6	1.8	2.0	2.1
60% chance of earning more than	9.4	2.9	2.6	2.8
50% chance of earning more than	10.0	3.8	3.4	3.4

Results after inflation and assumed transaction costs

When 7.5-years ENDS at the very end of a bear

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	TAA portfolio	U.S. (25/75 stocks/bonds)	Global (25/75 stocks/bonds)	Global but with 10% in commodities
99.6% chance of earning more than	1.5	-2.0	-3.7	-3.6
90% chance of earning more than	4.3	-0.3	-0.7	-0.3
80% chance of earning more than	6.5	1.7	0.2	0.4
70% chance of earning more than	8.8	2.7	0.7	1.1
60% chance of earning more than	10.2	3.4	1.8	1.9
50% chance of earning more than	11.4	4.0	2.8	2.6

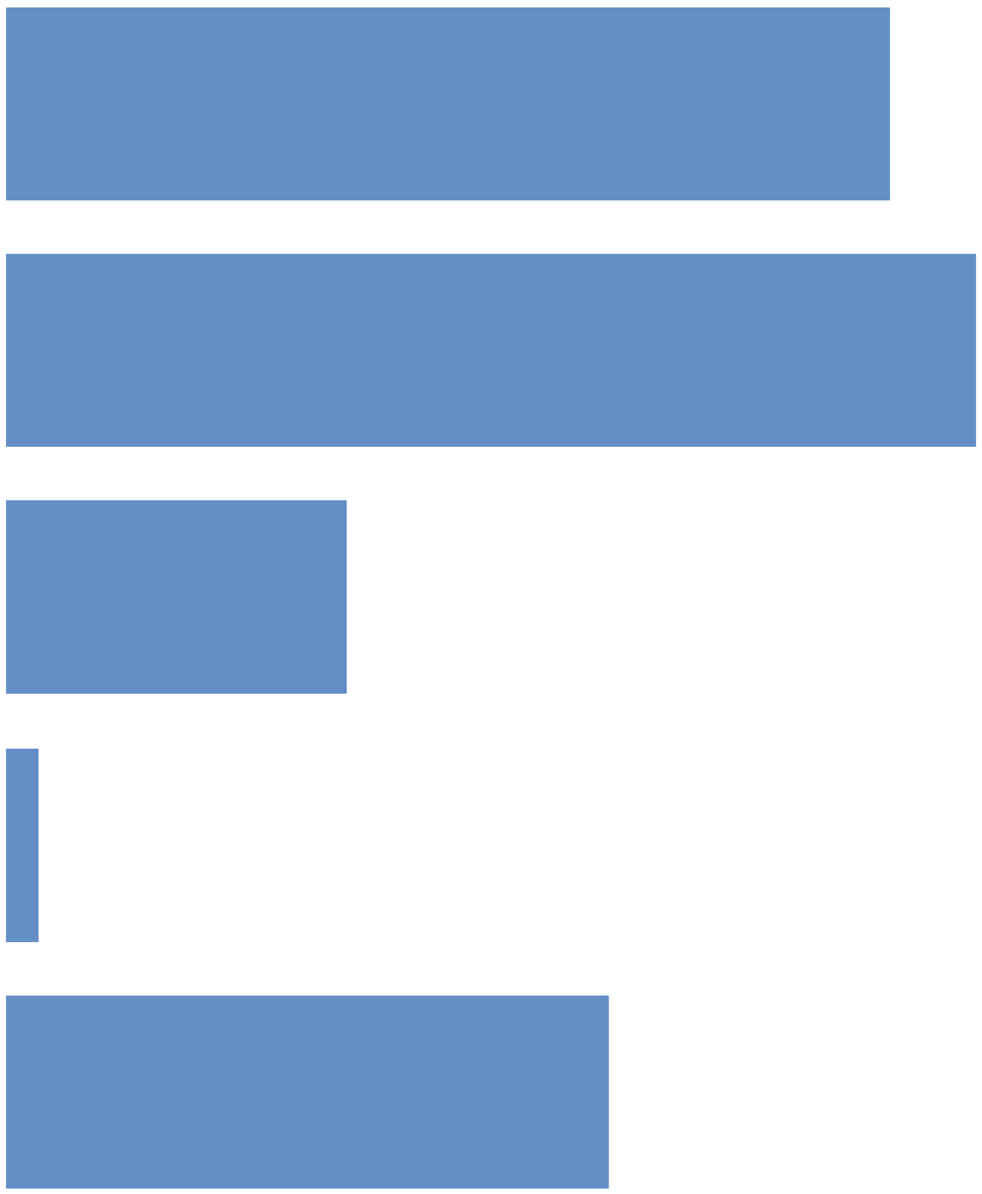
Results after inflation and assumed transaction costs

Normal asset mix . . . average

For this TAA portfolio

What’s normal for this TAA portfolio (since Jan 1919)

	MINIMUM allowed	MAXIMUM allowed	Long-run AVERAGE
U.S. stocks	0.0%	94.4%	31.3%
International stocks	0.0%	99.3%	34.3%
U.S. Treasury bonds	0.7%	95.0%	12.0%
Other bonds	0.0%	18.6%	1.1%
Commodities	0.0%	99.3%	21.3%



How perform . . . when stock allocation is above a certain level

If 7 ½-year window STARTS with a high stock allocation

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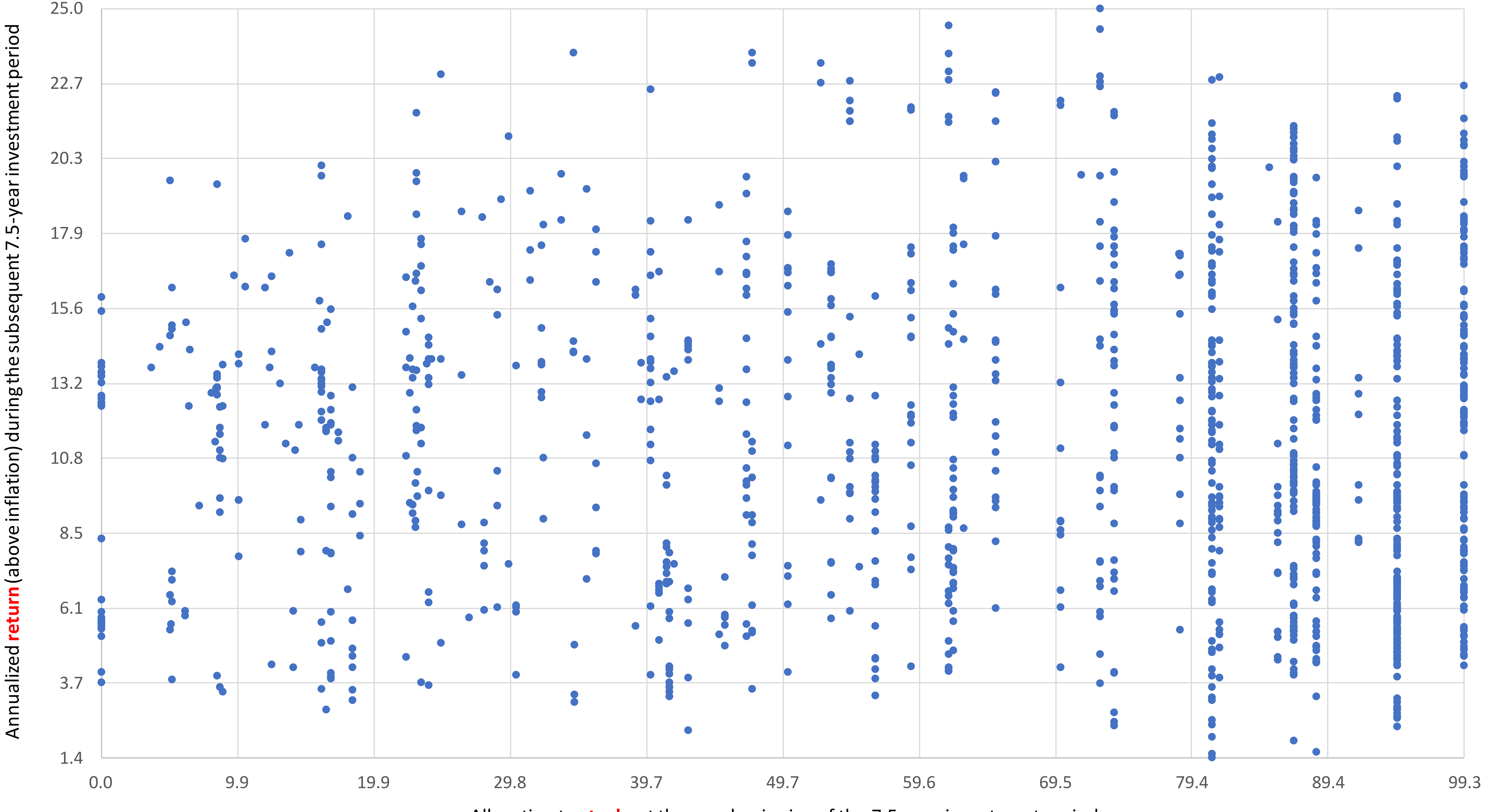
		If started the 7.5-year period with the stock allocation above this level				
		95%	90%	85%	80%	75%
TAA portfolio annualized return	Median (typical) result	12.3	9.5	9.7	9.9	10.0
	Absolute worst that ever occurred	4.3	2.4	1.5	1.4	1.4

If 7 ½-year window ENDS with a high stock allocation

		If ended the 7.5-year period with the stock allocation above this level				
		95%	90%	85%	80%	75%
TAA portfolio annualized return	Median (typical) result	13.2	11.8	10.6	10.8	10.8
	Absolute worst that ever occurred	3.7	3.7	1.4	1.4	1.4

Relationship between starting stock weight and 7.5-year performance



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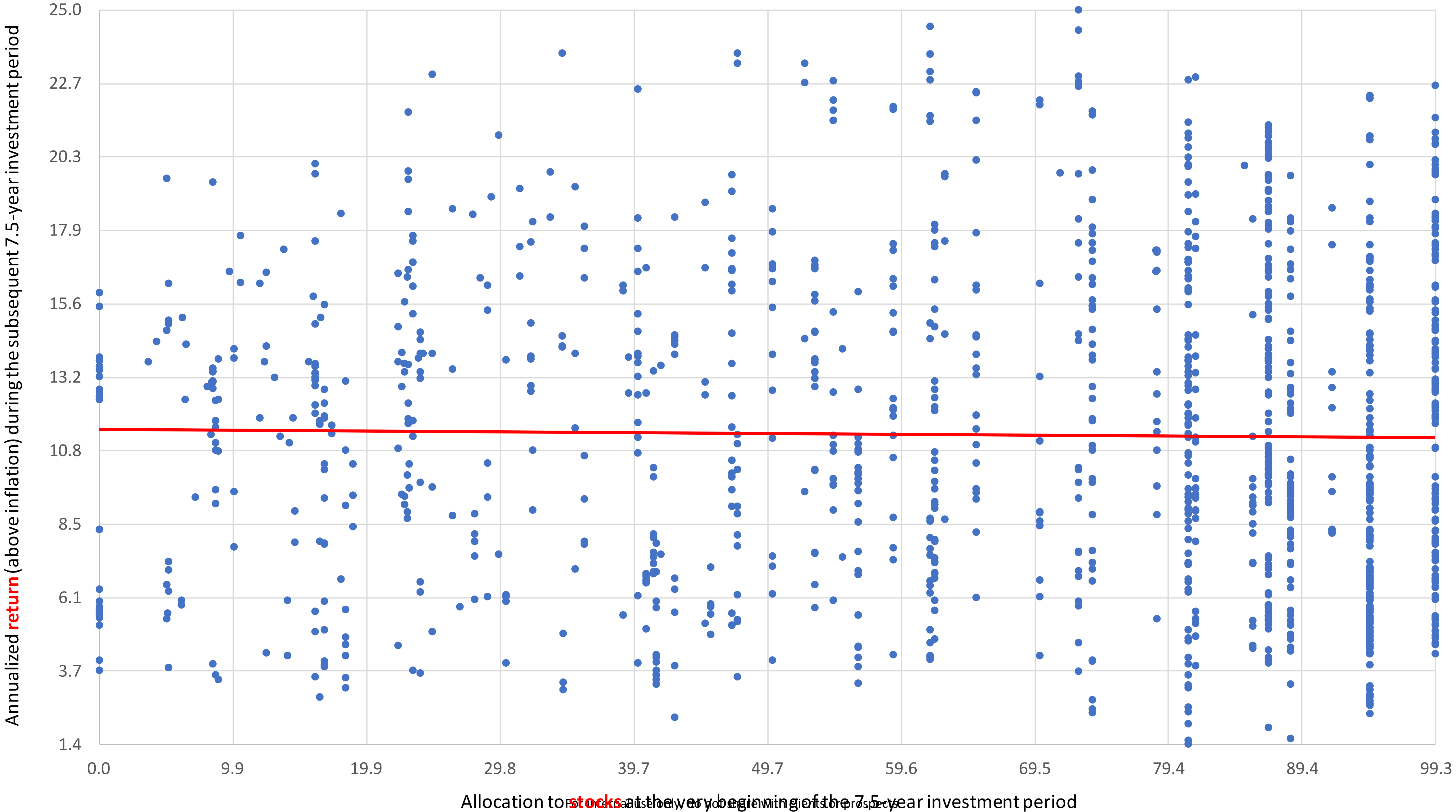
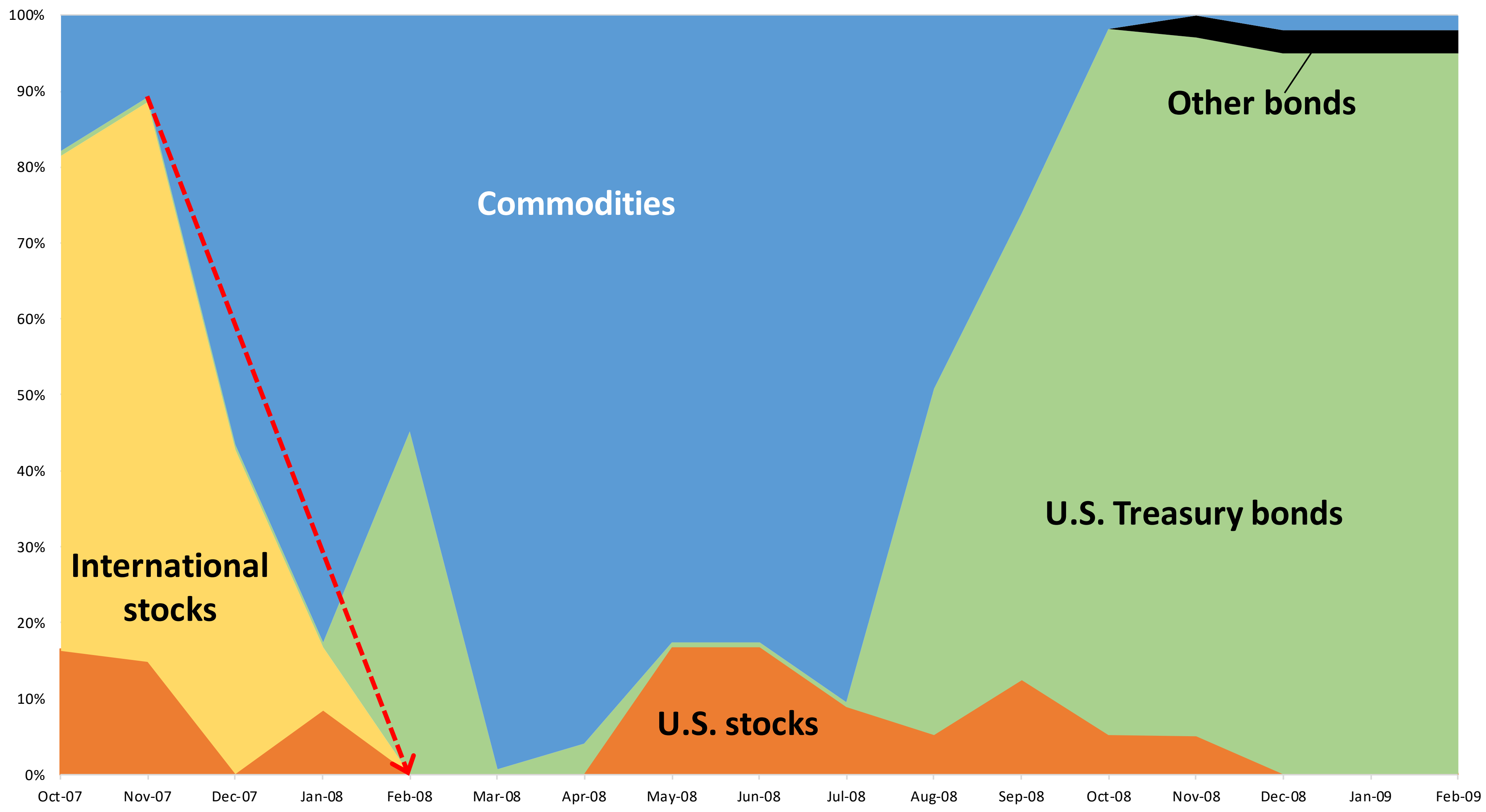


Why . . . How can this be?

That high allocations to stocks add ZERO risk . . .

The TAA portfolio moves out of stocks FAST



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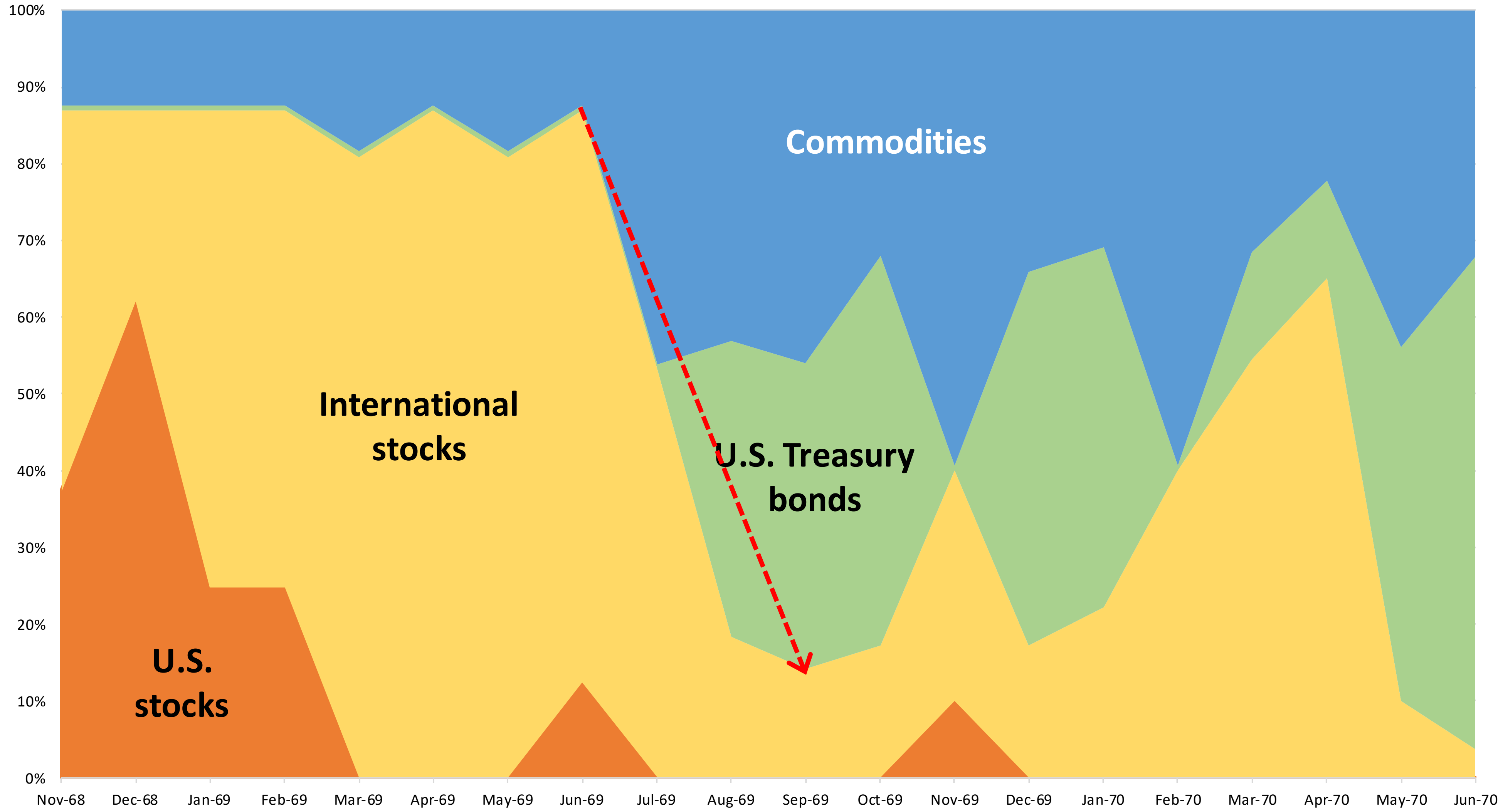

The TAA portfolio moves out of stocks FAST

Date	Jul 1946	Sep 1946	May 1984	Aug 1984	Oct 1987	Nov 1987	Aug 1990	Oct 1990	Apr 2002	Aug 2002	Nov 2007	Feb 2008	Apr 2010	Sep 2010	Jul 2011	Sep 2011
Allocation to stocks in %	88.5	5.2	80.9	5.1	80.9	0	99.3	8.3	81.5	5.2	88.5	0	88.5	0	94.4	8.6
Number of months to "get out"	**2 months**		**3 months**		**1 month**		**2 months**		**4 months**		**3 months**		**5 months**		**2 months**	

Bottom line

Bottom line

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- Any concern about . . .
- The allocation to stocks being too high
- Has ZERO basis in fact
  - It has never been a problem (1919-today)
  - There exists no reason why . . . it should be a problem

Forward-thinking innovations

When it comes time . . . to actually implement (to build the car)

Tactical Asset Allocation Views – August 2023

Henry Ma, PhD, CFA

President and Chief Investment Officer

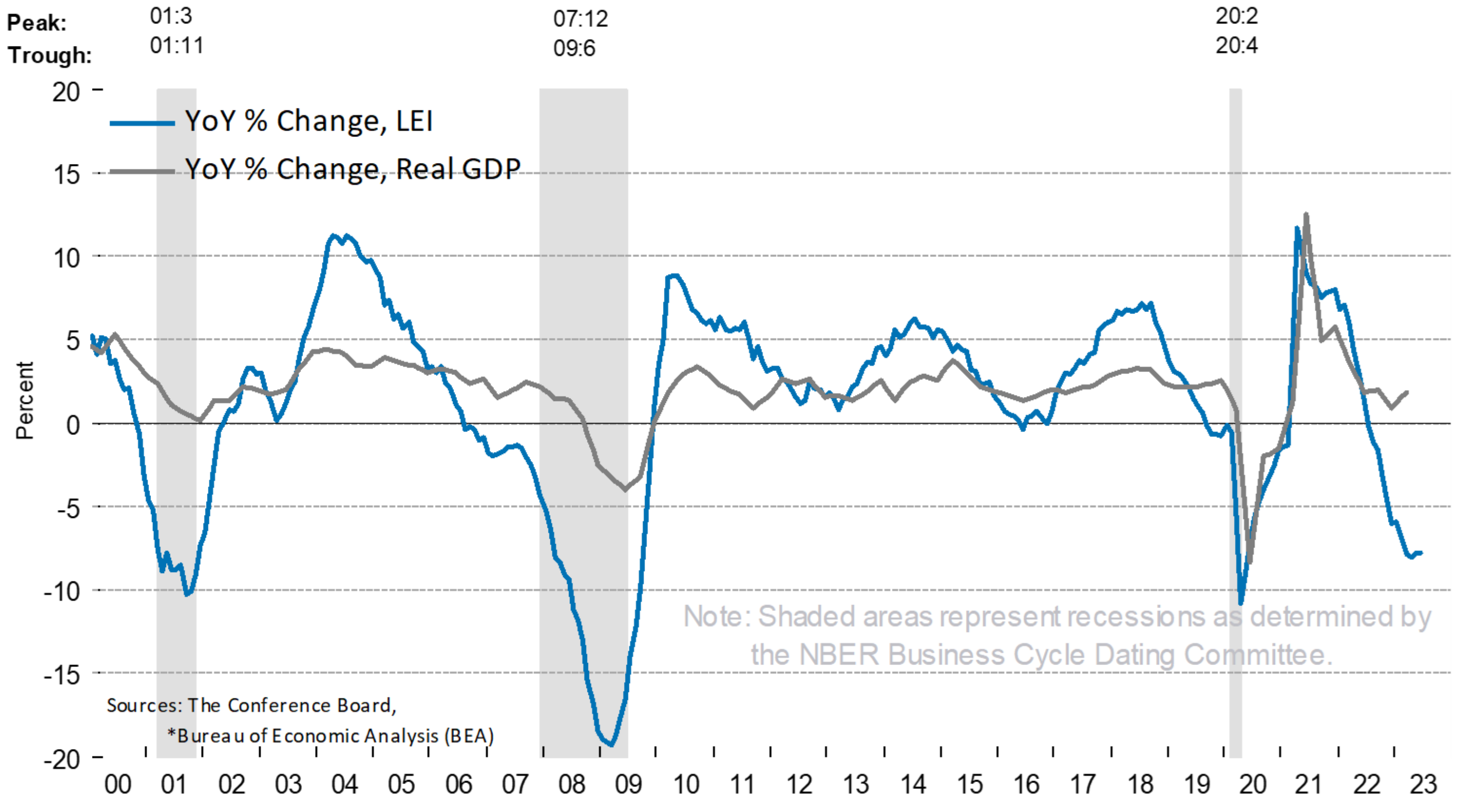
40 Grove Street, Suite 140, Wellesley, MA 02482

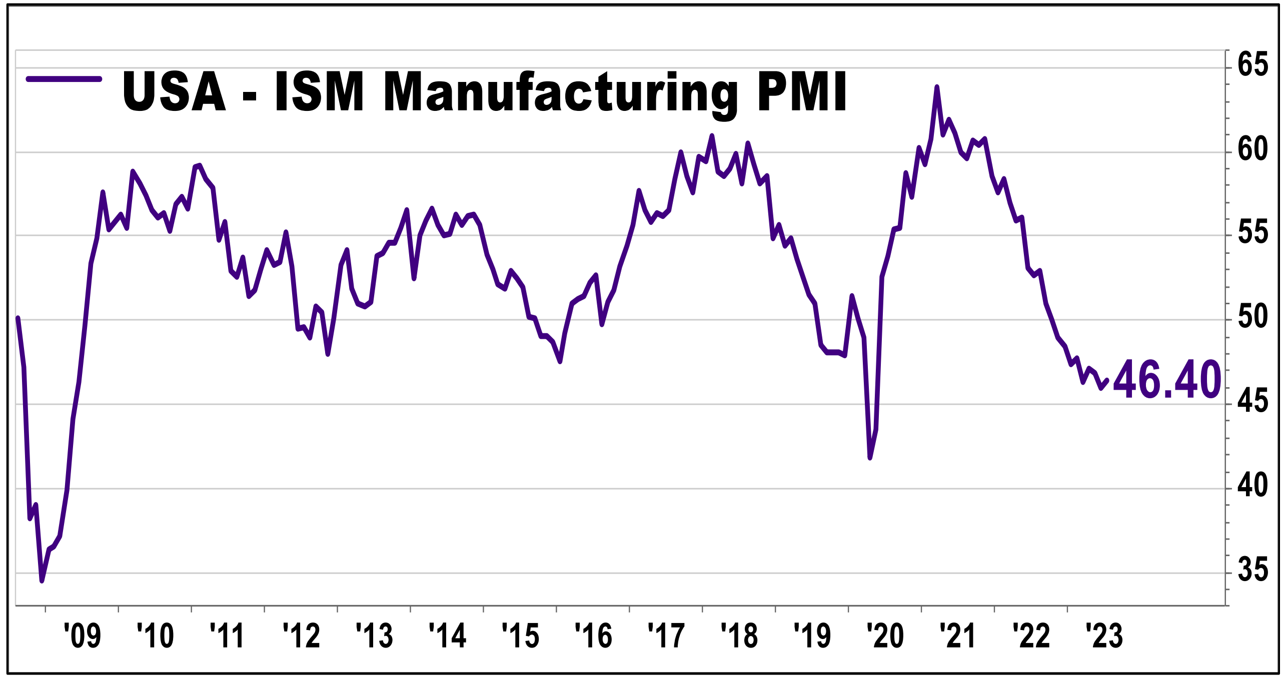
Phone 781-489-5398

Email info@julexcapital.com

Web www.julexcapital.com

Leading indicators signal continued slowing in economic activity
Manufacturing activities are contracting





Date Source: Conference Board and ISM.

But current economic data is still resilient, "soft landing" becomes more likely

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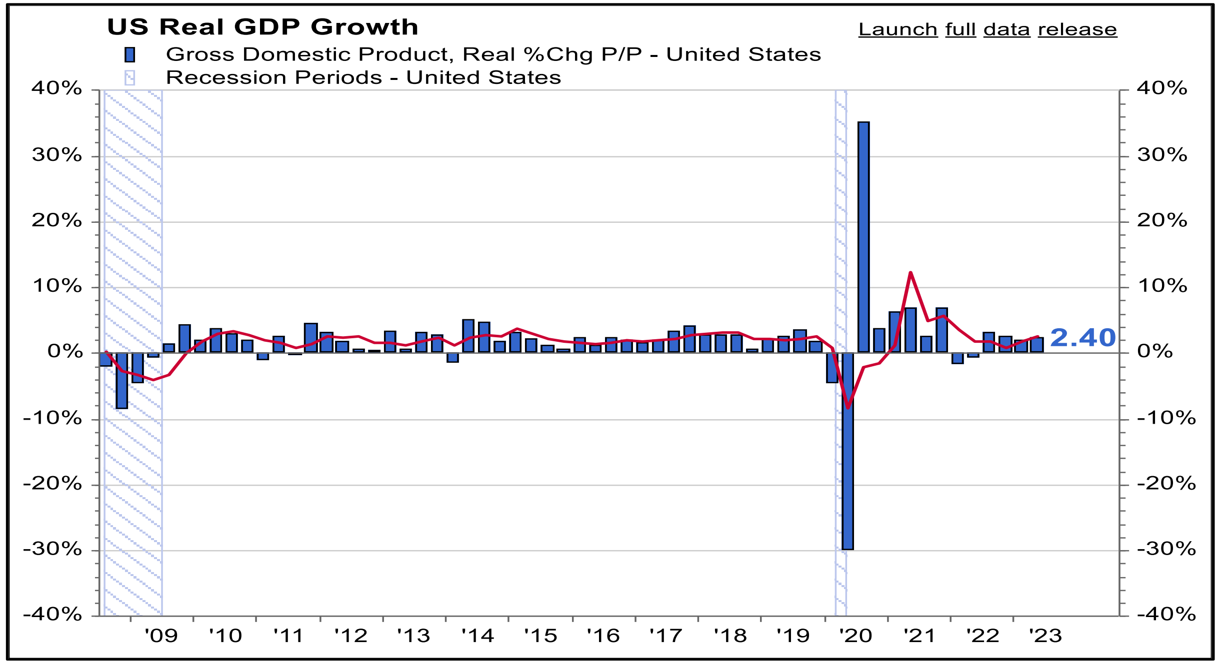
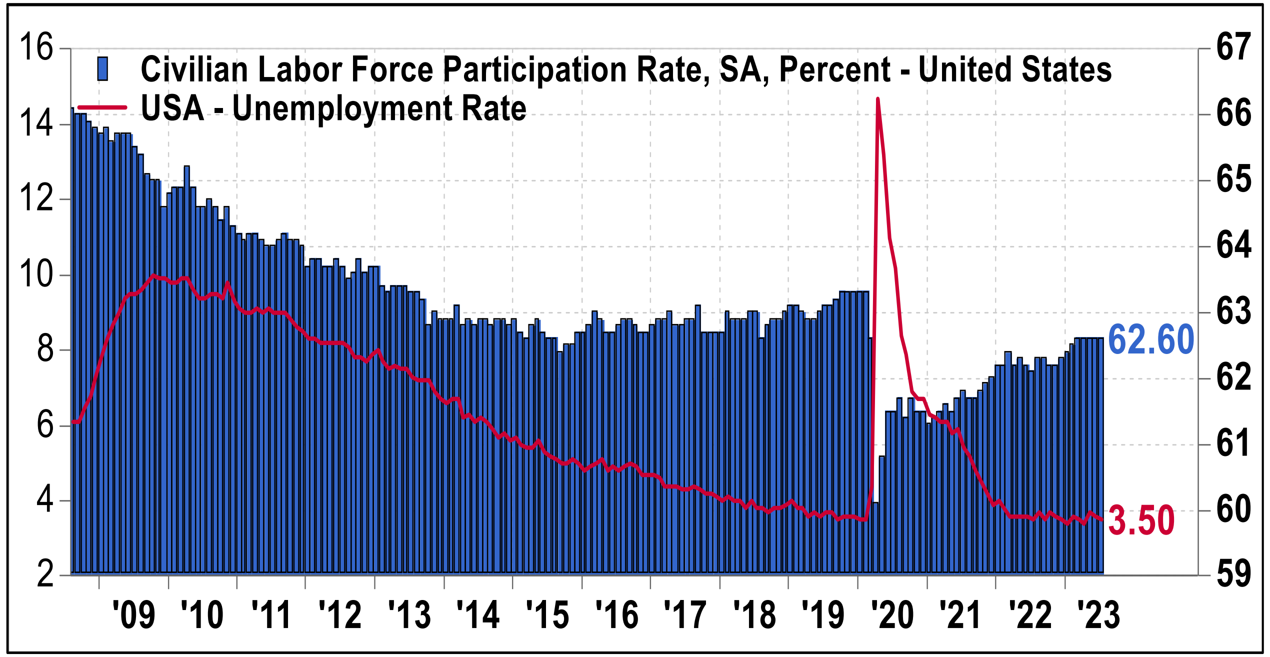
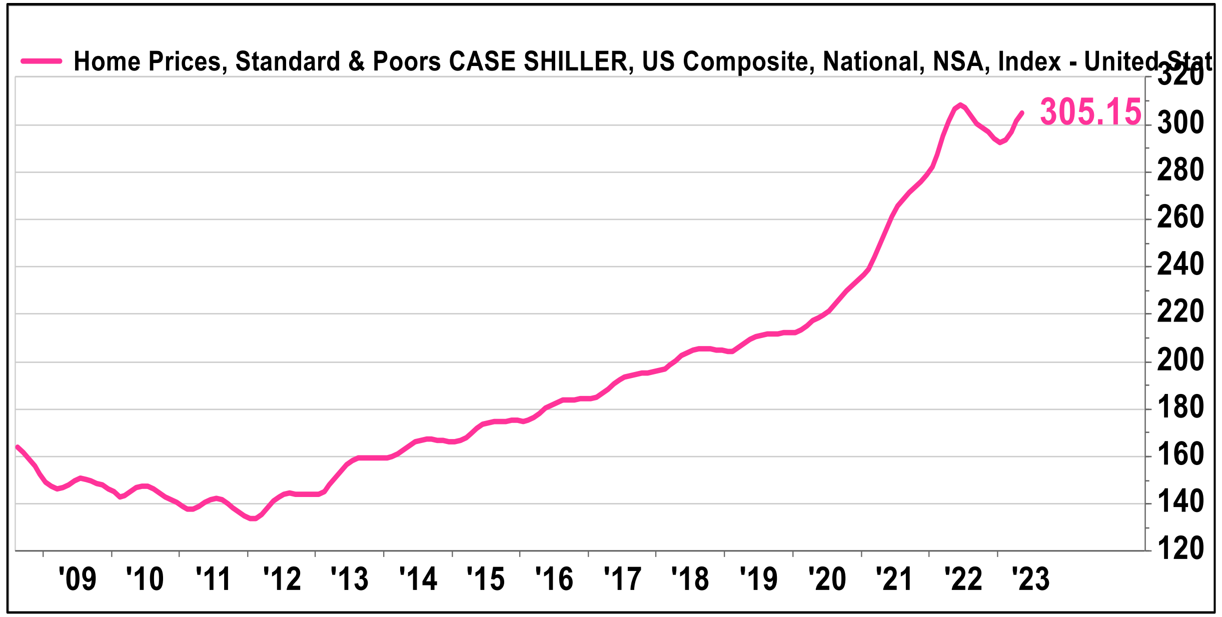
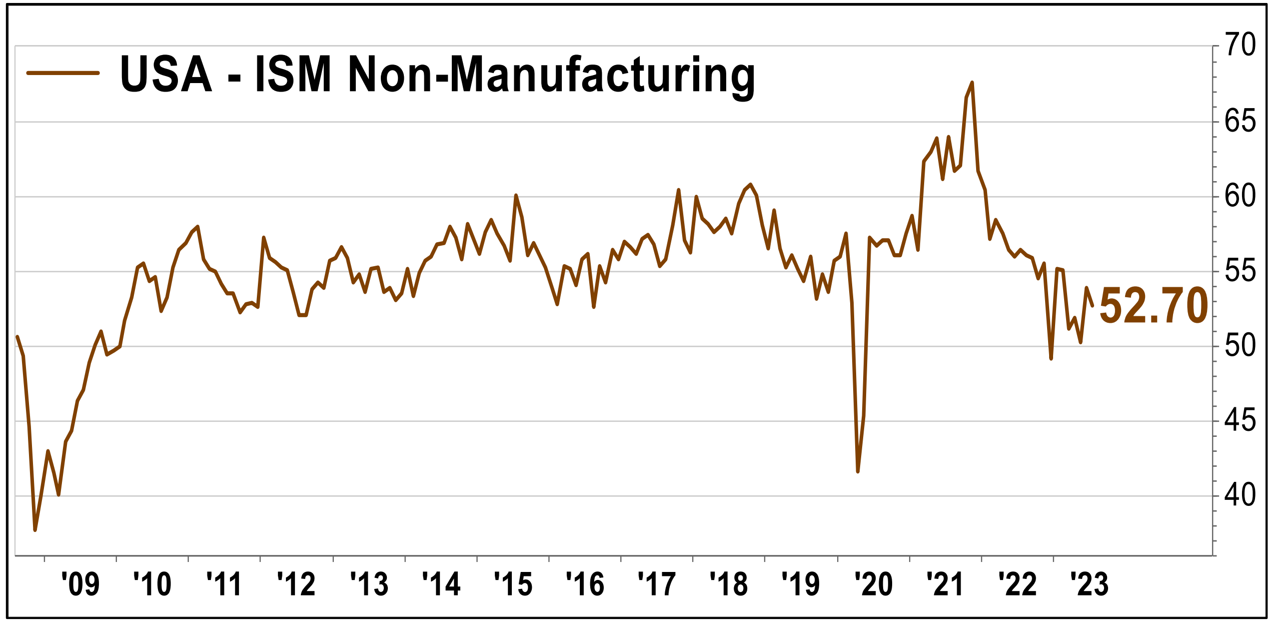


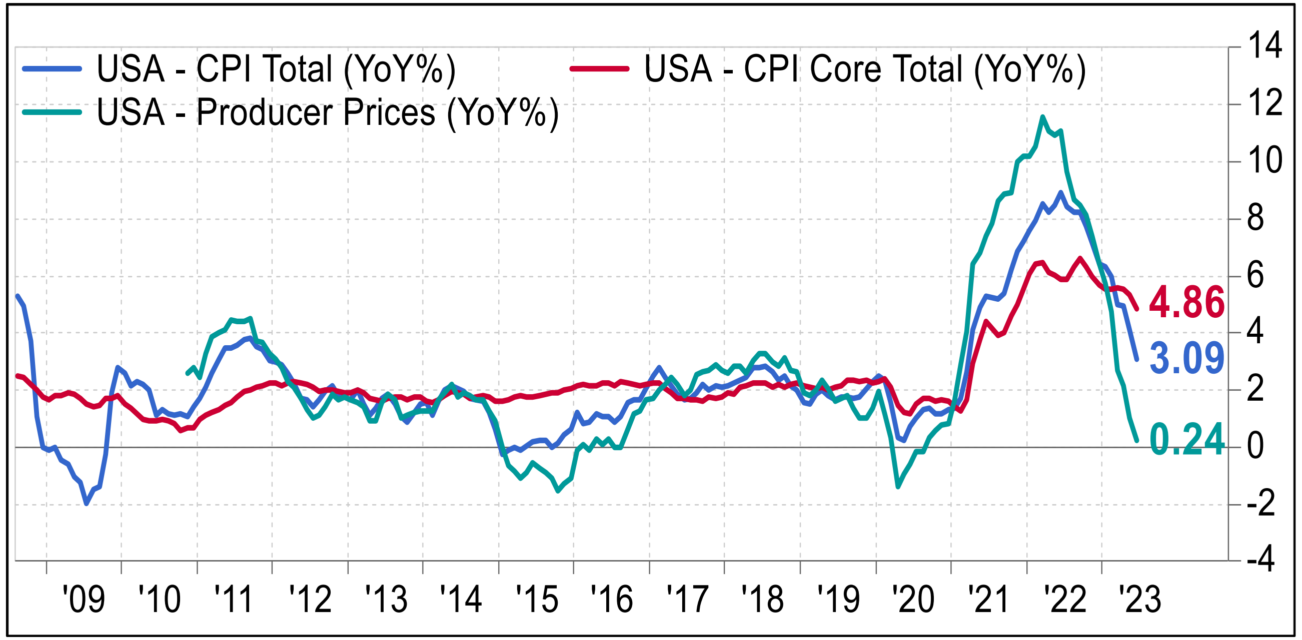


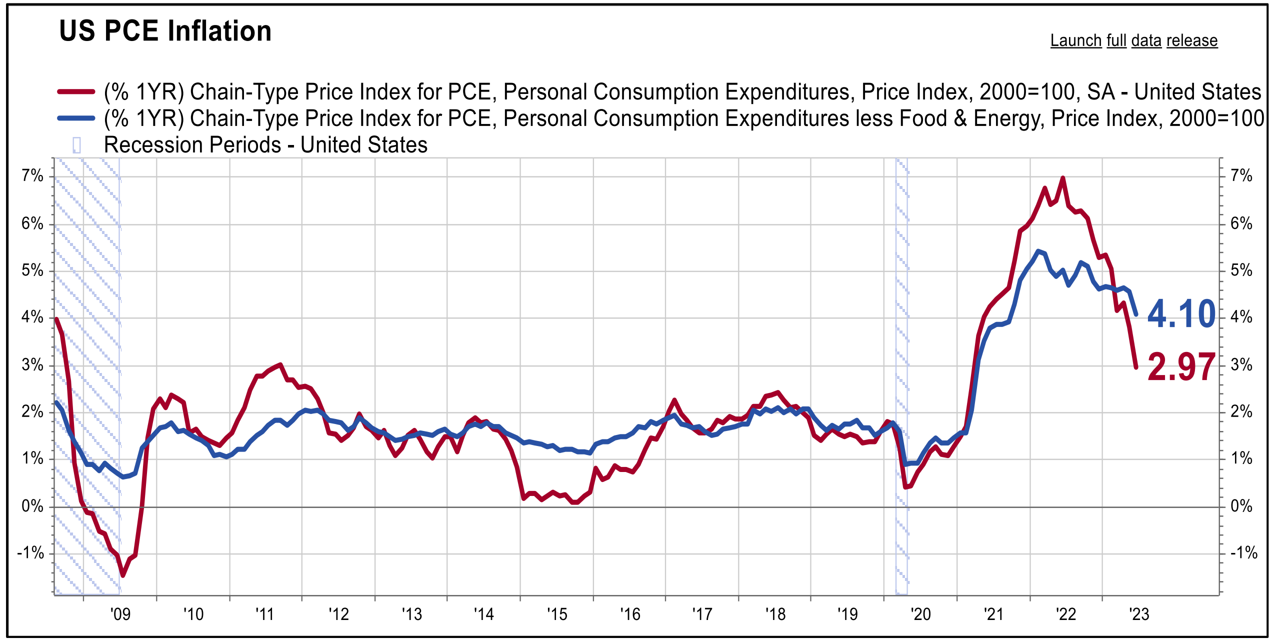


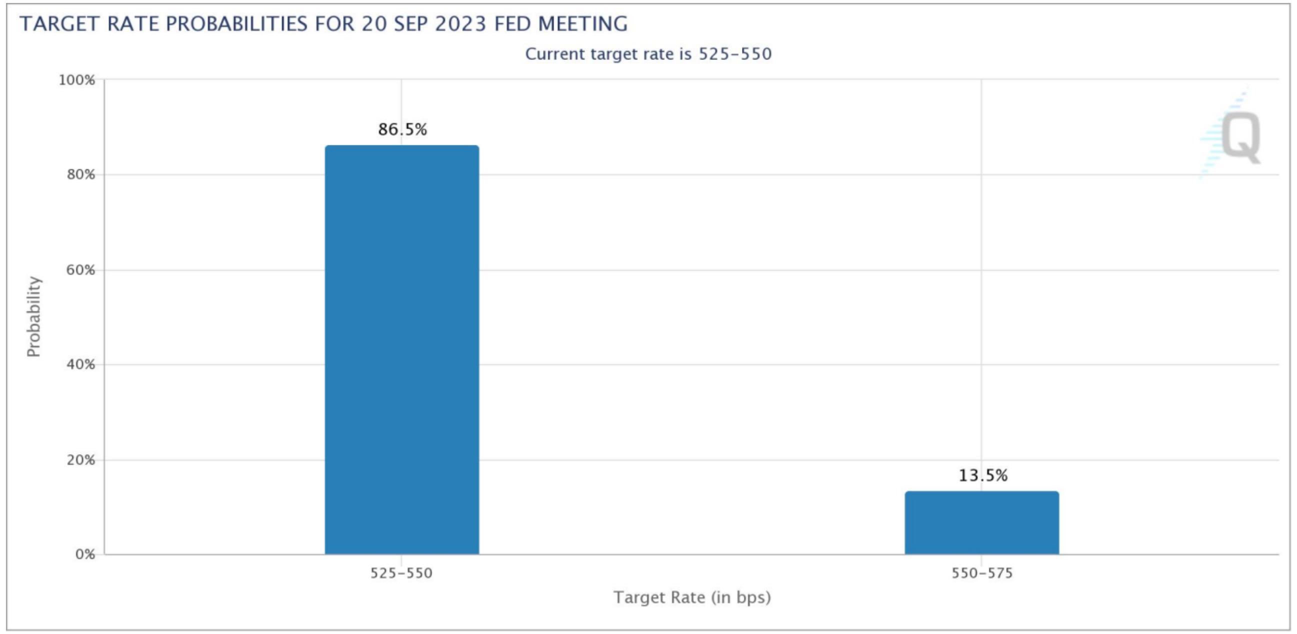


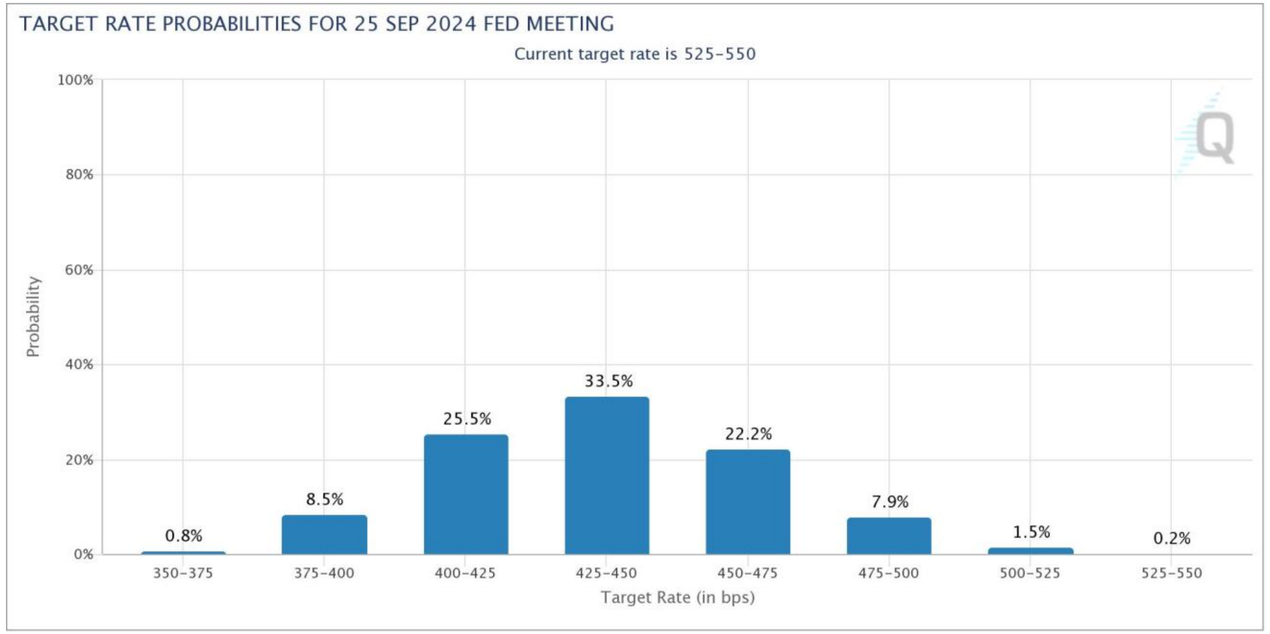
Date Source: FactSet.

Inflation continues trending lower, the tightening cycle is ending
Market prices in 100 bps rate cut one year from now





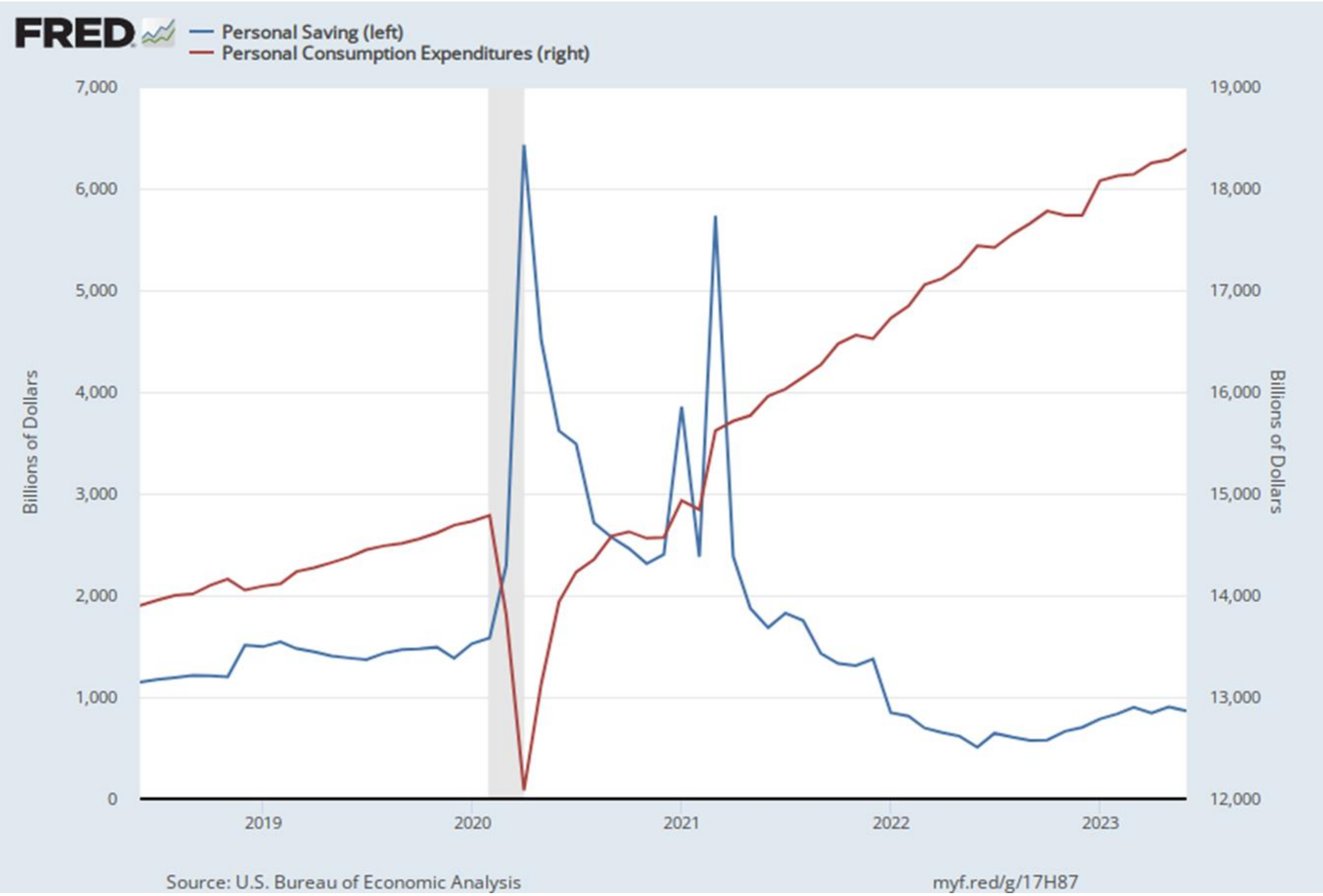


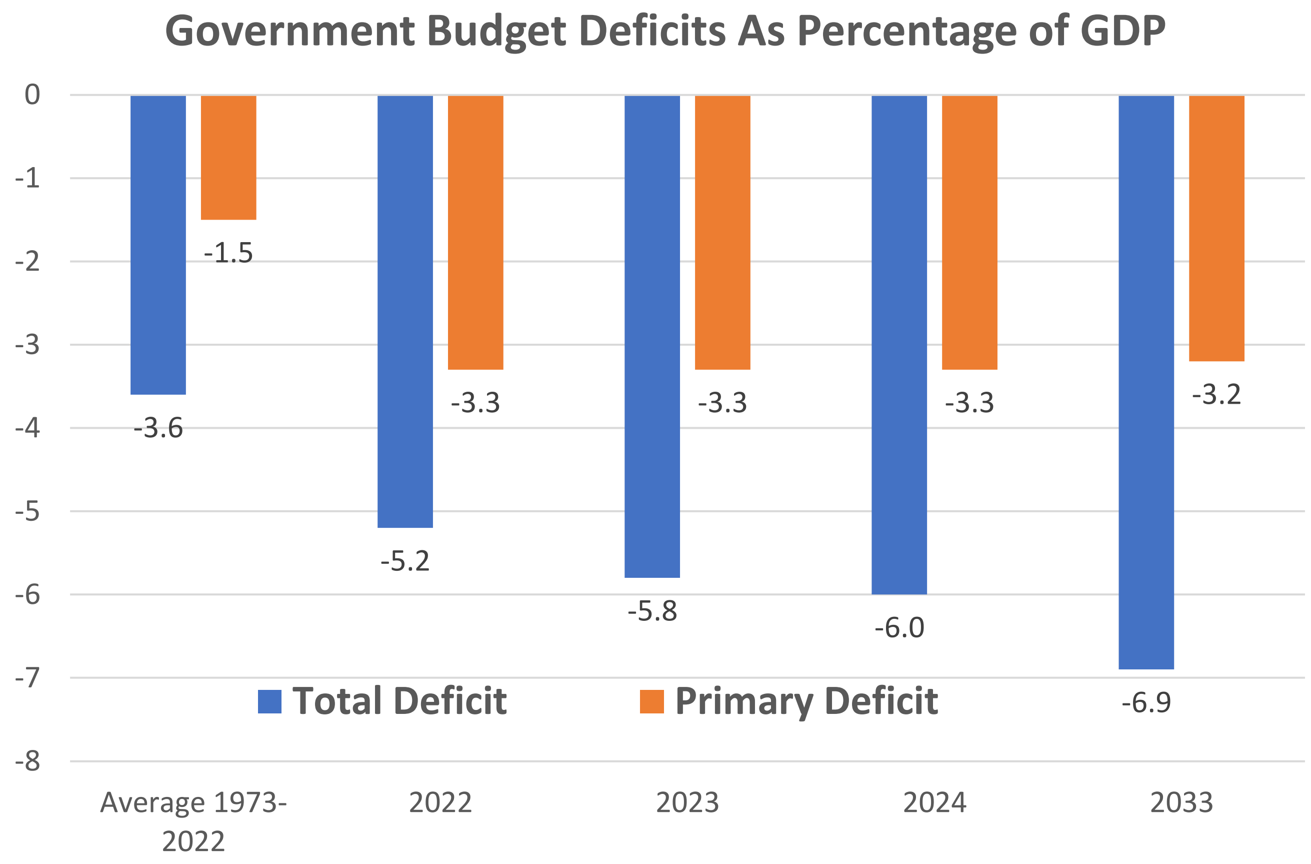


Date Source: FactSet, CME.

Recession or Soft Landing?

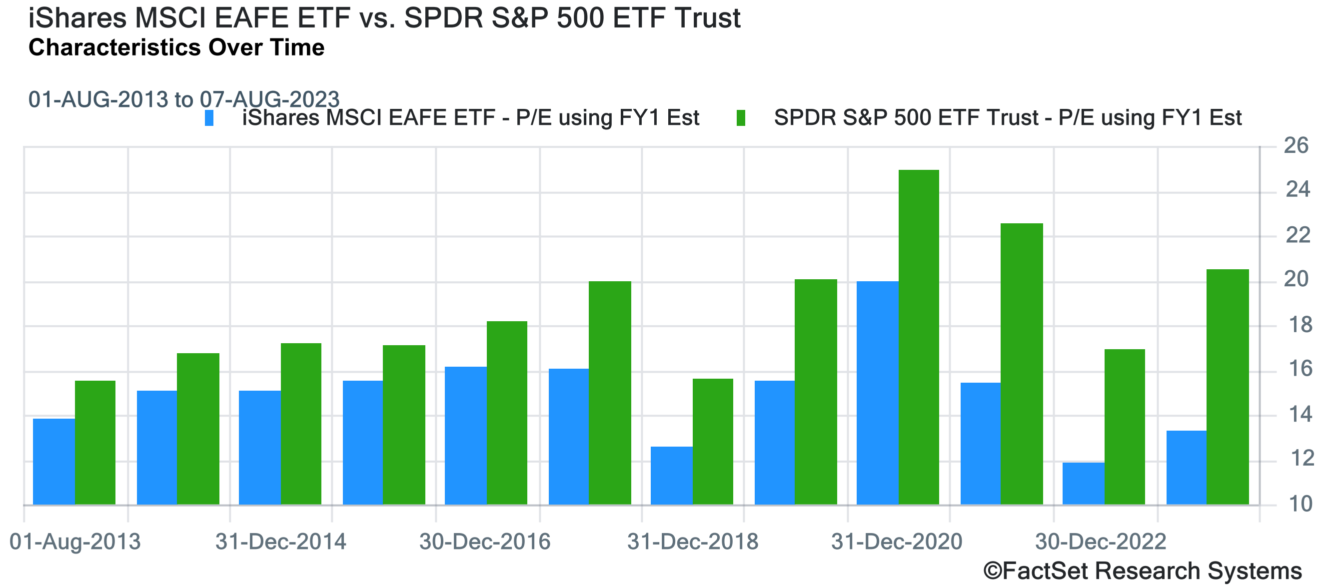
Restrictive monetary policies are offset (partially) by
- Delayed consumption
- Expansionary fiscal policies

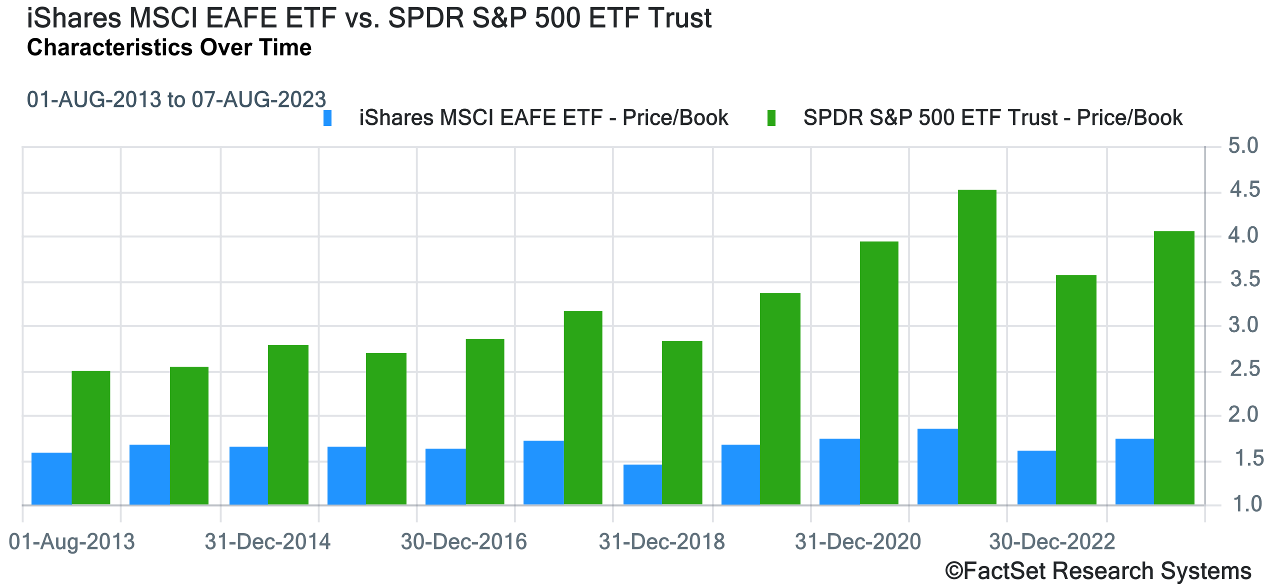


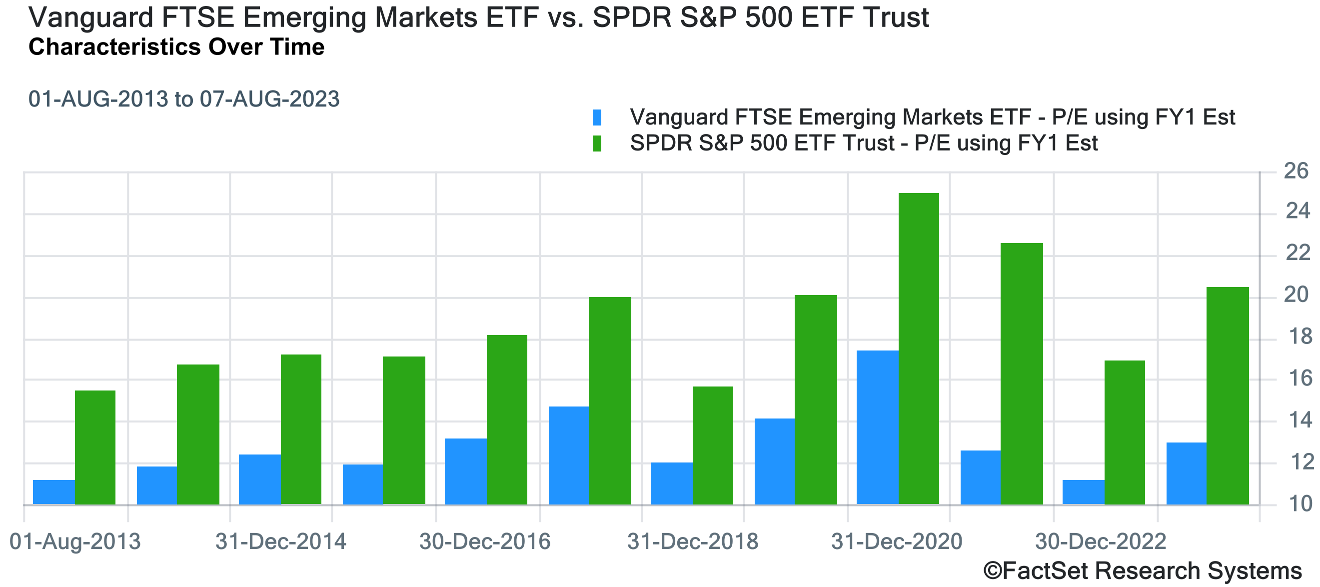


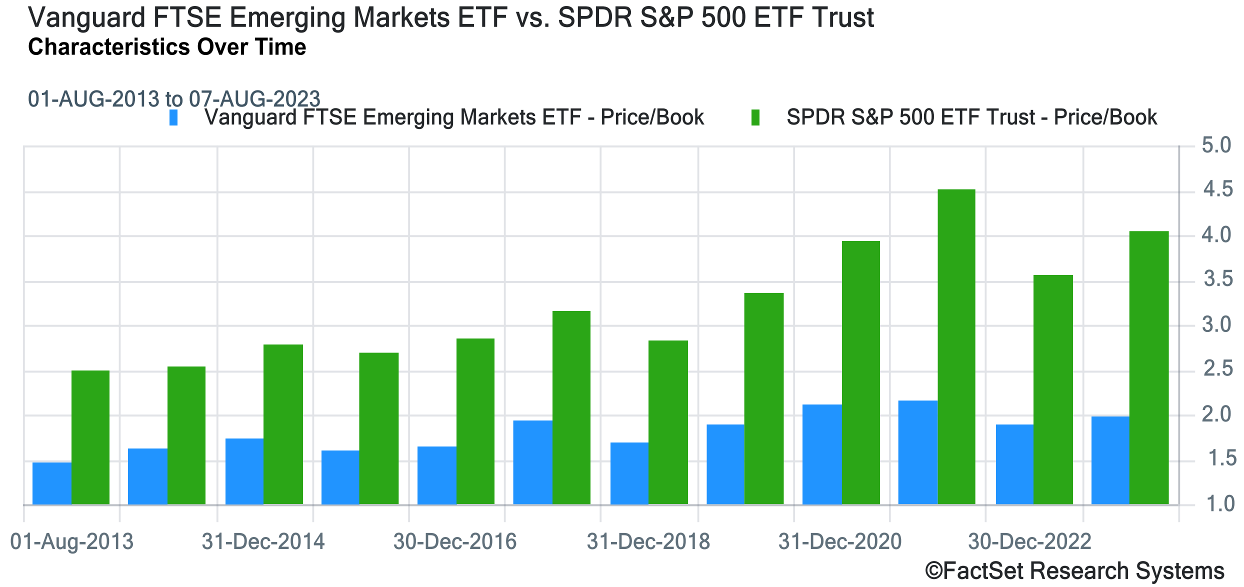
Date Source: CBO, Federal Reserve Bank, St. Louis

US Equities are expensive, international stocks are better valued









Date Source: FactSet

Large cap are expensive, small and mid cap are better valued

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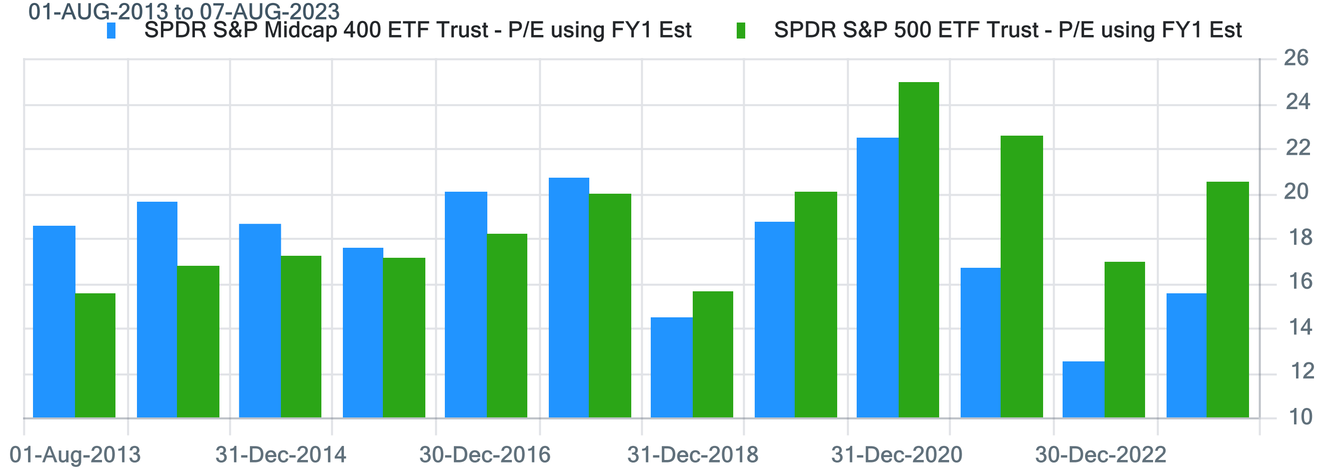
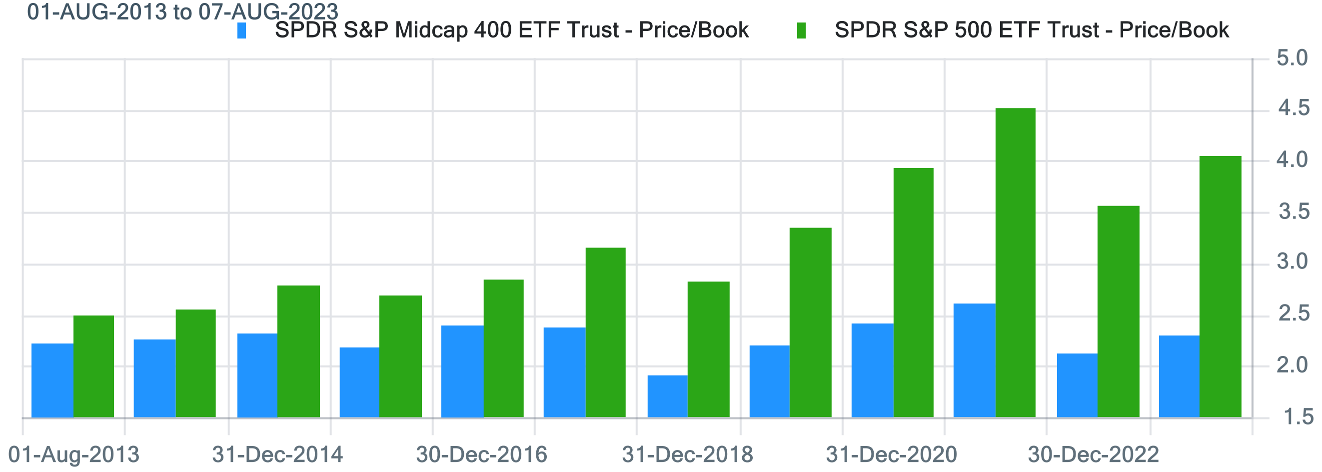
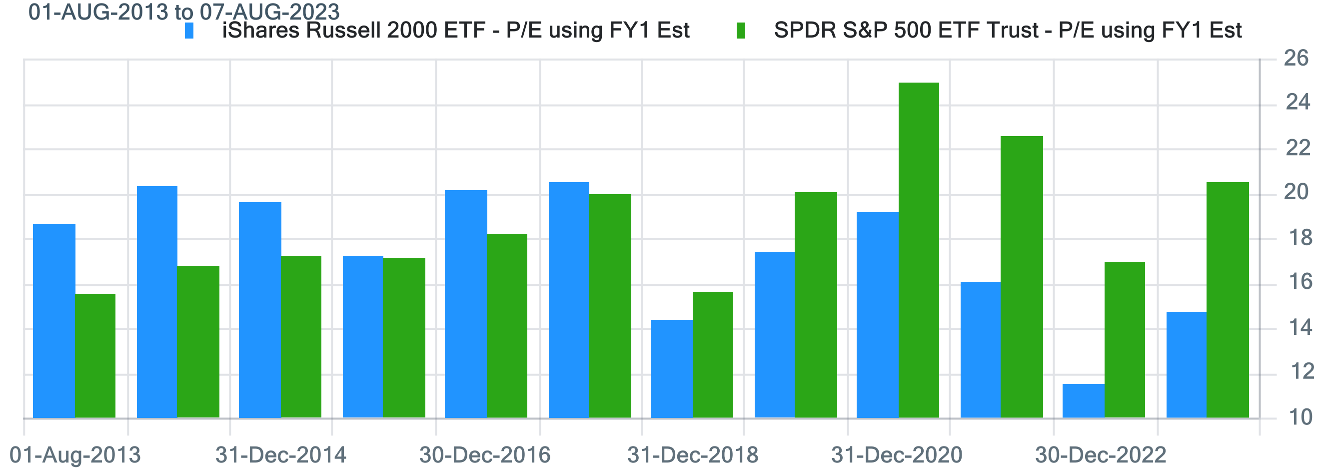
SPDR S&P Midcap 400 ETF Trust vs. SPDR S&P 500 ETF Trust
Characteristics Over Time
01-AUG-2013 to 07-AUG-2023



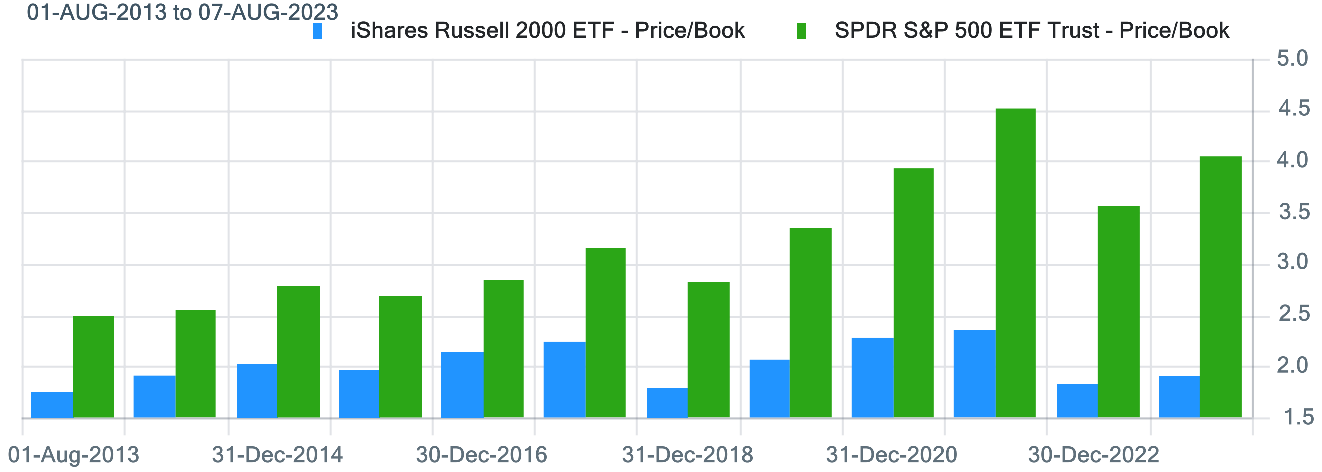
SPDR S&P Midcap 400 ETF Trust vs. SPDR S&P 500 ETF Trust
Characteristics Over Time
01-AUG-2013 to 07-AUG-2023



iShares Russell 2000 ETF vs. SPDR S&P 500 ETF Trust
Characteristics Over Time
01-AUG-2013 to 07-AUG-2023



iShares Russell 2000 ETF vs. SPDR S&P 500 ETF Trust
Characteristics Over Time
01-AUG-2013 to 07-AUG-2023



Date Source: FactSet

Credit spreads are around historical average
Default rate is on the rise

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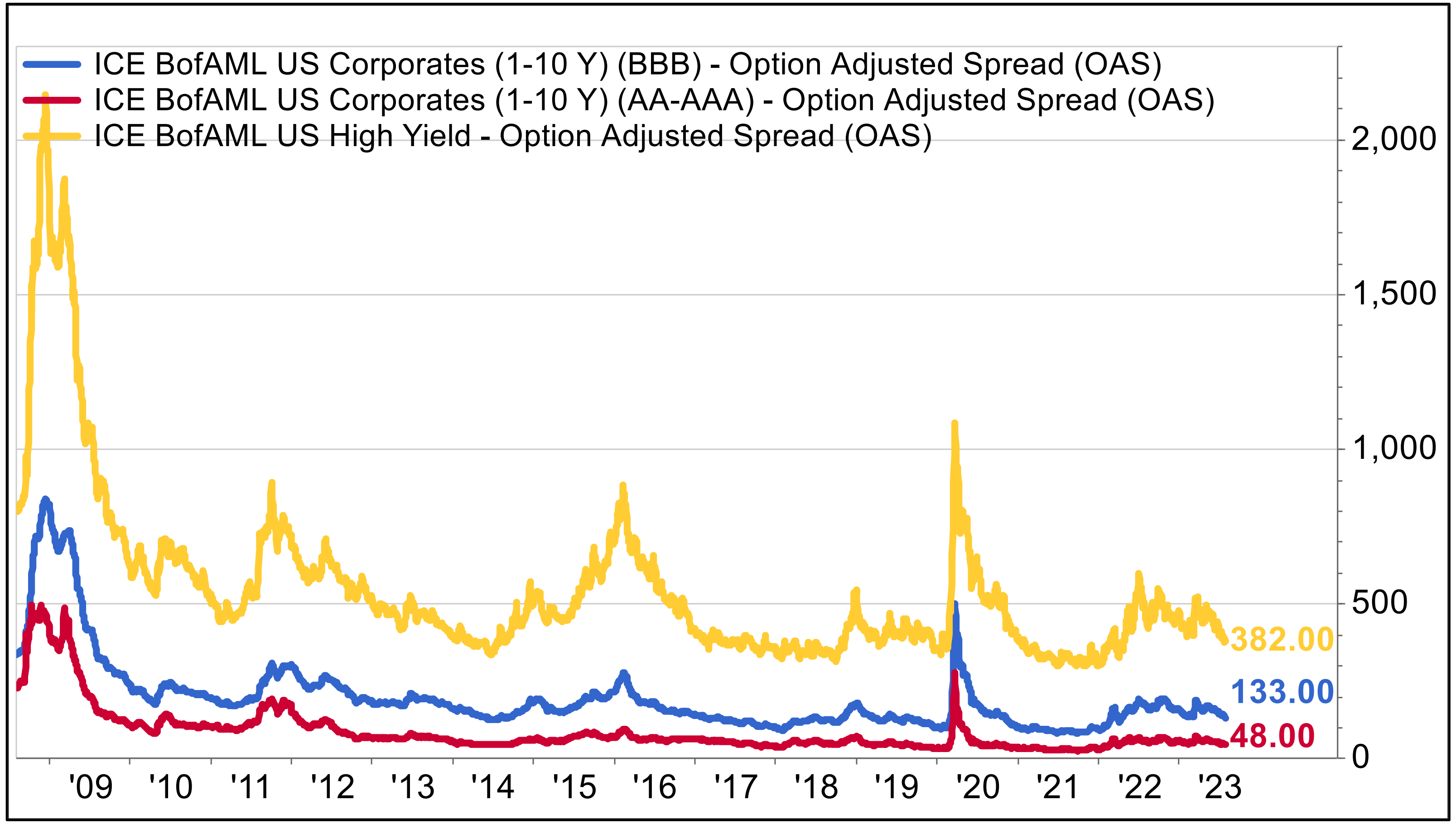

Date Source: FactSet

U.S. High Yield Default Rate Breakdown

(% of Par Value)	2020	2021	2022	May 2023 TTM	2023F
Regions					
U.S./Canada Issuers	5.2	0.5	1.3	1.9	4.5–5.0
Yankee Issuers	6.7	1.6	2.4	4.1	5.0–5.5
All Issuers(a)	5.4	0.7	1.5	2.4	4.5–5.0
Sector					
Broadcasting and Media	1.8	–	4.6	9.1	10
Energy	14	1.5	0.2	0.0	<0.5
Healthcare and Pharma	2.4	–	6.4	9.8	4.0(b)
Leisure and Entertainment	13.5	3.5	–	0.3	8.5
Retail	13.7	–	0.2	3.1	16
Technology	0.5	1.2	1.3	4.3	6.5
Telecom	14.5	0.7	0.1	0.0	10

(a) 83% of the $1.6 trillion index is U.S./Canada. Note: Yankee issuers are domiciled in Latin America.

(b) If Bausch Health files, the rate would reach 15%.

Note: F - Forecast. TTM - Trailing 12-month.
Source: Fitch Ratings U.S. High Yield Default Index.

FitchRatings

Asset Allocation Views – Asset Class

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SUW – Strong underweight; UW – Underweight; N – Neutral; OW – Overweight; SOW – Strong overweight

		CHANGE	SUW	UW	N	OW	SOW	
Asset Class	***Equities***				■			Economic data show signs of resiliency, Inflation rates are trending down, and central bank rate hikes are close to the end. However, valuations, especially in the US are not cheap compared to fixed income assets. Tight monetary policies and recession fears still present headwinds.
	Bonds			■				Elevated inflation rates, though declining, are potential risks to bonds. The Fed hiked rates in July and may hike again in September given the current inflation rate, especailly the core inflation, is still higher than the 2% target.
	Real Assets		■					Declining inflation and economic growth concerns decrease the demand for commodities and real assets. Real estate, especially the office buildings, could present another potential risk. However, geopolitical risks may provide some short-term support to commodity prices.
	Cash						■	Cash offers attractive yields, low duration and a good place for liquidity.

Asset Allocation Views – Regions and Styles

JULEX CAPITAL

SUW – Strong underweight; UW – Underweight; N – Neutral; OW – Overweight; SOW – Strong overweight

		CHANGE	SUW	UW	N	OW	SOW	
Regions and Styles	***U.S.***				■			Consumption, labor market and overall economy still show resiliency and "soft landing" has become a more likely scenario. However, manufacturing continues to contract and other leading indicators like business conditions, new orders and lending conditions have shown weakness. Valuation are still expensive compared to historical average. AI-induced tech rally offers tailwinds.
	International Markets (DM)					■		Valuation is attractive compared to the US. Currencies may appreciate as US dollar has peaked.
	Emerging Markets (EM)					■		Valuation is attractive relative to the US. Local currencies may appreciate further against USD. China may adopt new stimulus measures as its economic recovery stalled.
	U.S. Growth vs. Value			■				Value stocks are cheap compared to historical average and slowing economic growth and higher interest rates also makes the growth stock unattractive. However, the AI boom may offer a tailwind to tech sectors.
	U.S. Small vs. Large-Cap						■	Small-caps offer the cheapest valuation in decades. High quality small cap stocks should provide tremendous upside potential.
	Real Asset Equities		■					Declining inflation and economic growth concerns should put pressure on commodity prices. Higher interest rates and reduced demands for office space are unfavorable for office real estates. However, geopolitical risks may provide some short-term support to commodity prices.

Asset Allocation Views – Bonds

JULEX CAPITAL

SUW – Strong underweight; UW – Underweight; N – Neutral; OW – Overweight; SOW – Strong overweight

		CHANGE	SUW	UW	N	OW	SOW	
Bonds	***U.S. Investment Grade***			■				Corporate balance sheets remain solid, but the elevated inflation rate may last longer, and the FED may continue raising rates and keep interest rates high longer than expected.
	International Bonds			■				International bond yields stay volatile as central banks continue hiking rates to combat inflation.
	U.S. Long-Term Treasury			■				Elevated inflation may last longer than what most investors had expected.
	Inflation-Linked			■				Delining inflation rates may make TIPs unattractive.
	High Yield	↓			■			Spreads are around historical average and default rate remains low but is expected to rise due to higher interest expenses.
	Floating Rate and Bank Loans	↓			■			Spreads are around historical average and default rate remains low but is expected to rise due to higher interest expenses.
	EM Bonds (USD)	↓			■			Yields are still attractive, but higher US dollar may make costs of the interests higher.

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

Inflation, past, present, and future

Friday

August 18th

11:00 a.m. EASTERN

Disclosures

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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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