Interest rates, past, present, and future

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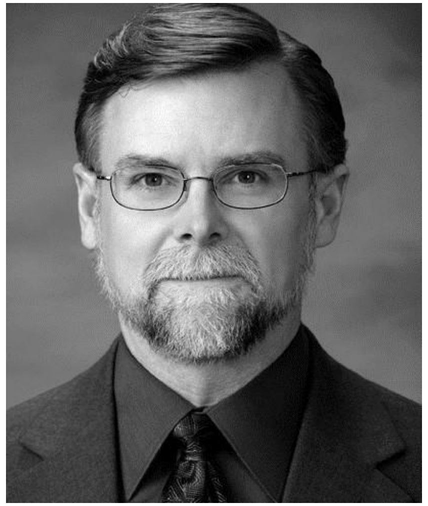

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Interest rates . . . . definitions

- Referring to “real interest rates”
- aka . . . Interest rates after expectations for future inflation has been subtracted out

- Real interest rates = nominal interest rates - expected future inflation

- Stay focused on interest rates for . . . . the 10-year U.S. Treasury bond

Baseline expectations for the future

- **Level off**
  - but with extreme volatility
  - from now through the bottom of the coming recession

- **Then climb upward**
  - for the following “20 years”

Interest rates today

Just go to Bloomberg

Nominal interest rates

Treasury Yields

NAME	COUPON	PRICE	YIELD
GB3:GOV **3 Month**	0.00	5.26	5.41%
GB6:GOV **6 Month**	0.00	5.25	5.48%
GB12:GOV **12 Month**	0.00	5.07	5.36%
GT2:GOV **2 Year**	4.63	99.45	4.92%
GT5:GOV **5 Year**	4.00	99.32	4.15%
GT10:GOV **10 Year**	3.38	95.95	3.87%
GT30:GOV **30 Year**	3.63	94.77	3.92%

Nominal interest rates

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That's a pretty BIG gap !!

Real interest rates

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Treasury Inflation Protected Securities (TIPS)

NAME	COUPON	PRICE	YIELD
GTII5:GOV **5 Year**	1.25	97.22	1.87%
GTII10:GOV **10 Year**	1.38	99.09	1.47%
GTII20:GOV **20 Year**	0.75	85.30	1.68%
GTII30:GOV **30 Year**	1.50	97.73	1.60%

Today . . . The 10-year U.S. Treasury is yielding

- Today at this moment
- The 10-year yield is 1.47%

- Over the long-run . . . . . The <u>average</u> yield is 2.38%

- That's 62% higher than where interest rates stand today (proportionately)

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- Over the long-run . . . . . The average yield is 2.38%

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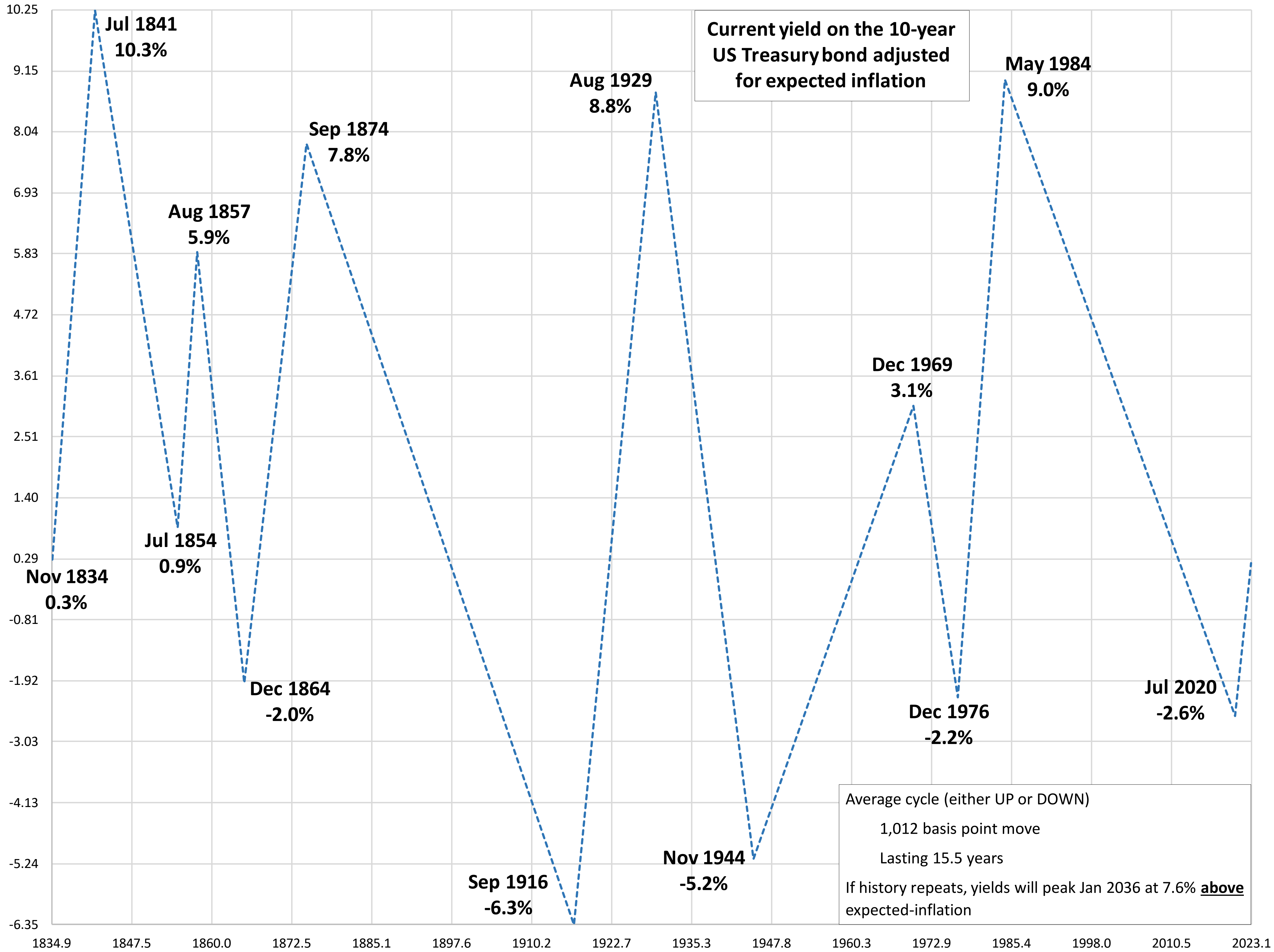
- **Interest rates are far too low today . . . They can't stay this low**

Interest rates over time


Current yield on the 10-year US Treasury bond adjusted for expected inflation
Jul 1841
10.3%
Aug 1857
5.9%
Sep 1874
7.8%
Aug 1929
8.8%
May 1984
9.0%
Dec 1969
3.1%
Nov 1834
0.3%
Jul 1854
0.9%
Dec 1864
-2.0%
Sep 1916
-6.3%
Nov 1944
-5.2%
Dec 1976
-2.2%
Jul 2020
-2.6%
Average cycle (either UP or DOWN)
1,012 basis point move
Lasting 15.5 years
If history repeats, yields will peak Jan 2036 at 7.6% above expected-inflation
10.25
9.15
8.04
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1.40
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-0.81
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-4.13
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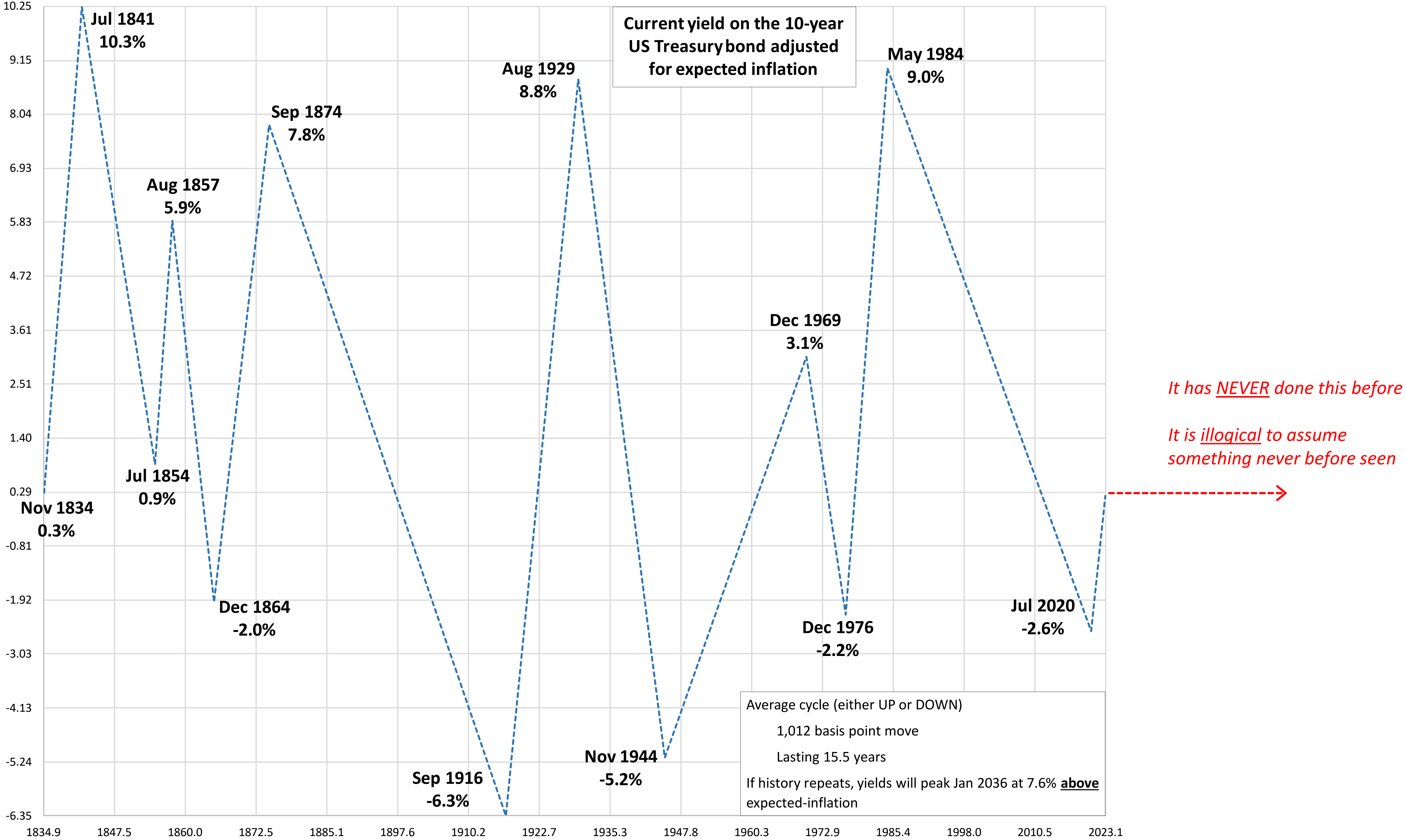
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Jul 2020 -2.6%
It has NEVER done this before
It is illogical to assume something never before seen
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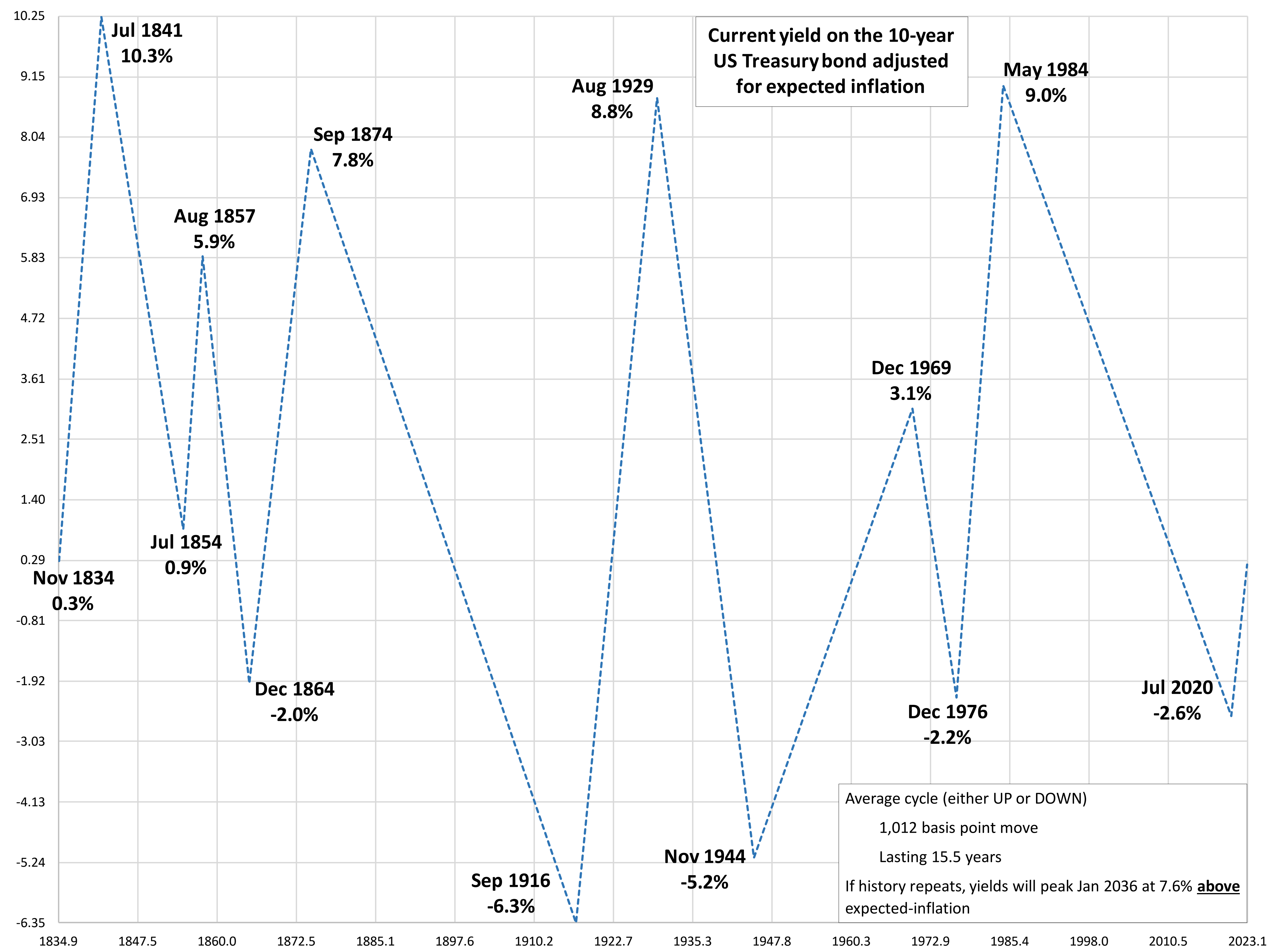

Takeaways . . .

- **Interest rates are <u>never</u> constant**
- **Instead, they're either rising or falling**
- **Interest rates . . . journey through long episodic eras**

Why must interest rates rise?

Over the long-term

A simple obvious thought experiment

- The nominal yield on the 10-year U.S. Treasury is 3.87%
- You're marginal combined state and federal tax rate is 39%
- Inflation is expected to average 2.40% over the next 10 years

- Given these assumptions . . . if you invest in a 10-year U.S. Treasury
- You are guaranteed to lose -0.04% per year . . . every year . . . for ten years

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- This is impossible . . . as a permanent situation
- People don't save/invest in order to guarantee and lock in a loss !!!

A simple obvious thought experiment

- The nominal yield on the 10-year U.S. Treasury is 3.87%
- You're marginal combined state and federal tax rate is 39%
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Interest rates must and will rise . . . significantly

- Given these assumptions .
- You are guaranteed to lose -0.04% per year . . . every year . . . for ten years

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2nd reason why interest rates will rise

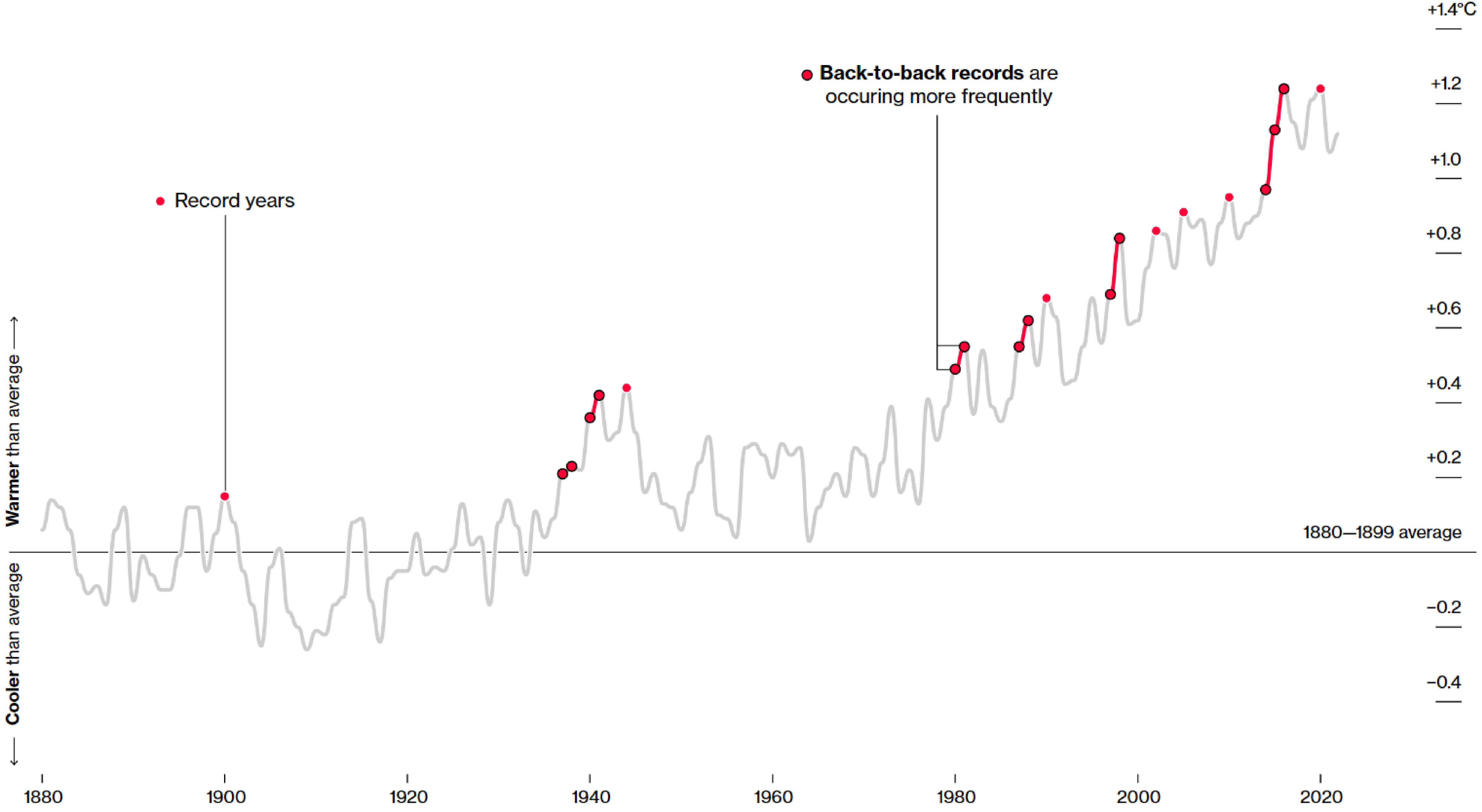
- It's all about funding (paying for) . . . projects . . . that're at play

- Society and governments have several projects that they're attempting to finance
  - Hot war with Russia
  - Cold war with China
  - Conversion from fossil fuels to renewables
  - Income inequality gap
  - Wealth inequality gap
  - Expanding social welfare programs
  - Changing weather patterns
  - Transitioning from one political structure . . . to a different structure
  - Deglobalization

- Funding these projects . . . drives interest rates higher

Rising Heat

Average annual global temperature deviation from 1880—1899 average



Source: NASA GISS Surface Temperature Analysis

Politics

- Just stop
- Just stop
- This has absolutely zero to do with which political party gains dominance
- The forces at play are <u>far far</u> larger than any political differences . . . which honestly are trivial

Review

The path forward

Baseline expectations for the future

- **Level off**
  - but with extreme volatility
  - from now through the bottom of the coming recession

- **Then climb upward**
  - for the following “20 years”
  - Ok . . . maybe just 10-15 years

What's to be done

- The old irrelevant approach is dead . . . For goodness sake, just admit it's dead
  - MPT - Modern Portfolio Theory
  - Mean variance optimization
  - 60/40 portfolio
  - See the very nice piece on this by GMO . . . out of Boston

- What works . . . What's needed
  - Tactical asset allocation (TAA)
  - Serious, institutional, well-structured . . . alternative investments . . . If it's offered at a B/D it won't work

What's to be done

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  - MPT - Modern Portfolio Theory
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Julex has an article on their website addressing this point (soon to appear in *The Journal of Investing*)

- Wh
  - a B/D it <u>won't</u> work

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Does the Federal Reserve determine interest rates

Friday

August 4th

11:00 a.m. EASTERN

Important Disclosures

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