

INTEREST RATES TAKE CENTER STAGE: FRAMING AND PERSPECTIVE

Higher rates, lower value?

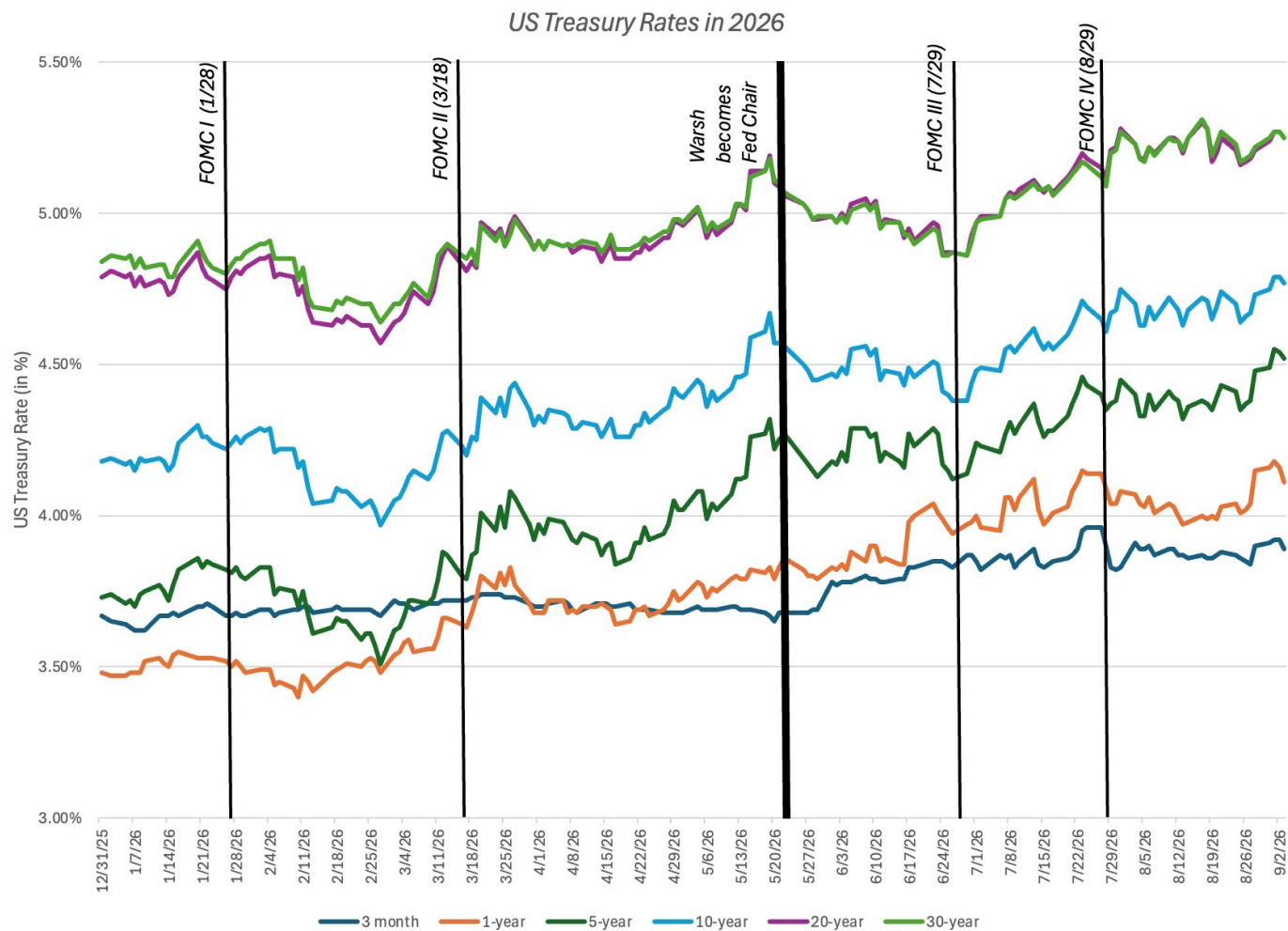
INTEREST RATES TAKE CENTER STAGE!

- In the last few weeks, interest rate worries have come up to the surface again, for three reasons, all related.
 - The first is the **rise in long-term US treasury rates**, especially the long-term treasuries to levels not seen in twenty years.
 - The second is **US debt exceeding \$40 trillion** for the first time, bringing attention to a long-standing worry that this debt burden may be too high.
 - The third is that the **Federal Reserve has a new chair in Kevin Warsh**, and for the many Fed Watchers out there, who are uncertain about where he plans to lead the Fed, the FOMC meeting coming up in mid-September looms larger than ever.
- I hope to step back from the day-to-day coverage of US treasury yields and look at not only **how they have performed in 2026, and put that performance in longer term perspective**, but also examine movements in long term yields in government bonds in other currencies.
- I also intend to revisit a discussion that I initiated in 2022, when interest rates were the central act in markets, **about the relationship between interest rates and stock prices**, and why higher rates do not always translate into lower stock prices, and why that effect varies across sectors and companies.

GOVERNMENT BORROWING RATES

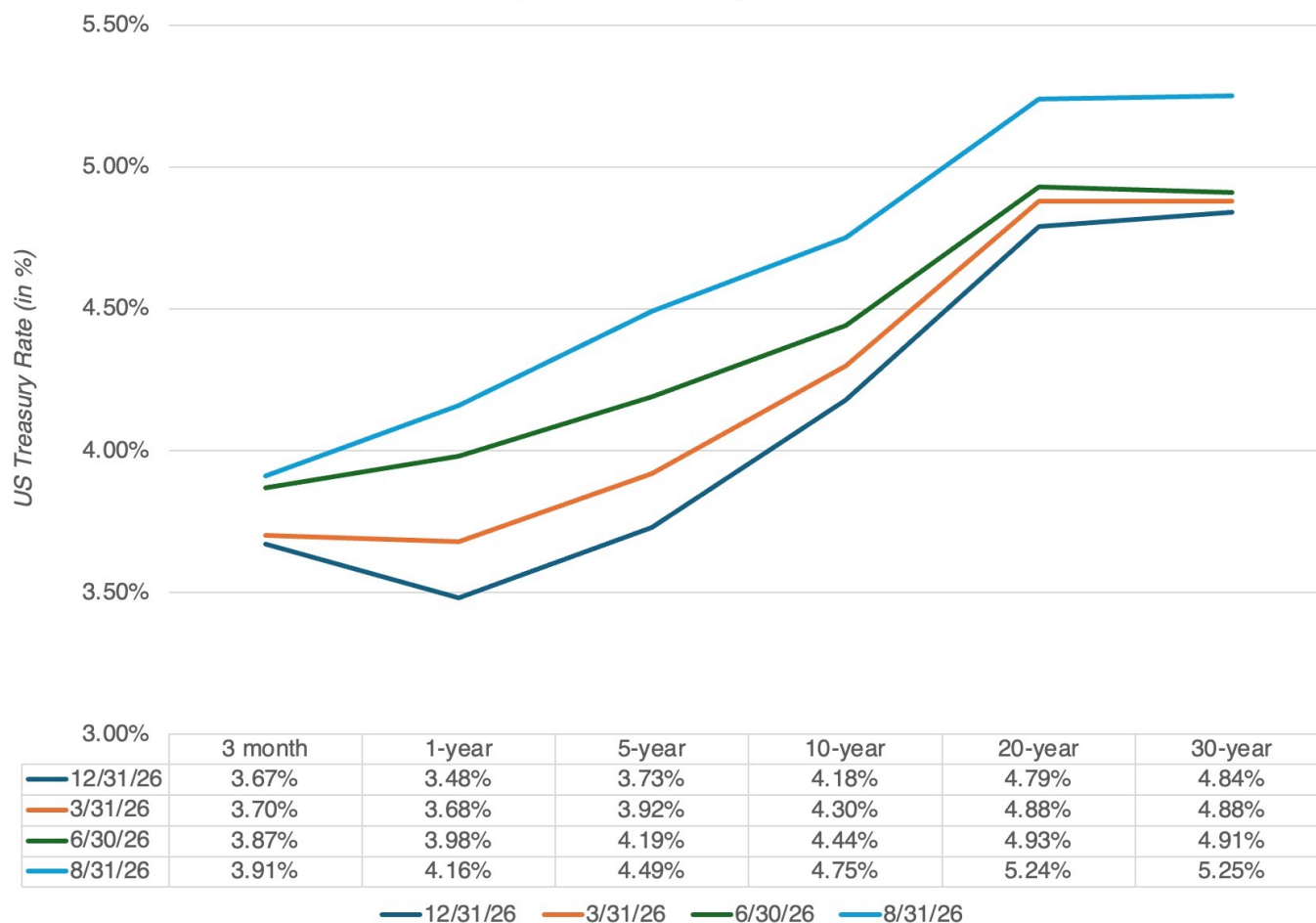
- **Governments borrow money** and often do so by issuing bonds in financial markets.
- The **rates on these bonds reflect the concerns that lenders have about the purchasing power of the currencies** that they are issued in, and government bond rates, for better or worse, become indicators that drive day-to-day market movements in almost all asset classes.
- I will begin with an **examination of US treasury rates** before expanding the discussion to government bond rates in other currencies.

US TREASURIES IN 2026



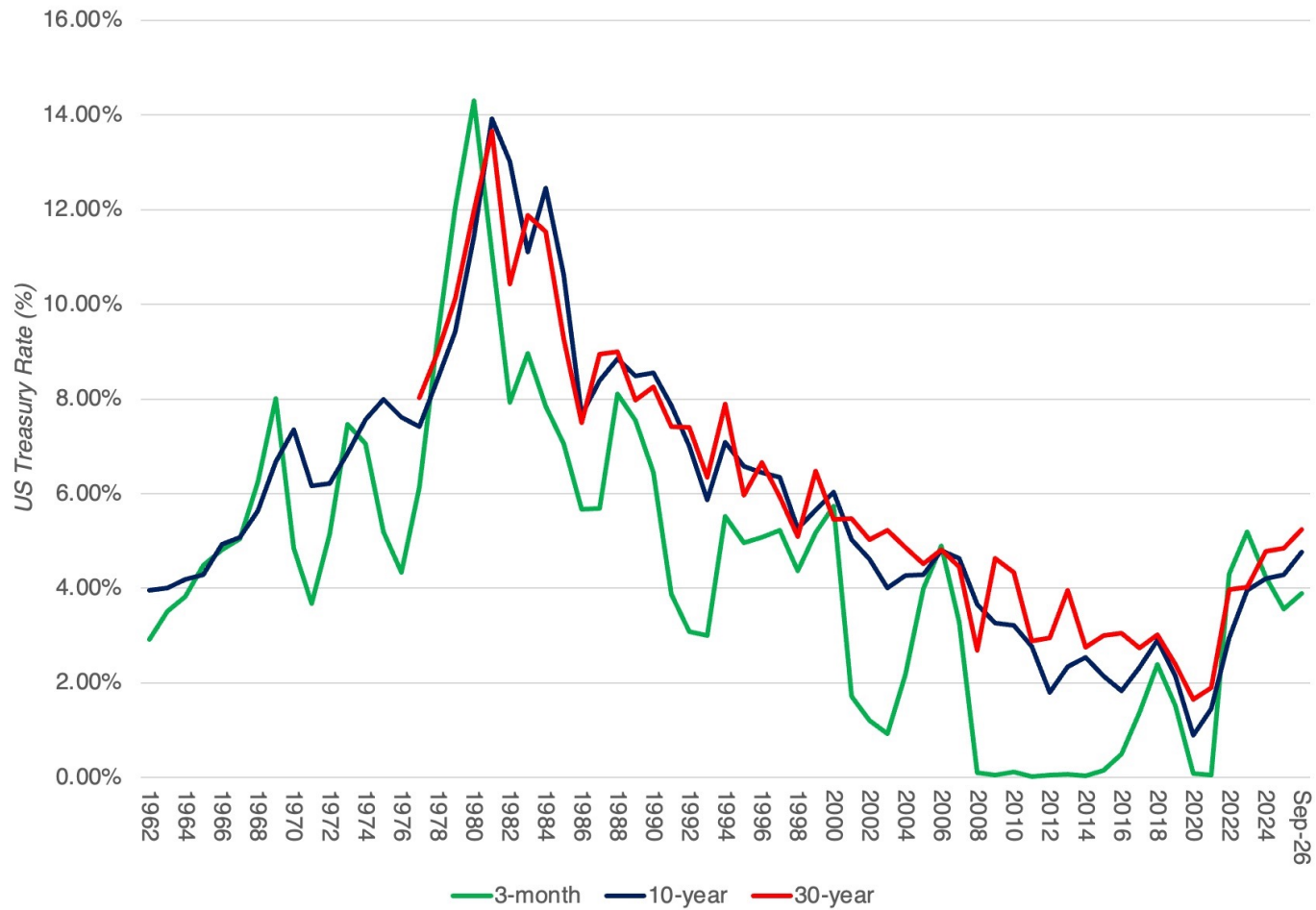
WITH YIELD CURVE IMPLICATIONS

US Treasury Yield Curves: By Quarter in 2026

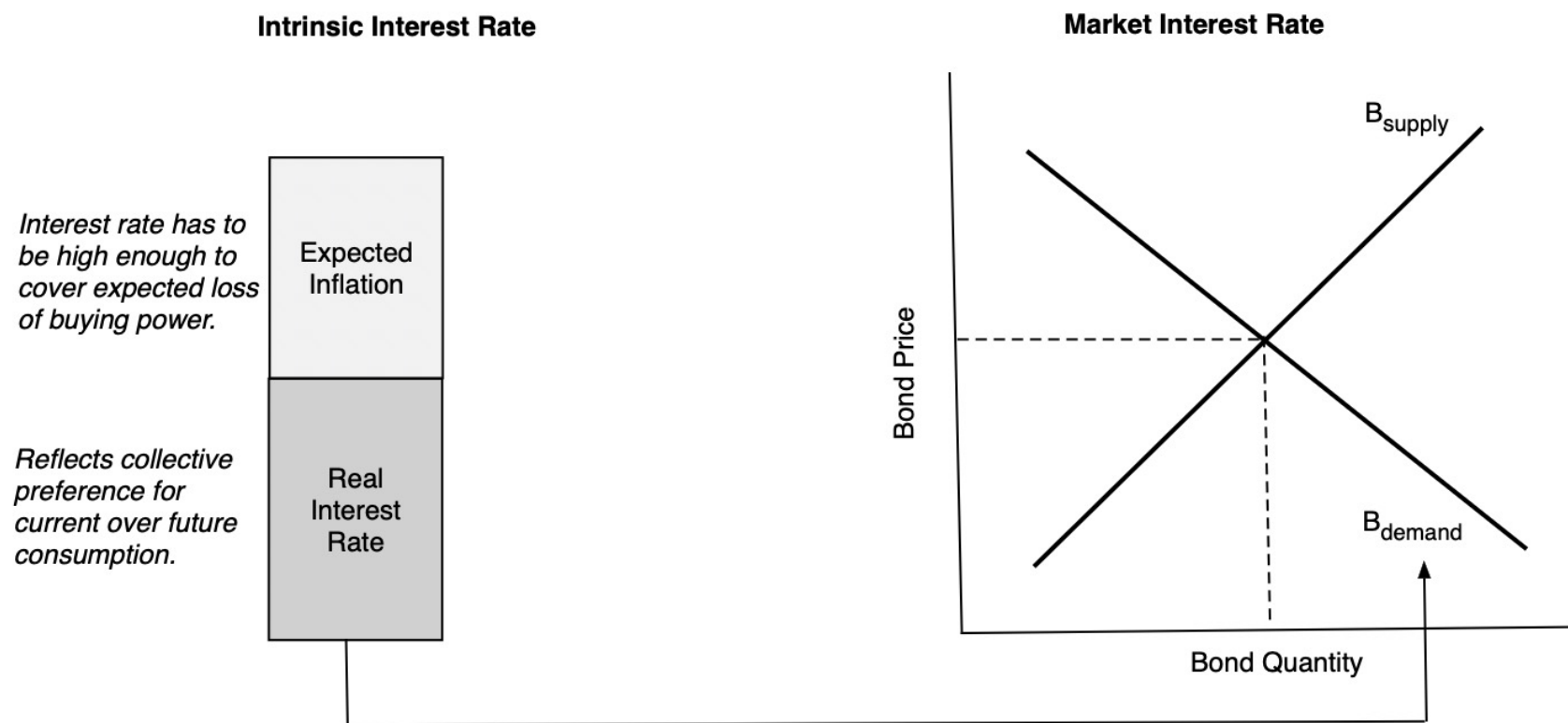


A LONGER-TERM PERSPECTIVE ON US TREASURIES!

US Treasuries: Annual Year-end Values from 1962 to 2026

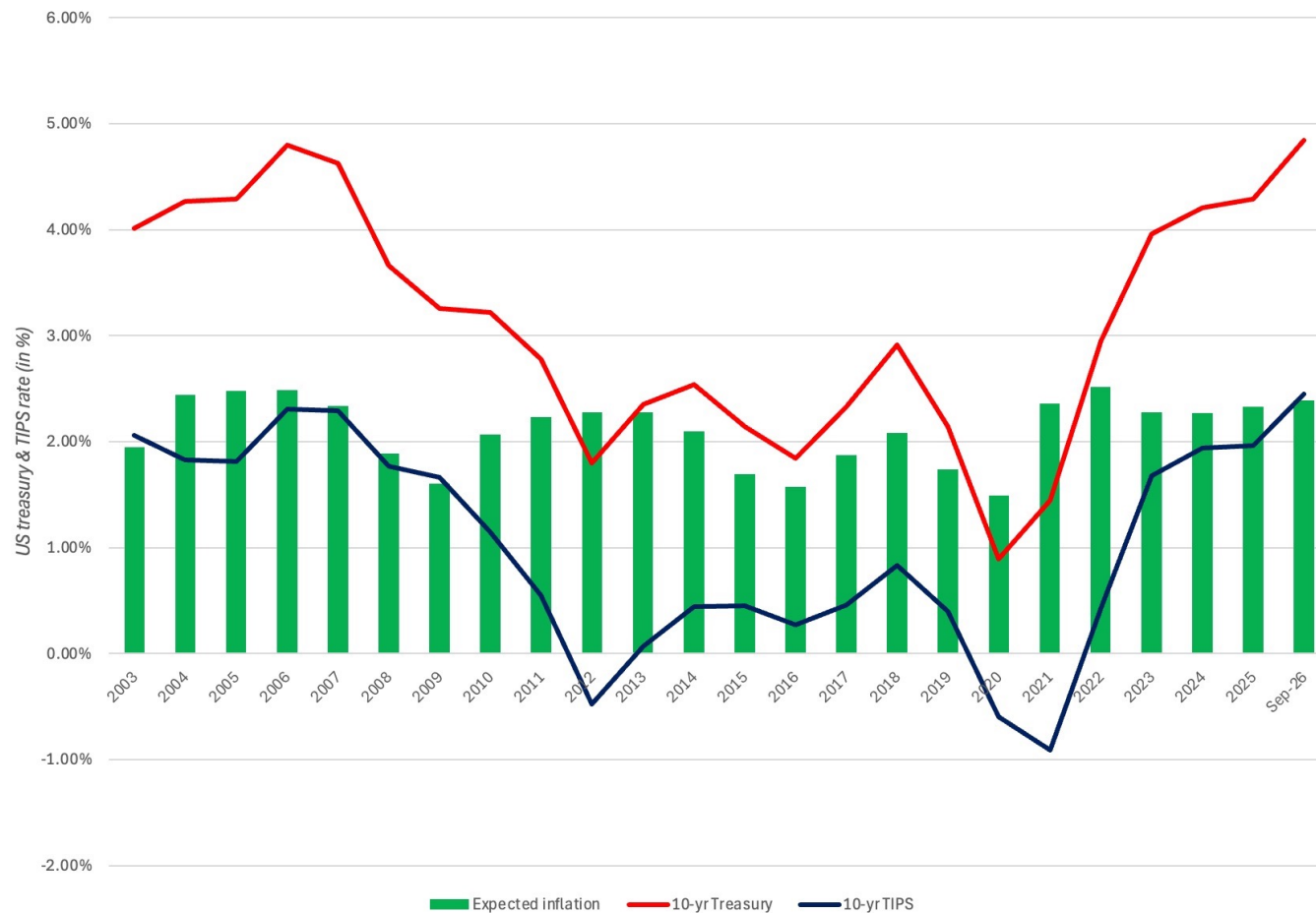


THE FUNDAMENTALS THAT DRIVE RATES!



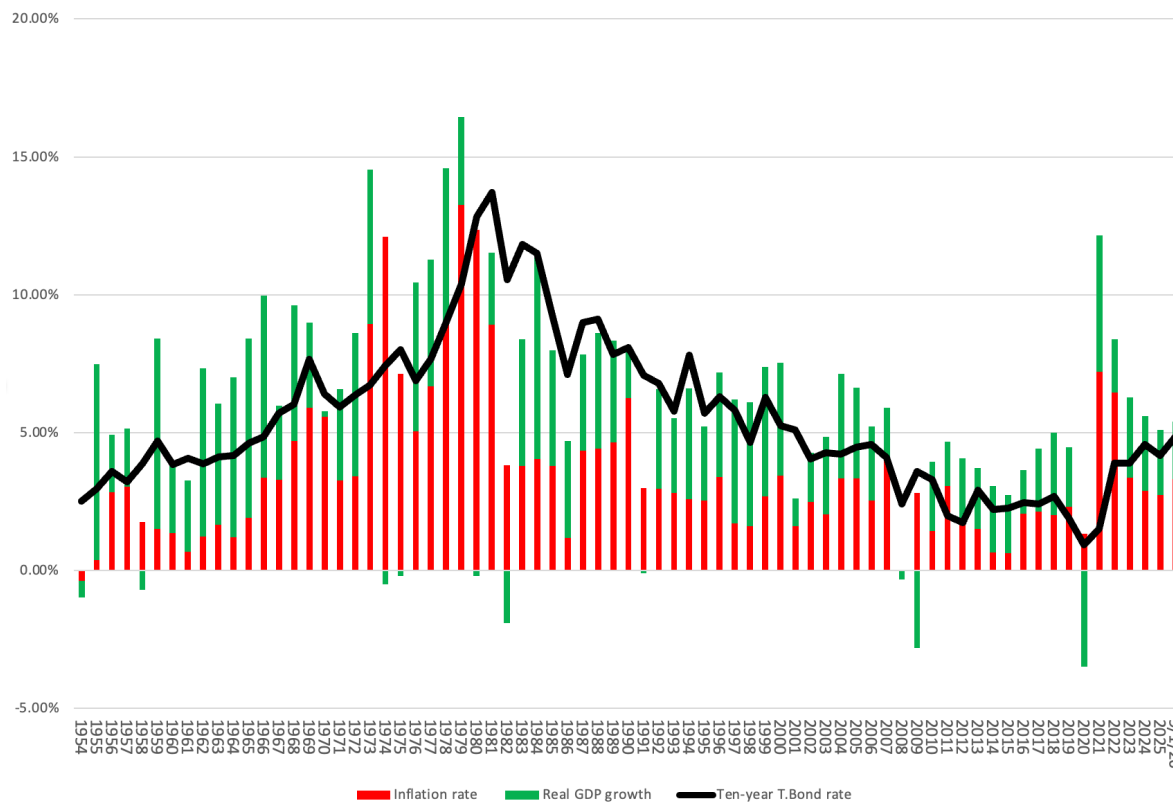
EXPECTED INFLATION IN THE US: A MARKET-BASED ESTIMATE

US 10-year Treasury & TIPS Rates: 2003 - 2026



INTRINSIC VS ACTUAL RATES

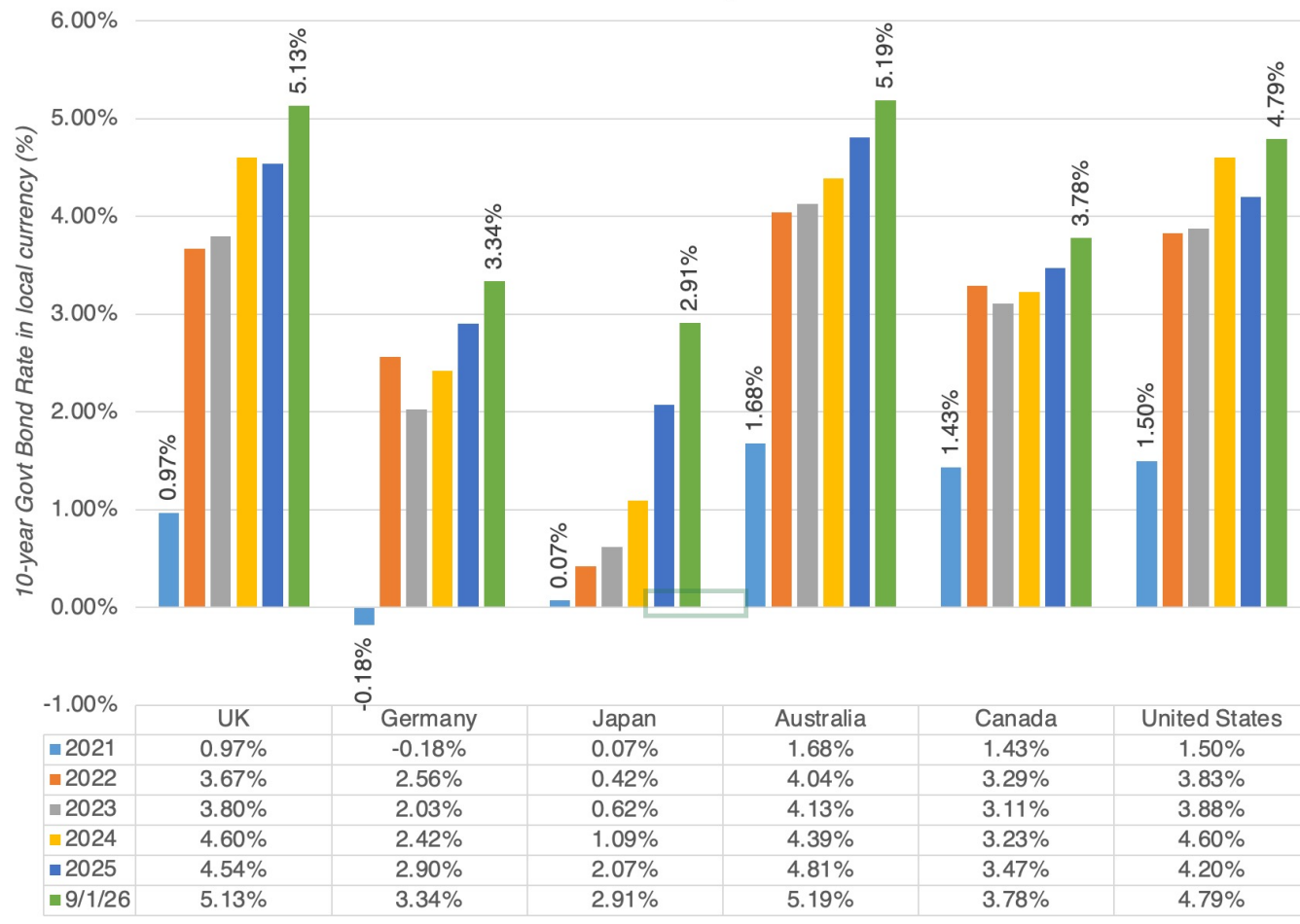
T.Bond Rate - Actual versus Intrinsic: 1954- September 2026



Year end	Ten-year T.Bond rate	Inflation rate	Real GDP growth	Intrinsic riskfree rate	Intrinsic - T.Bond Rate
1954-2025	5.50%	3.57%	2.92%	6.48%	-0.98%
1954-1980	5.83%	4.49%	3.50%	7.98%	-2.15%
1981-2008	6.88%	3.26%	3.04%	6.30%	0.58%
2009-2020	2.36%	1.81%	1.32%	3.13%	-0.77%
2021-2025	3.61%	4.52%	2.98%	7.50%	-3.90%
1954-2025	5.50%	3.57%	2.92%	6.48%	-0.98%
9/1/26	4.84%	3.31%	2.10%	5.41%	-0.57%

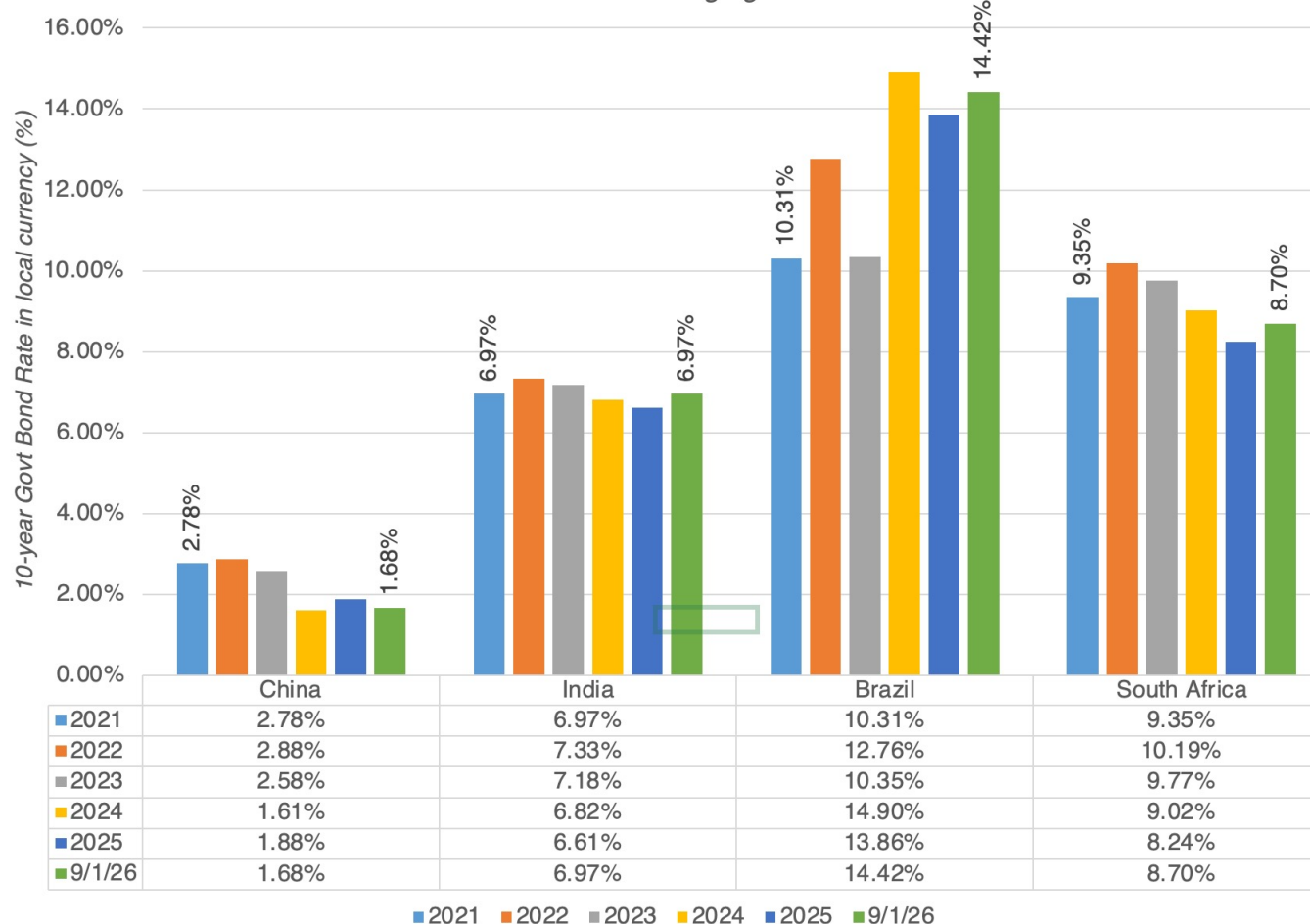
NOT JUST THE US: RATES IN MAJOR CURRENCIES!

Government Bond Rates - "Developed" Market Currencies



IN OTHER CURRENCIES!

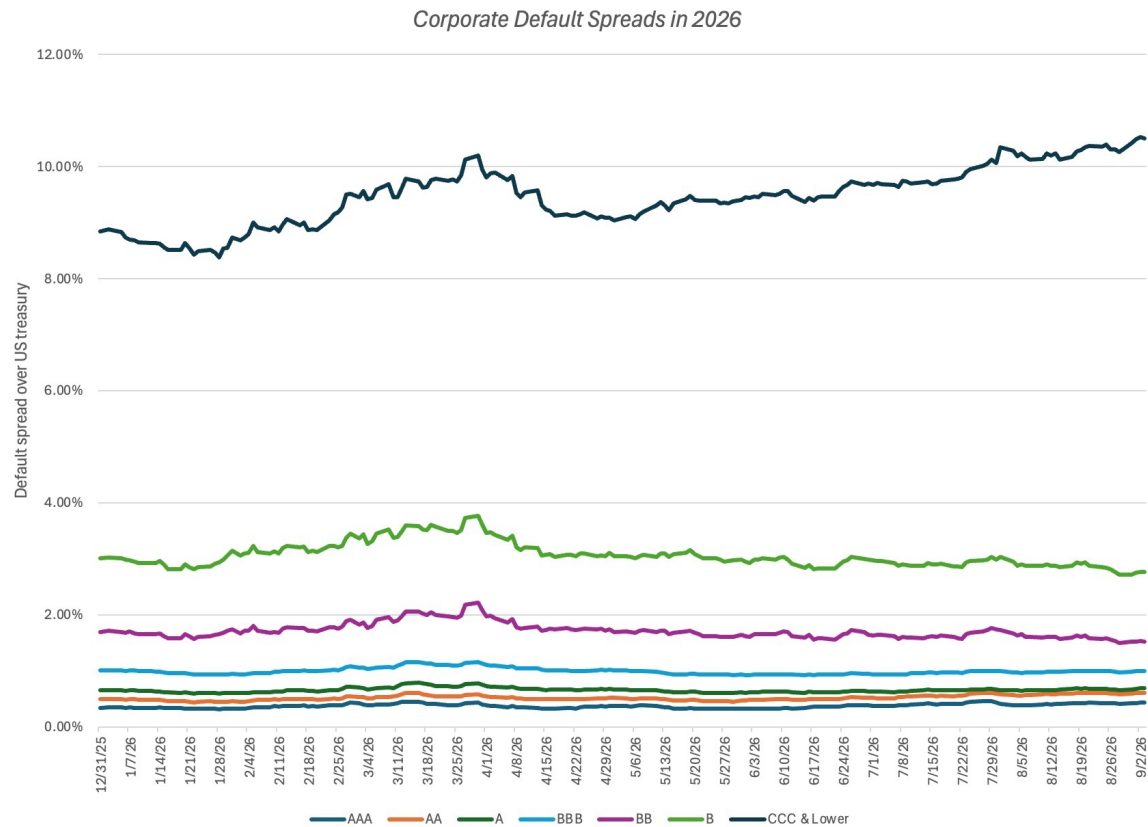
Government Bond Rates: "Emerging" Market Governments



INTEREST RATE RIPPLE EFFECTS

- Changes in government bond rates clearly play out in the **pricing of government bonds**, and returns you will earn on them, but the ripple effects play out across the rest of the market (financial and real).
- I will start with the **corporate bond market**, where the interest rate effect is dominant, before looking at **equities**, where interest rate effects are more nuanced and at real assets, where the effects can be indirect.

I. CORPORATE BOND RATES: DEFAULT SPREADS!



Date	AAA	AA	A	BBB	BB	B	CCC & Lower
12/31/26	0.34%	0.49%	0.65%	1.01%	1.69%	3.01%	8.85%
3/31/26	0.40%	0.56%	0.75%	1.13%	2.08%	3.61%	9.94%
6/30/26	0.38%	0.52%	0.63%	0.95%	1.64%	2.99%	9.70%
8/31/26	0.42%	0.59%	0.67%	0.98%	1.52%	2.72%	10.42%
Change in 2026	0.08%	0.10%	0.02%	-0.03%	-0.17%	-0.29%	1.57%

BOND PRICING EFFECTS!

Date	US 10-year	AAA	AA	A	BBB	BB	B	CCC & Lower
Coupon yield	4.18%	4.52%	4.67%	4.83%	5.19%	5.87%	7.19%	13.03%
Price change	-4.46%	-4.98%	-5.09%	-4.46%	-4.03%	-2.91%	-1.92%	-10.67%
Total Return	-0.28%	-0.46%	-0.42%	0.37%	1.16%	2.96%	5.27%	2.36%

II. STOCK PRICES: MUDDYING THE VALUE EFFECT?

Discount Rates and Value

Generic Version

$$\text{Present Value} = \sum_{t=1}^{t=N} \frac{\text{Expected Cashflow}_t}{(1+r)^t}$$

When cashflows are fixed (contractually set), as is the case with a coupon bond, value will always decrease as the discount rate rises:

$$\text{Present Value} \downarrow = \sum_{t=1}^{t=N} \frac{\text{Expected Cashflow}_t}{(1+r \uparrow)^t}$$

When cashflows are residual, and can change as discount rates change, as is the case with equities, the value can increase, decrease or remain unchanged as discount rates rise:

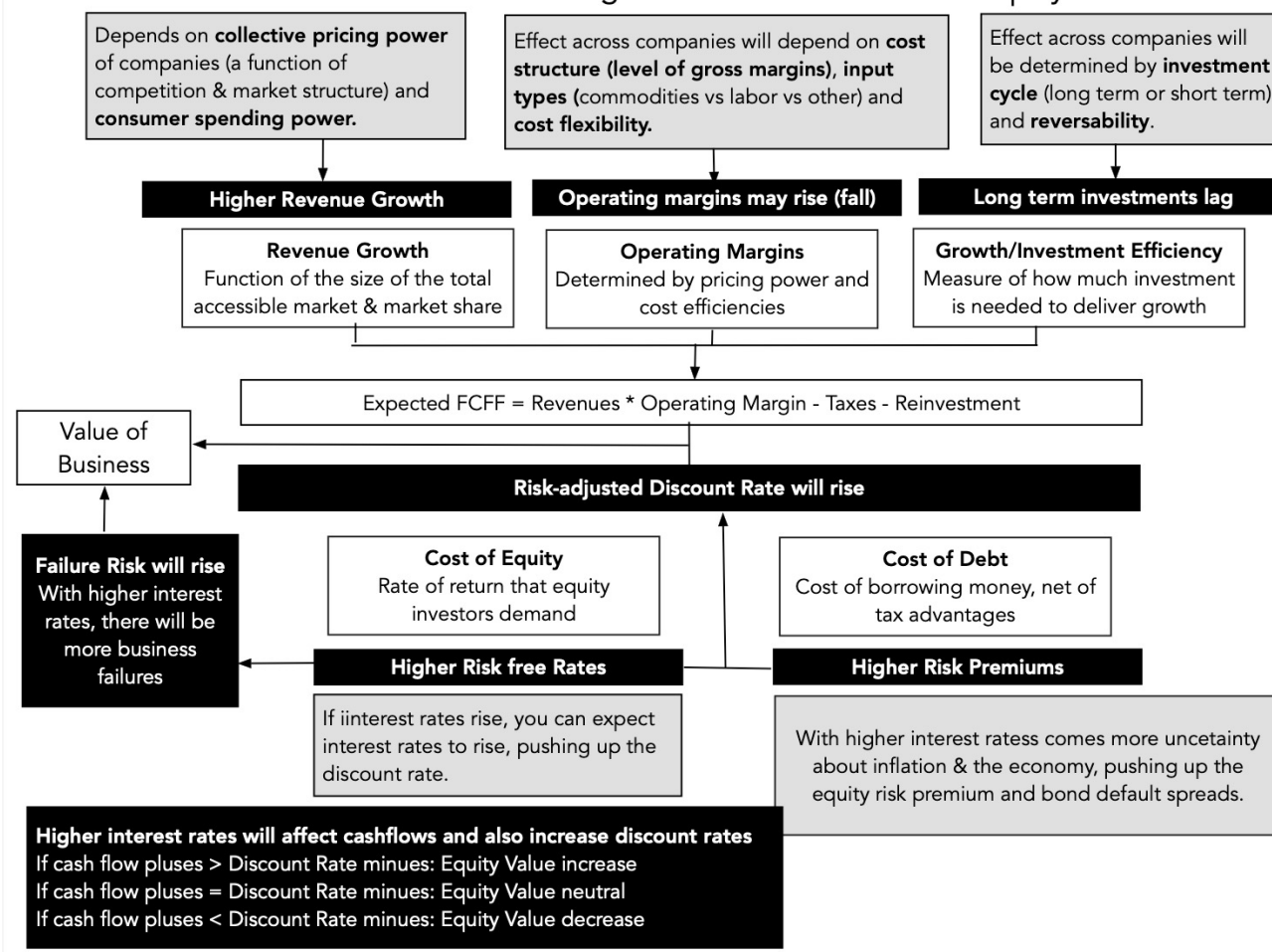
$$\text{Present Value} \uparrow \text{ or } \downarrow = \sum_{t=1}^{t=N} \frac{\text{Expected Cashflow}_t \uparrow \text{ or } \downarrow}{(1+r \uparrow)^t}$$

EQUITY VALUE AND INTEREST RATES: BREAKING DOWN THE CASH FLOW EFFECT

- With **revenues**, the key determinants of how higher interest rates play out in value will depend first on why interest rates rose in the first place (higher inflation or higher real rates), and if it is higher inflation, **how much pricing power a business has to pass through that inflation to its customers.**
- With earnings, the question is how **higher interest rates play out in profit margins**, through their effects on costs of goods sold (gross), other operating expenses (operating) and interest expenses (net).
- When **interest rates rise, and that rise is due more to real rates rising rather than inflation going up, businesses can scale back reinvestment**, since fewer investments will generate the returns needed to pass muster. This reduction in reinvestment can increase near-term cashflows, at the expense of future growth.

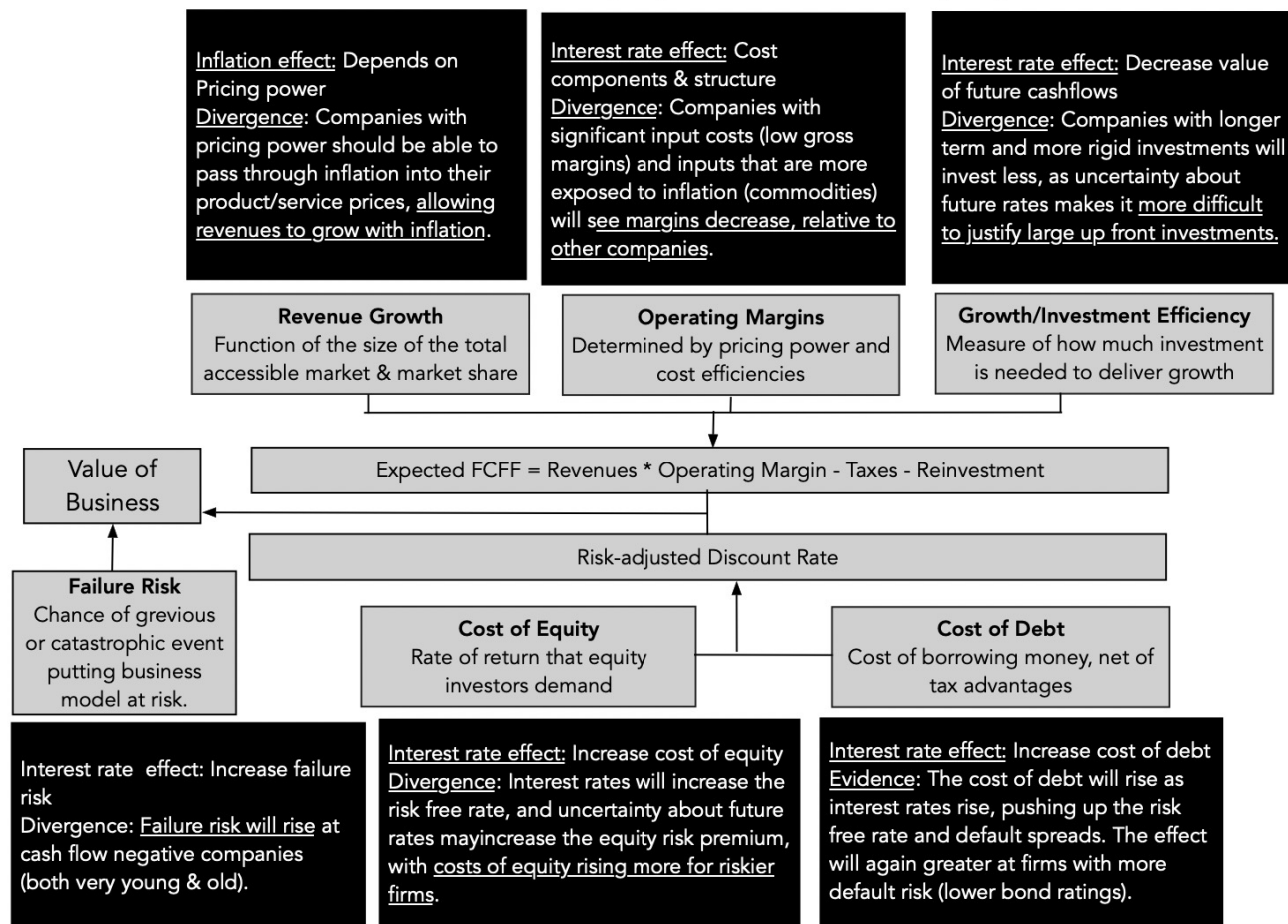
INTEREST RATES AND AGGREGATE EQUITY VALUE

Effects of Increasing Interest Rates on Overall Equity Value



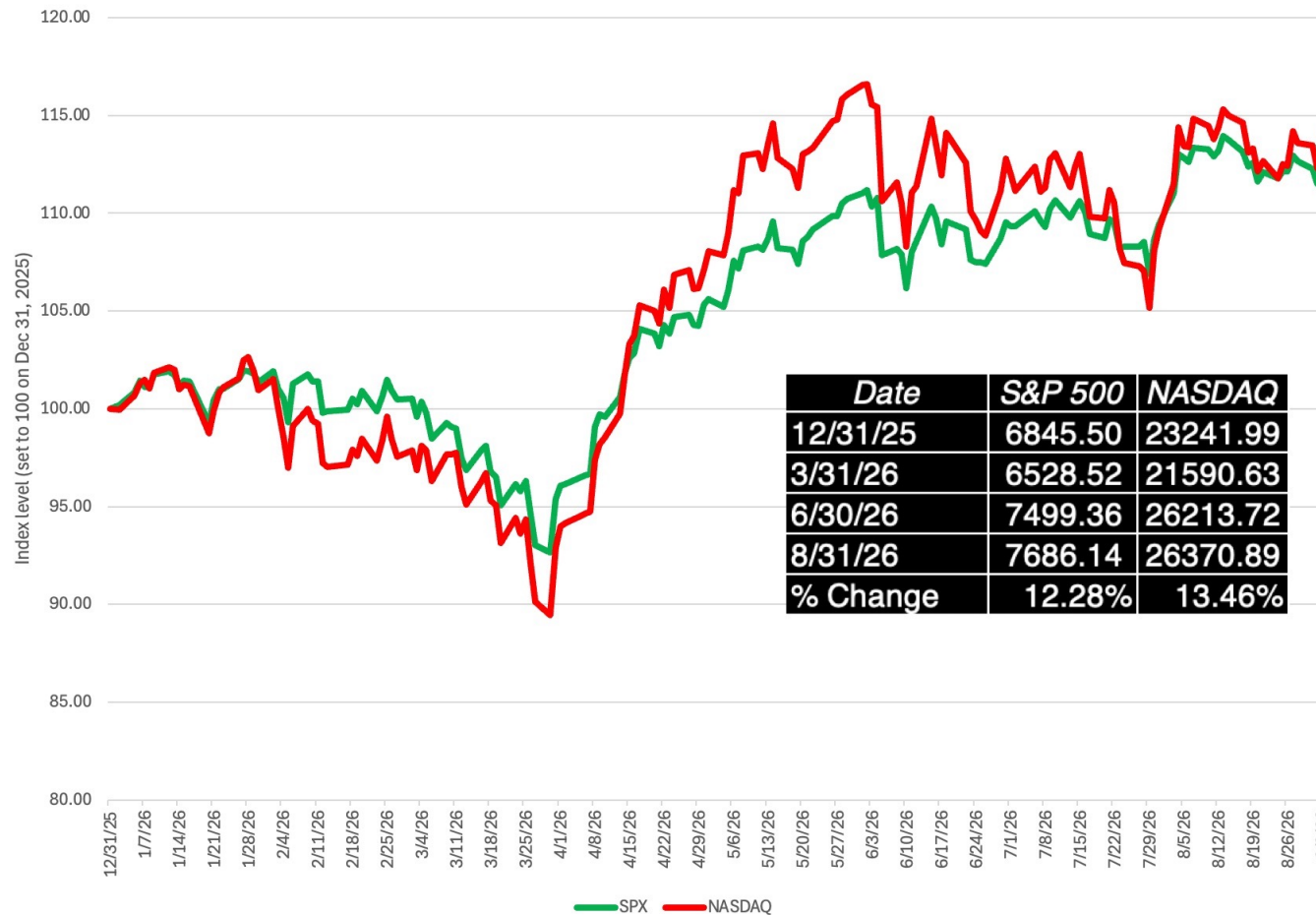
INTEREST RATES AND COMPANY VALUE

Interest Rates and Equity Value: Cross Company effects



US EQUITIES IN 2026

US Equities in 2026: S&P 500 and NASDAQ

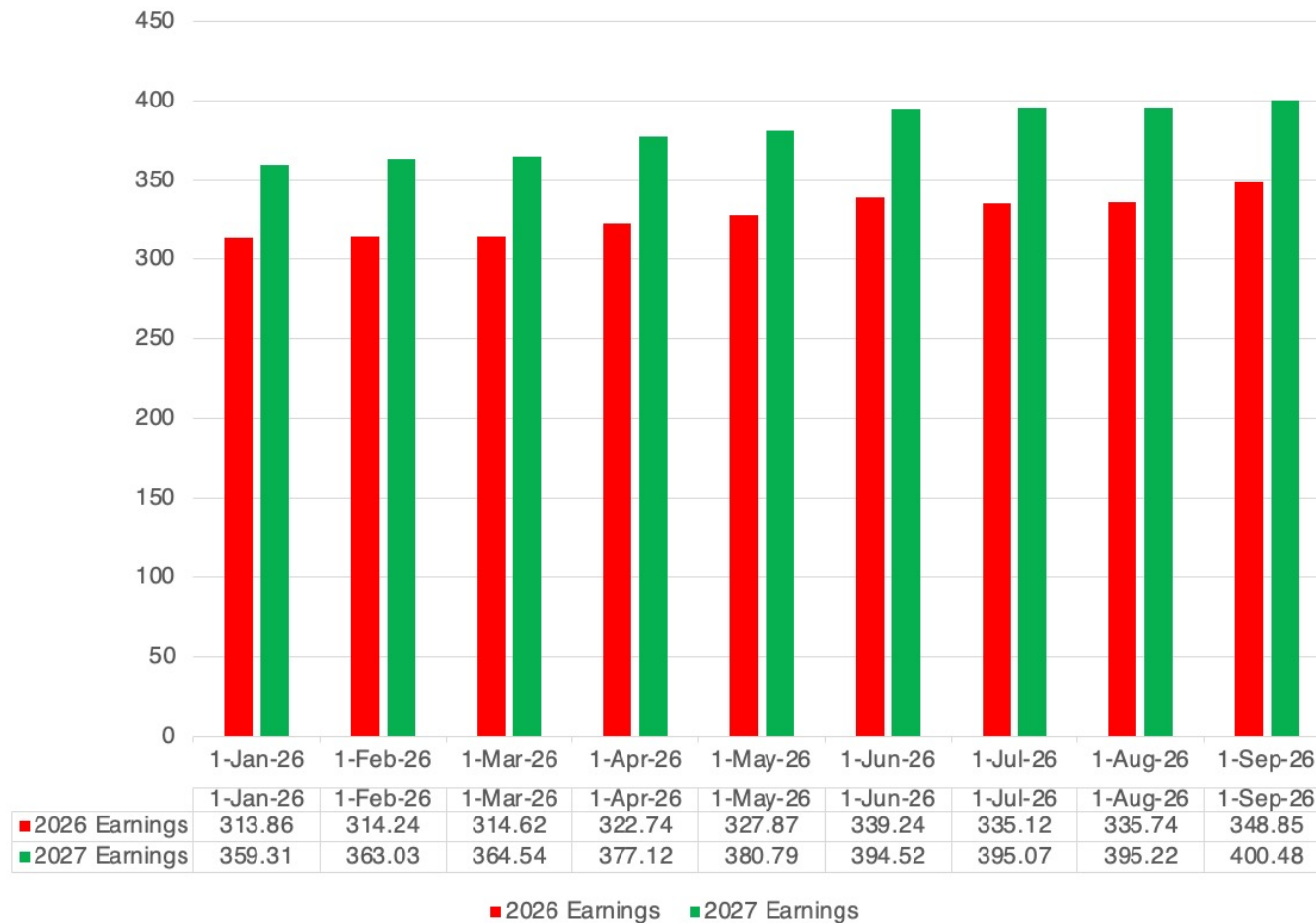


STOCKS AND US TREASURY RATES IN 2026

<i>US 10-year treasury yield Day Change in 2026</i>	<i># days in 2026</i>	<i>S&P 500 Return on day</i>
10-yr Rate up >3 basis points	42	-0.52%
10-yr Rate up, 0-3 basis points	42	0.11%
10-yr Rate down, 0-3 basis points	42	0.20%
10-yr Rate down >3 basis points	31	0.53%
Rates unchanged	12	0.46%
Grand Total	169	0.08%

THE SECRET SAUCE FOR EQUITY RESILIENCE

S&P 500 Consensus Earnings Estimates, by month in 2026



CROSS COMPANY DIFFERENCES — SECTORS (US)

Sector	# firms	Aggregate Market Capitalization			Across companies				
		12/31/25	8/31/26	% Change	% Up	% Down	1st Quartile	Median	3rd Quartile
Communication Services	296	\$7,666,668	\$7,694,402	0.36%	33.78%	66.22%	-35.86%	-8.90%	24.96%
Consumer Discretionary	553	\$7,521,507	\$7,648,841	1.69%	43.04%	56.96%	-23.84%	-1.46%	23.83%
Consumer Staples	279	\$3,525,540	\$3,758,719	6.61%	36.56%	63.44%	-41.03%	-6.57%	16.21%
Energy	292	\$2,266,280	\$3,183,063	40.45%	66.10%	33.90%	0.00%	26.77%	63.48%
Financials	1,124	\$9,857,580	\$10,287,129	4.36%	67.97%	32.03%	-1.35%	11.96%	28.88%
Health Care	1,139	\$6,822,820	\$7,691,838	12.74%	49.96%	50.04%	-30.96%	2.80%	54.69%
Industrials	779	\$6,220,727	\$6,859,345	10.27%	50.58%	49.42%	-19.44%	3.28%	31.49%
Information Technology	696	\$21,581,259	\$27,025,006	25.22%	51.29%	48.71%	-25.79%	7.75%	61.71%
Materials	267	\$1,229,440	\$1,493,524	21.48%	52.43%	47.57%	-17.27%	5.24%	32.12%
Real Estate	228	\$1,544,759	\$1,686,354	9.17%	61.40%	38.60%	-9.99%	8.55%	22.05%
Utilities	88	\$1,497,359	\$1,534,797	2.50%	68.18%	31.82%	-4.03%	5.25%	10.68%
All US firms	5,741	\$69,733,940	\$78,863,019	13.09%	53.25%	46.75%	-20.42%	5.24%	34.09%

REGIONAL DIFFERENCES

Sub Region	# firms	Aggregate Market Capitalization			Across companies				
		12/31/25	8/31/26	% Change	% Up	% Down	1st Quartile	Median	3rd Quartile
Africa and Middle East	2,594	\$5,446,497	\$5,885,302	8.06%	52.78%	47.22%	-11.00%	3.05%	27.59%
Australia & NZ	1,676	\$2,105,157	\$2,326,970	10.54%	46.24%	53.76%	-27.24%	-2.20%	25.68%
Canada	2,387	\$3,820,342	\$4,331,234	13.37%	48.43%	51.57%	-24.87%	2.93%	46.85%
China	7,887	\$21,396,280	\$21,450,584	0.25%	35.13%	64.87%	-23.33%	-8.87%	11.36%
EU & Environs	5,820	\$19,593,636	\$20,689,865	5.59%	43.47%	56.53%	-18.79%	-1.95%	18.90%
Eastern Europe & Russia	309	\$181,329	\$237,384	30.91%	50.16%	49.84%	-14.24%	3.26%	21.69%
India	5,100	\$5,332,695	\$5,088,397	-4.58%	36.29%	63.71%	-26.06%	-10.17%	14.69%
Japan	3,864	\$7,379,725	\$8,803,505	19.29%	58.26%	41.74%	-7.28%	3.38%	20.29%
Latin America & Caribbean	1,165	\$2,742,305	\$2,969,695	8.29%	43.52%	56.48%	-17.54%	0.00%	19.03%
Small Asia	10,282	\$9,441,969	\$13,086,943	38.60%	41.81%	58.19%	-19.92%	-4.45%	15.96%
UK	1,040	\$4,120,039	\$4,621,547	12.17%	49.33%	50.67%	-17.28%	2.49%	26.02%
United States	5,741	\$69,733,940	\$78,863,019	13.09%	53.25%	46.75%	-20.42%	5.24%	34.09%
All firms	47,865	\$151,294,454	\$168,355,032	11.28%	44.36%	55.64%	-20.00%	-2.40%	20.70%

CONCLUSION

- As we get closer to the FOMC meeting date, it is likely that there will more talk about interest rates, and **what the Fed can or cannot do**. Much of that **debate is pointless**, since the pathway of rates is and will continue to be set by fundamentals.
- In fact, the **ten-year US treasury rate has been stuck in a fairly tight range, between 4% and 5%, since 2022**, and that is largely because expected inflation has settled in at about 2.5%. For rates to change significantly, up or down, there has to be a break in inflation expectations, to the up or downside, and there is little that Kevin Warsh or Scott Bessent can do to alter that trajectory.
- As to how equity markets and businesses are dealing with higher rates, the pain from moving from a low-rate to a high-rate world was most acutely felt in 2022, and **both have adapted quickly to the new environment, with businesses finding ways to deliver higher earnings in the face of higher rates, and markets pricing in these earnings to deliver solid returns**. There are multiple links in that chain, and each one will be tested, with the third quarter earnings reports coming up in the next few weeks being the first test.