



Interest

How it Affects Everything Everywhere All at Once

William J. Trainor Jr., Ph.D., CFA
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10-Year Treasury Yield, Jan. 1871 to March 2023



At all times, in all markets, in all parts of the world, the tiniest change in rates changes the value of every financial asset.”
Warren Buffett

Imbibe or save...



A roman soldier is contemplating saving one denarii instead of going to the pub in year zero (although not defined as such at the time). Assuming you could find a bank to last 2023 years, at 3% interest, how much would that be worth today?



If only your ancestor didn't go to the pub...



Now worth \$90,545,809,100,365,500,000,000,000 or
around \$90 septillion.

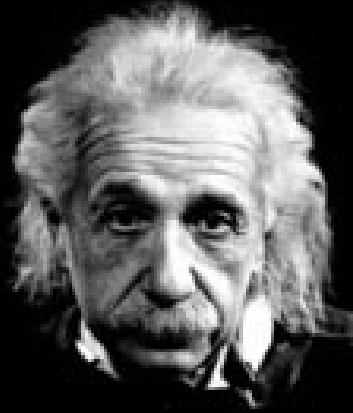
That's approximately \$11 quadrillion for every person on the planet.

However, if it was invested in a cheap bank at 1%, only worth \$552 million.



COMPOUND INTEREST IS THE EIGHTH WONDER OF THE WORLD

He who
understands it ...
earns it



He who doesn't ...
pays it

-Albert Einstein



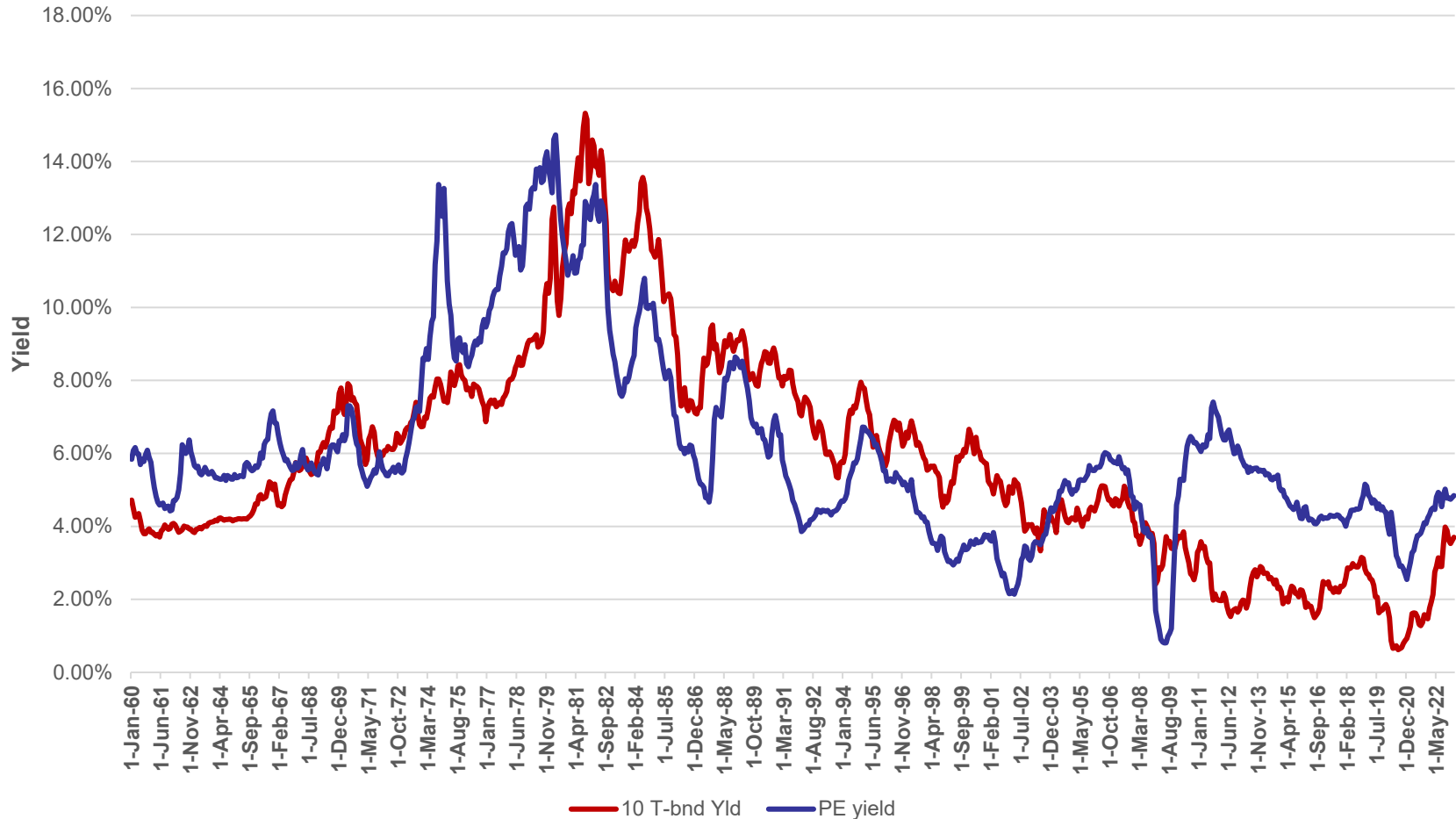
Yields and PEs



are highly related



10-yr T-note Yield vs Earnings Yield (1/PE)



TINA Arrived in late 2008

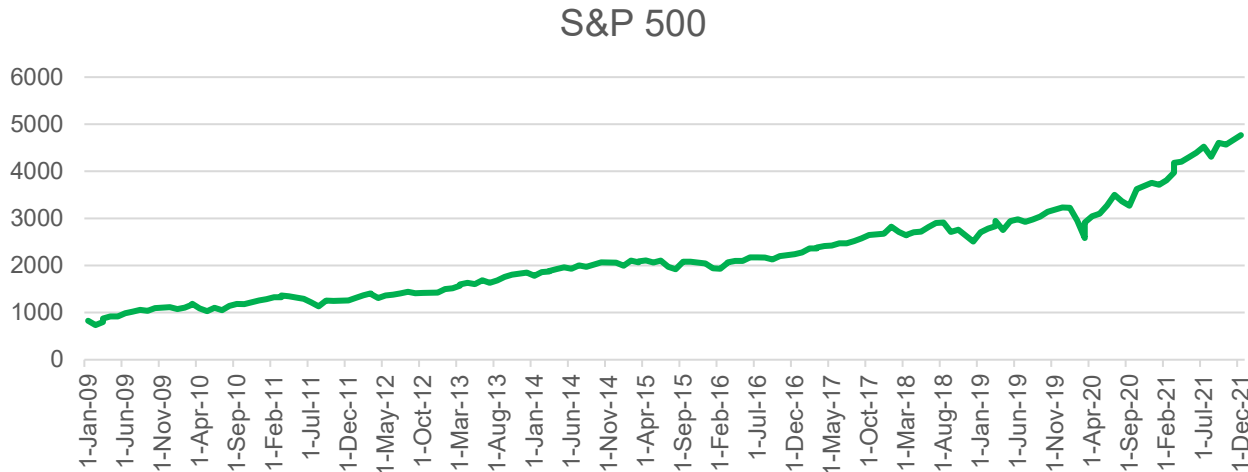


GLOBAL INTEREST RATES Yields as of August 2021

	Negative yields				Yields between 0% and 1%				Yields between 1% and 2%				Yields between 2% and 3%			Yields greater than 3%		
	1Y	2Y	3Y	4Y	5Y	6Y	7Y	8Y	9Y	10Y	15Y	20Y	30Y					
U.S.	0.06	0.18	0.34		0.69		1.00			1.22		1.80	1.89					
Canada	0.24	0.45	0.54	0.74	0.81	0.90	0.98	1.04	1.14	1.20		1.61	1.76					
Australia	0.01	0.04	0.24	0.45	0.59	0.75	0.87	0.98	1.11	1.18	1.57	1.85	2.04					
Italy	-0.52	-0.45	-0.29	-0.18	-0.05	0.14	0.21	0.36	0.50	0.62	1.10	1.33	1.63					
Greece	-0.28	-0.47	-0.38	-0.26	-0.17	-0.04				0.60	0.73	0.94	1.39					
UK	0.03	0.05	0.15	0.19	0.26	0.35	0.41	0.51	0.59	0.56	0.87	0.98	0.99					
Spain	-0.59	-0.59	-0.50	-0.49	-0.39	-0.24	-0.16	0.01	0.12	0.27	0.72	0.87	1.17					
Portugal	-0.62	-0.64	-0.62	-0.55	-0.48	-0.32	-0.22	-0.13	0.02	0.17	0.47	0.50	1.10					
Sweden	-0.22	-0.33		-0.30	-0.20		-0.08	0.01		0.09		0.43						
Japan	-0.13	-0.13	-0.14	-0.14	-0.13	-0.13	-0.12	-0.09	-0.05	0.02	0.20	0.39	0.64					
Ireland	-0.67	-0.68	-0.66	-0.65	-0.60	-0.51	-0.41	-0.31		-0.07	0.16	0.43	0.64					
France	-0.64	-0.72	-0.70	-0.68	-0.53	-0.53	-0.40	-0.30	-0.20	-0.11	0.18	0.39	0.68					
Slovakia		-0.85	-0.66	-0.61		-0.56	-0.47	-0.42	-0.23	-0.12	0.24		0.68					
Belgium	-0.64	-0.75	-0.74	-0.70	-0.64	-0.53	-0.47	-0.36	-0.27	-0.12	0.04	0.39	0.66					
Finland	-0.67	-0.77	-0.79	-0.71	-0.70	-0.59	-0.49	-0.40	-0.30	-0.21	0.04	0.14	0.31					
Austria	-0.73	-0.75	-0.73	-0.72	-0.64	-0.60	-0.52	-0.40	-0.32	-0.22	0.03	0.23	0.39					
Netherlands		-0.82	-0.81	-0.76	-0.72	-0.66	-0.65	-0.57	-0.41	-0.33	-0.06	-0.06	0.10					
Switzerland	-0.80	-0.78	-0.79	-0.75	-0.71	-0.63	-0.58	-0.52	-0.45	-0.40	-0.23	-0.16	-0.16					
Germany	-0.67	-0.77	-0.82	-0.81	-0.74	-0.70	-0.64	-0.61	-0.55	-0.46	-0.20	-0.23	0.02					

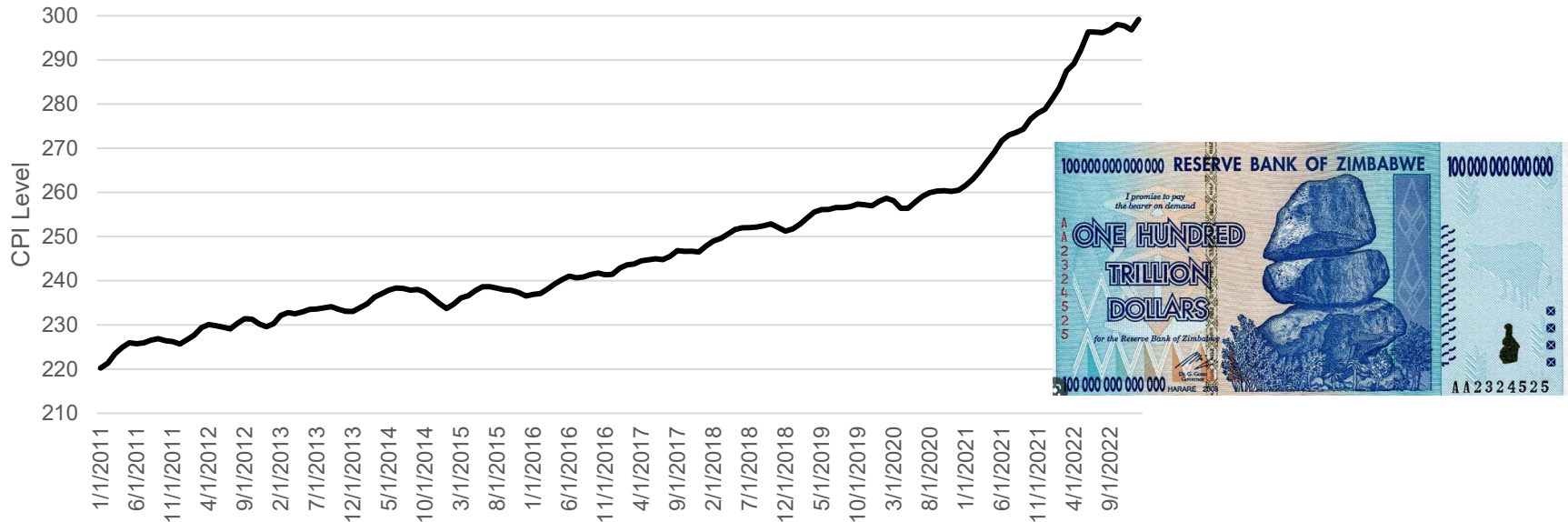
Source: Northern Trust Global Asset Allocation, Bloomberg. Data through 7/30/2021.

As interest rates fell to zero, the new theme was **There Is No Alternative to stocks**



Your budget doesn't like this...

Consumer Price Index, 2011-2023

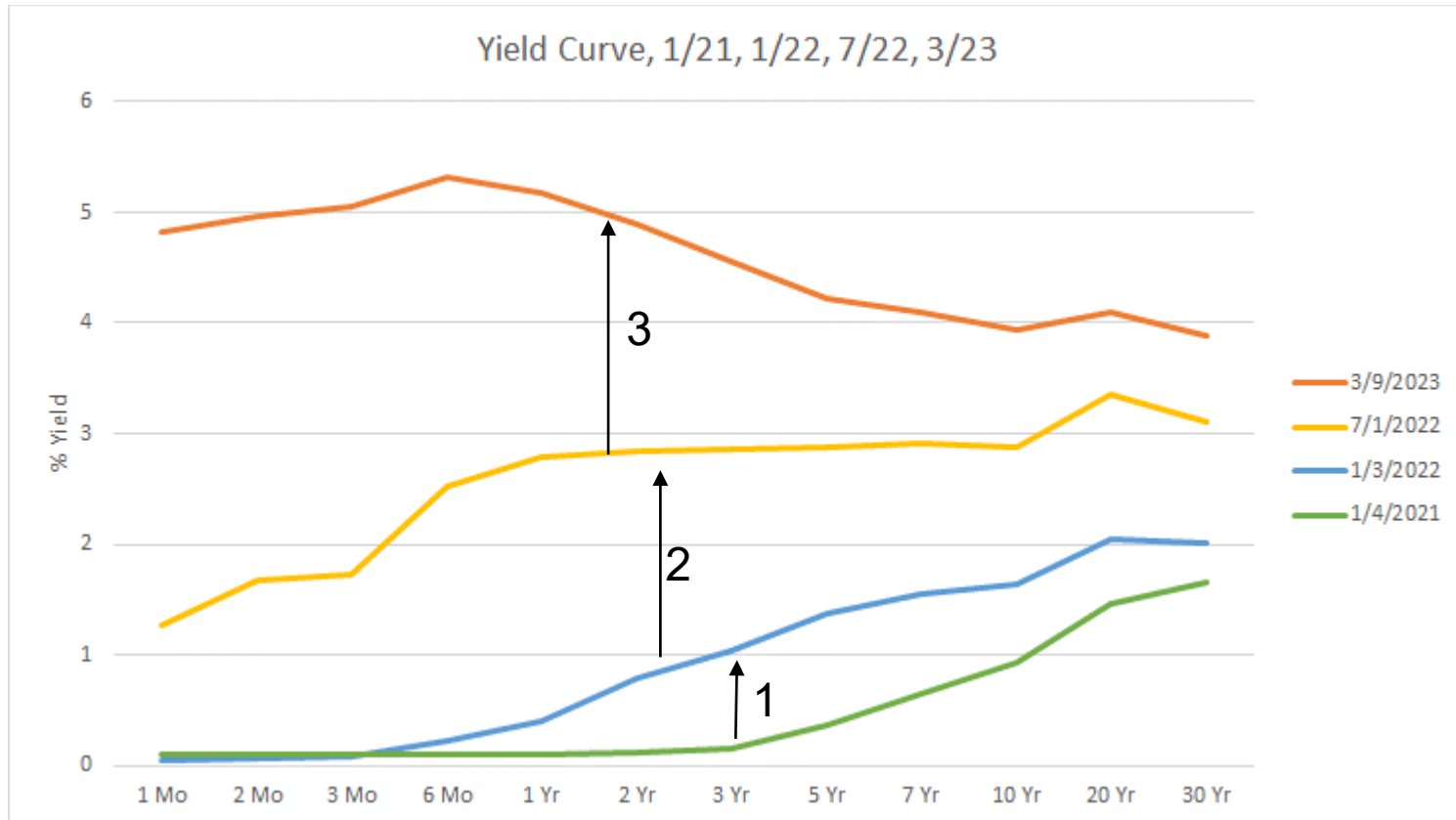


Price level is up 15% in the last two years. It took the previous 10 years to increase that much.

Since 2010, price level is up 39%. Inflation may decrease, but prices always keep rising with few exceptions.



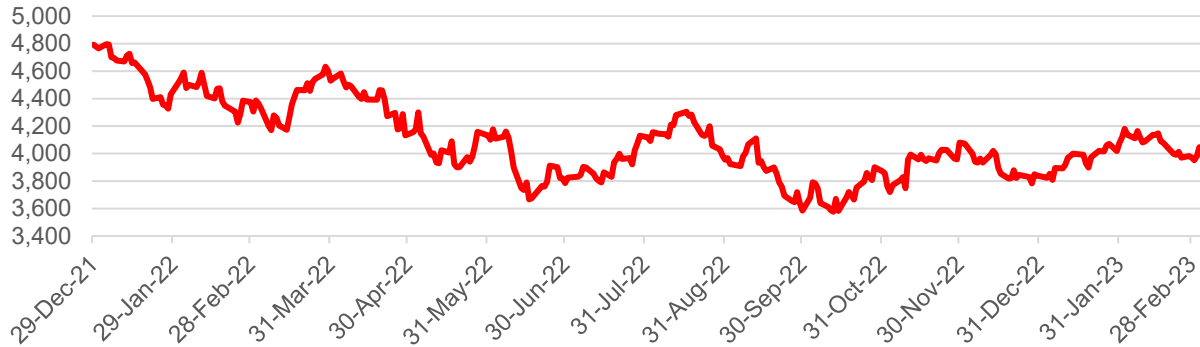
TARA crashed the party!





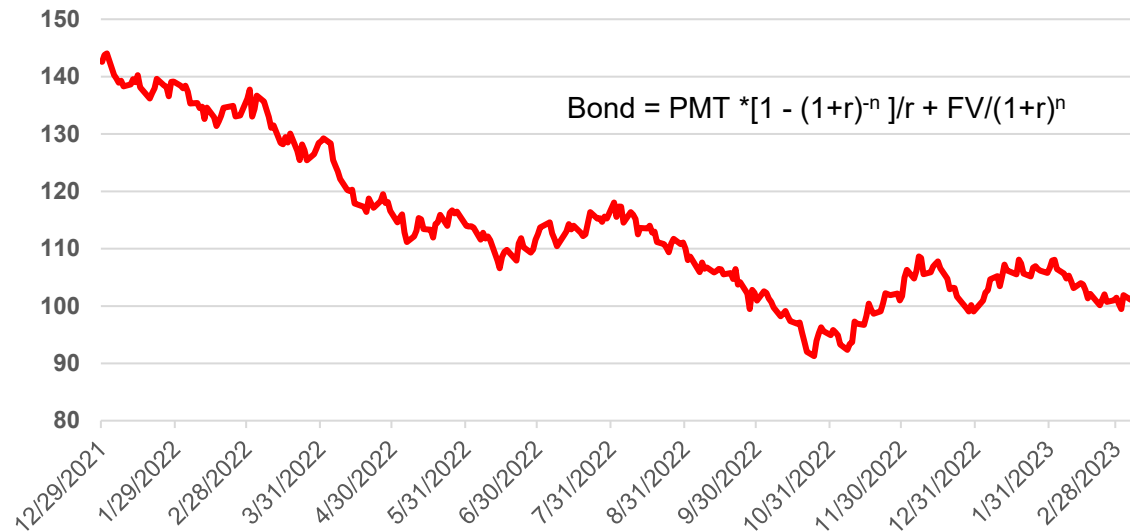
Your retirement savings didn't like that...

S&P 500



$S\&P = E_1/(1+k_1)^1 + E_2/(1+k_2)^2 + E_3/(1+k_3)^3 + \dots + E_n/(1+k_n)^n$ or to super simplify, $S\&P = E_1/(k-g)$

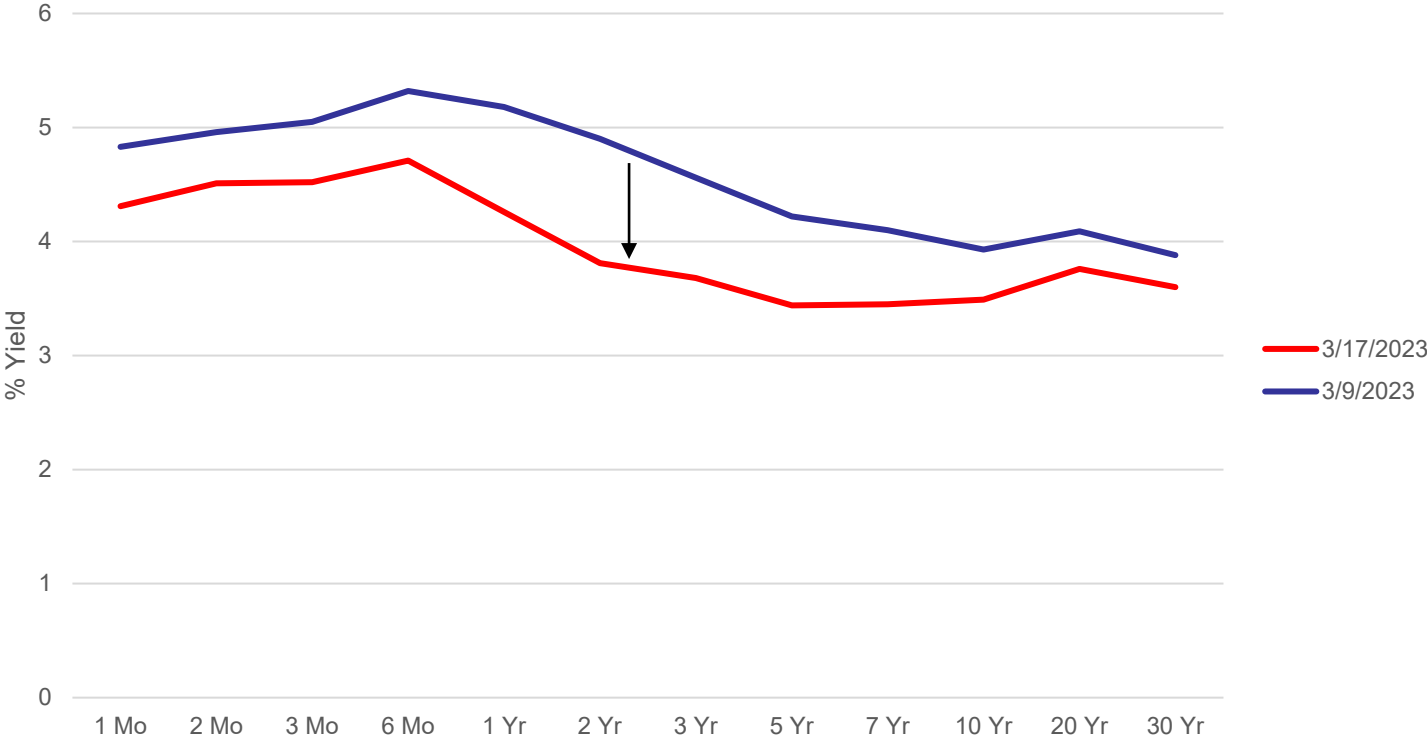
20-30 yr T-bonds



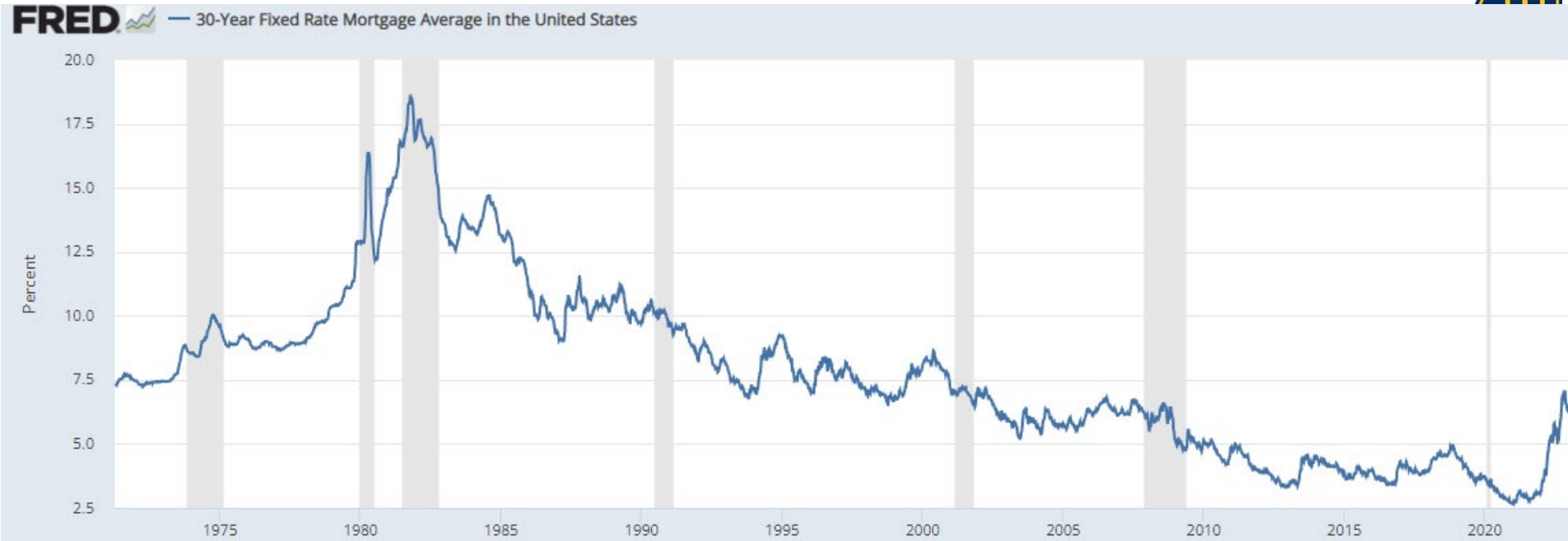
Silicon Valley Bank and Signature Bank didn't like that...



Yield Curve, 3/9/23 and 3/17/23



Home Buyers/Sellers Don't Like this:

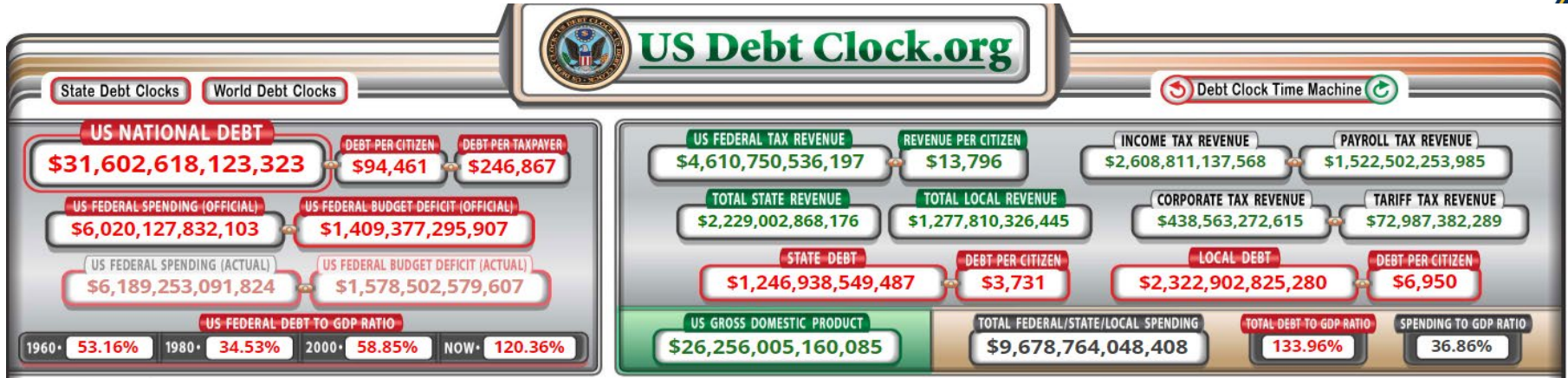


30-year mortgage rates have gone from under 3% in Aug. 2021 to over 6% in 2023.

On a \$300,000 mortgage, monthly payments were \$1,265, now \$1,800+.

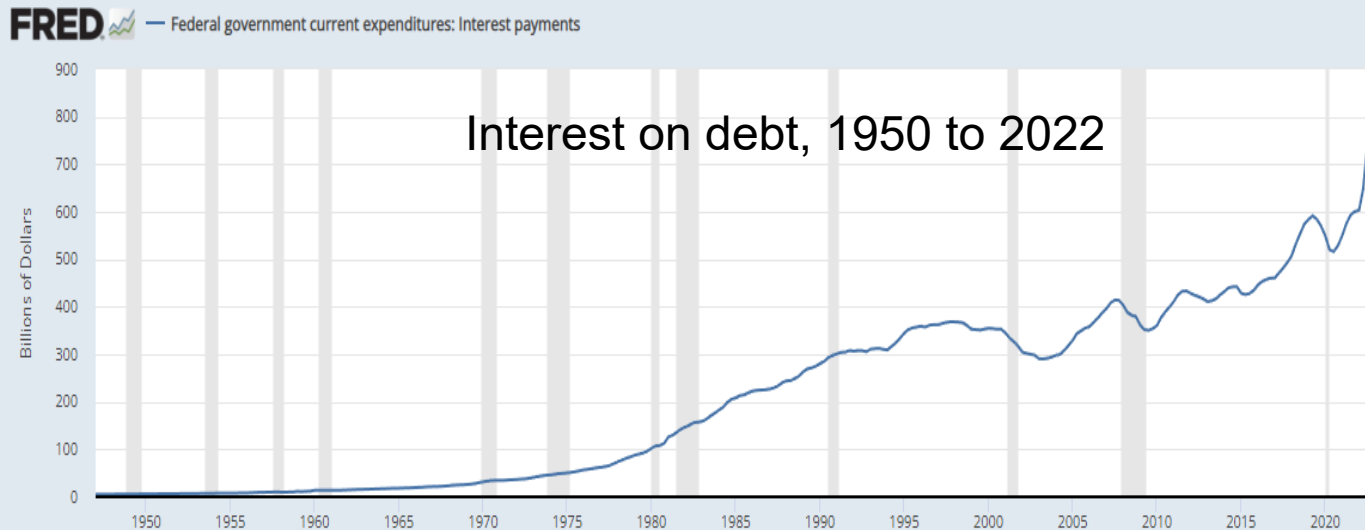
Conversely, \$1,500 a month could have bought you a \$355,784 house, now \$250,187.

And nobody likes this...*

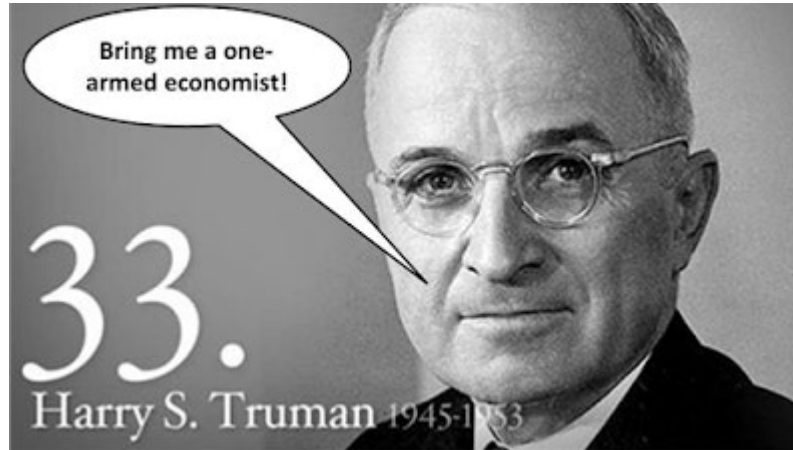


<https://www.usdebtclock.org/>

U.S. tax receipts are \$3.2 trillion. 44% of U.S. debt has an average maturity of 3.4 years. Most was financed at near zero rates, not anymore. One-year T-bill yields 4.3%.



On the other hand,



**Stocks are on sale and
bonds pay interest again.**

THE



END

