

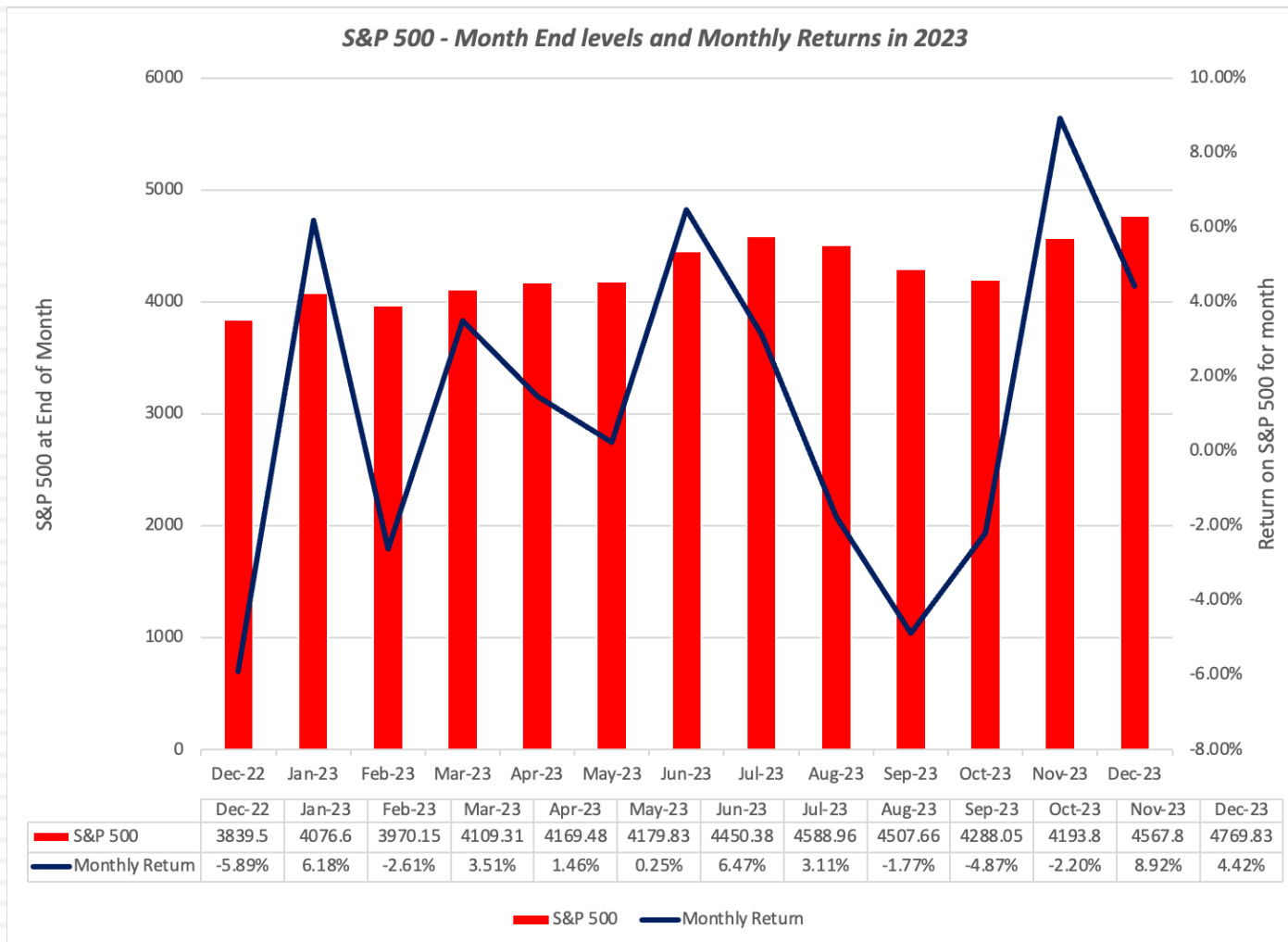
DATA UPDATE 2 FOR 2024: A STOCK COMEBACK – THE LOW EXPECTATIONS GAME!

Winning is easy, when not much is expected...

The Lead in..

- At the start of 2023, US equities looked like they were heading into a sea of troubles, with inflation out of control and a recession coming up.
 - While stocks had ups and downs during the year, they ended the year strong, and recouped, at least in the aggregate, most of the losses from 2022.
 - That positive result, notwithstanding, the recovery was uneven, with a big chunk of the increase in market capitalization coming from seven companies (Facebook, Amazon, Apple, Microsoft, Alphabet, NVidia and Tesla) and wide divergences across stocks, in performance.
- As we start 2024, it looks expectations have been reset, with most forecasters now expecting the economy to glide in for a soft landing and interest rates to decline, and while that may seem like good news, it will represent a challenge for equity market investors.

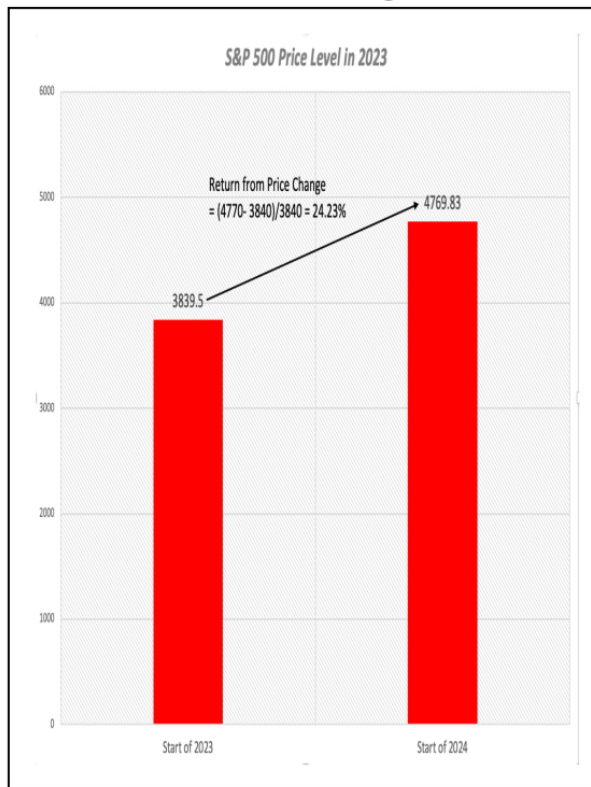
A Look Back at 2023, in months..



The 2023 Scorecard for Stocks

The S&P 500 in 2023

Price Change



Dividends

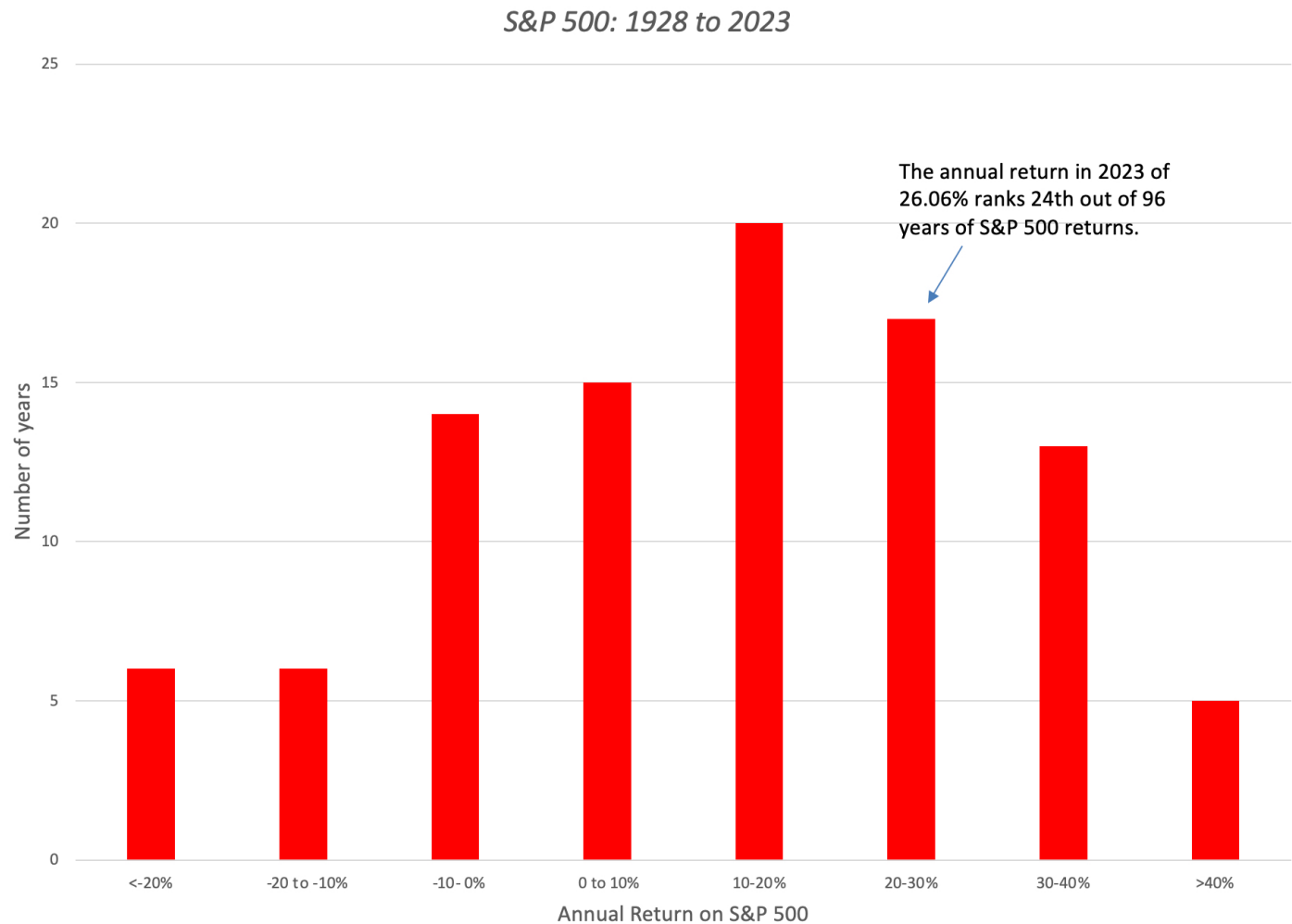
Dividends on the S&P 500 in 2023
= 70.3 (estd thru Dec)
Index Level on Jan 1, 2023
= 3840
Dividend Yield = 1.83%

Of the 500 companies in the index, 403 paid dividends during 2023, up from 394 firms in 2021. 66% of firms increased dividends during the year.

Total Return

Return in 2023
= 24.23% + 1.83%
= 26.06%

A Historical Perspective..



Returns, by Sector...

US firms											
Primary Sector	Number of firms	Market Capitalization (in millions of \$)					Market Capitalization (% Change)				
		12/30/22	3/31/23	6/30/23	9/30/23	12/31/23	2023 Q1	2023 Q2	2023 Q3	2023 Q4	2023
Communication Services	339	\$2,904,439	\$3,430,767	\$3,815,710	\$3,890,422	\$4,298,115	18.12%	11.22%	1.96%	10.48%	47.98%
Consumer Discretionary	620	\$3,992,974	\$4,638,179	\$5,235,066	\$4,965,067	\$5,571,407	16.16%	12.87%	-5.16%	12.21%	39.53%
Consumer Staples	314	\$3,077,884	\$3,092,869	\$3,144,194	\$2,958,560	\$3,081,486	0.49%	1.66%	-5.90%	4.15%	0.12%
Energy	312	\$2,048,944	\$1,904,325	\$1,864,423	\$2,084,295	\$1,935,177	-7.06%	-2.10%	11.79%	-7.15%	-5.55%
Financials	1,320	\$6,060,926	\$5,824,490	\$6,051,594	\$5,963,851	\$6,845,047	-3.90%	3.90%	-1.45%	14.78%	12.94%
Health Care	1,326	\$5,955,231	\$5,679,025	\$5,882,904	\$5,605,566	\$5,953,522	-4.64%	3.59%	-4.71%	6.21%	-0.03%
Industrials	803	\$3,957,566	\$4,075,151	\$4,348,243	\$4,120,898	\$4,639,778	2.97%	6.70%	-5.23%	12.59%	17.24%
Information Technology	782	\$8,303,018	\$10,206,142	\$11,909,355	\$11,198,217	\$13,113,128	22.92%	16.69%	-5.97%	17.10%	57.93%
Materials	303	\$1,042,220	\$1,087,373	\$1,100,871	\$1,049,248	\$1,171,297	4.33%	1.24%	-4.69%	11.63%	12.38%
Real Estate	265	\$1,297,717	\$1,313,219	\$1,336,657	\$1,228,908	\$1,452,329	1.19%	1.78%	-8.06%	18.18%	11.91%
Utilities	94	\$1,191,578	\$1,156,708	\$1,126,691	\$1,012,749	\$1,095,669	-2.93%	-2.60%	-10.11%	8.19%	-8.05%
All US firms	6,481	\$39,832,538	\$42,408,252	\$45,815,714	\$44,077,798	\$49,157,037	6.47%	8.03%	-3.79%	11.52%	23.41%
Global firms											
Primary Sector	Number of firms	Market Capitalization (in millions of \$)					Market Capitalization (% Change)				
		12/30/22	3/31/23	6/30/23	9/30/23	12/31/23	2023 Q1	2023 Q2	2023 Q3	2023 Q4	2023
Communication Services	2,218	\$5,913,536	\$6,754,850	\$6,969,234	\$6,970,003	\$7,518,062	14.23%	3.17%	0.01%	7.86%	27.13%
Consumer Discretionary	6,185	\$9,719,624	\$10,929,214	\$11,596,351	\$10,990,696	\$11,949,766	12.44%	6.10%	-5.22%	8.73%	22.94%
Consumer Staples	3,115	\$8,012,747	\$8,246,114	\$8,007,742	\$7,641,783	\$7,975,760	2.91%	-2.89%	-4.57%	4.37%	-0.46%
Energy	1,459	\$6,620,585	\$6,562,082	\$4,614,353	\$7,299,786	\$7,044,040	-0.88%	-29.68%	58.20%	-3.50%	6.40%
Financials	5,317	\$15,775,391	\$15,625,094	\$15,831,079	\$16,081,619	\$17,673,838	-0.95%	1.32%	1.58%	9.90%	12.03%
Health Care	4,545	\$10,630,244	\$10,462,754	\$10,568,650	\$10,195,056	\$10,842,708	-1.58%	1.01%	-3.53%	6.35%	2.00%
Industrials	8,590	\$12,324,984	\$13,021,674	\$13,423,529	\$12,786,625	\$14,020,183	5.65%	3.09%	-4.74%	9.65%	13.75%
Information Technology	6,222	\$14,103,730	\$17,018,183	\$18,855,245	\$17,620,194	\$20,376,739	20.66%	10.79%	-6.55%	15.64%	44.48%
Materials	6,433	\$6,195,846	\$6,455,484	\$6,046,874	\$6,081,748	\$6,606,719	4.19%	-6.33%	0.58%	8.63%	6.63%
Real Estate	2,704	\$3,224,059	\$3,195,020	\$3,112,076	\$2,989,122	\$3,343,427	-0.90%	-2.60%	-3.95%	11.85%	3.70%
Utilities	893	\$3,400,577	\$3,376,044	\$3,334,338	\$3,168,499	\$3,515,439	-0.72%	-1.24%	-4.97%	10.95%	3.38%
All Global firms	47,698	\$95,921,410	\$101,646,572	\$102,359,538	\$101,825,271	\$110,866,959	5.97%	0.70%	-0.52%	8.88%	15.58%

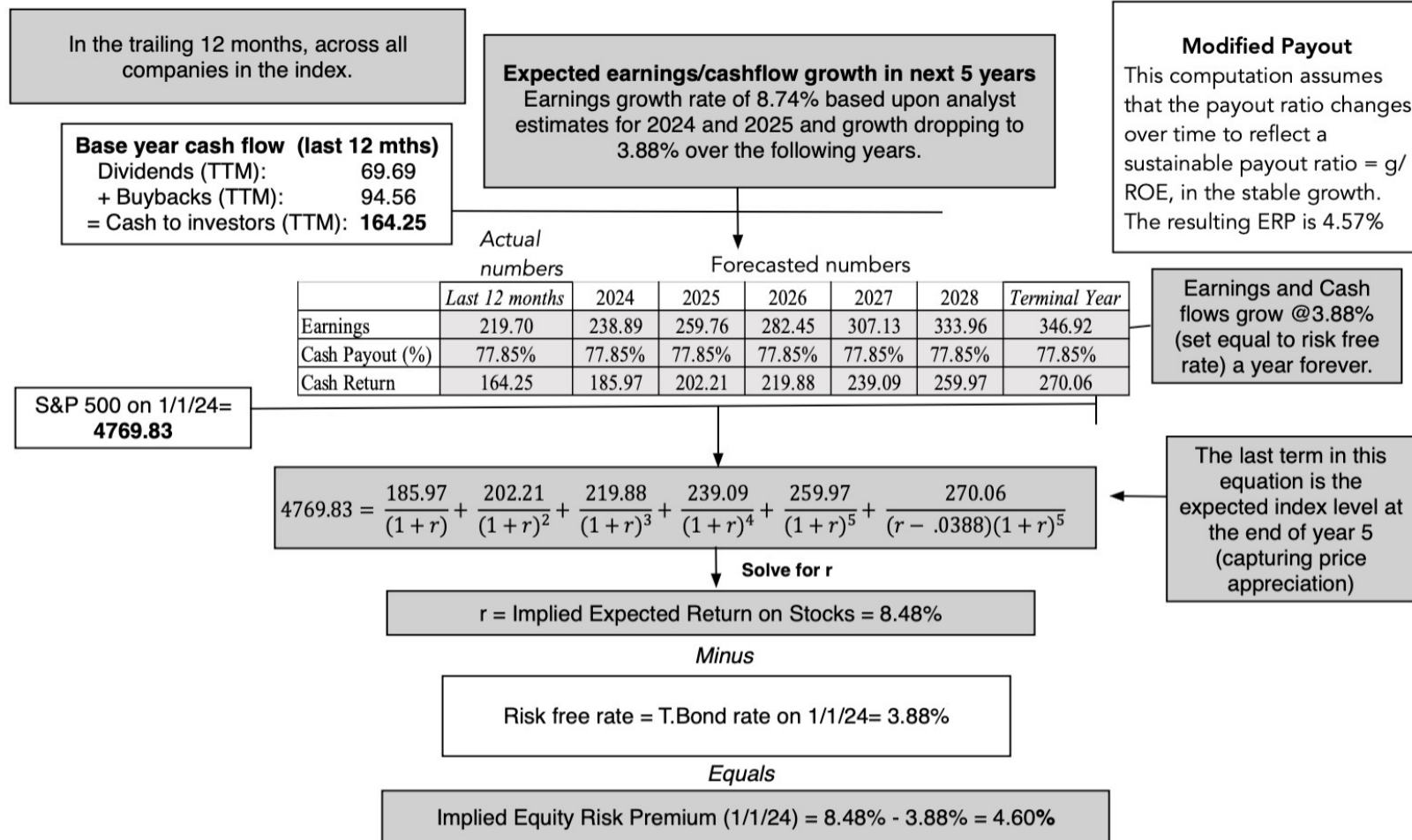
And by region...

Primary Sector	Number of firms	Market Capitalization (in millions of \$)					Market Capitalization (% Change)				
		12/30/22	3/31/23	6/30/23	9/30/23	12/31/23	2023 Q1	2023 Q2	2023 Q3	2023 Q4	2023
Africa and Middle East	2,423	\$4,711,546	\$4,752,924	\$2,089,343	\$5,159,939	\$5,225,482	0.88%	-56.04%	146.96%	1.27%	10.91%
Australia & NZ	1,798	\$1,532,661	\$1,600,949	\$1,593,185	\$1,532,111	\$1,738,485	4.46%	-0.48%	-3.83%	13.47%	13.43%
Canada	2,791	\$2,498,468	\$2,613,725	\$2,669,940	\$2,535,226	\$2,791,564	4.61%	2.15%	-5.05%	10.11%	11.73%
China	7,504	\$15,260,820	\$16,278,869	\$15,103,620	\$14,372,189	\$14,220,441	6.67%	-7.22%	-4.84%	-1.06%	-6.82%
EU & Environs	5,925	\$13,154,541	\$14,430,645	\$14,620,508	\$13,861,109	\$15,385,625	9.70%	1.32%	-5.19%	11.00%	16.96%
Eastern Europe & Russia	325	\$84,843	\$89,797	\$91,843	\$107,084	\$117,635	5.84%	2.28%	16.59%	9.85%	38.65%
India	4,446	\$3,341,429	\$3,076,257	\$3,539,992	\$3,833,224	\$4,387,483	-7.94%	15.07%	8.28%	14.46%	31.31%
Japan	4,020	\$5,254,468	\$5,486,076	\$5,732,720	\$5,620,166	\$6,060,760	4.41%	4.50%	-1.96%	7.84%	15.34%
Latin America & Caribbean	984	\$1,534,250	\$1,636,480	\$1,776,054	\$1,688,299	\$1,882,716	6.66%	8.53%	-4.94%	11.52%	22.71%
Small Asia	9,876	\$5,719,265	\$6,129,117	\$6,156,326	\$5,979,948	\$6,620,480	7.17%	0.44%	-2.86%	10.71%	15.76%
UK	1,125	\$2,996,581	\$3,143,482	\$3,170,294	\$3,058,177	\$3,279,251	4.90%	0.85%	-3.54%	7.23%	9.43%
United States	6,481	\$39,832,538	\$42,408,252	\$45,815,714	\$44,077,798	\$49,157,037	6.47%	8.03%	-3.79%	11.52%	23.41%
All Global firms	47,698	\$95,921,410	\$101,646,572	\$102,359,538	\$101,825,271	\$110,866,959	5.97%	0.70%	-0.52%	8.88%	15.58%

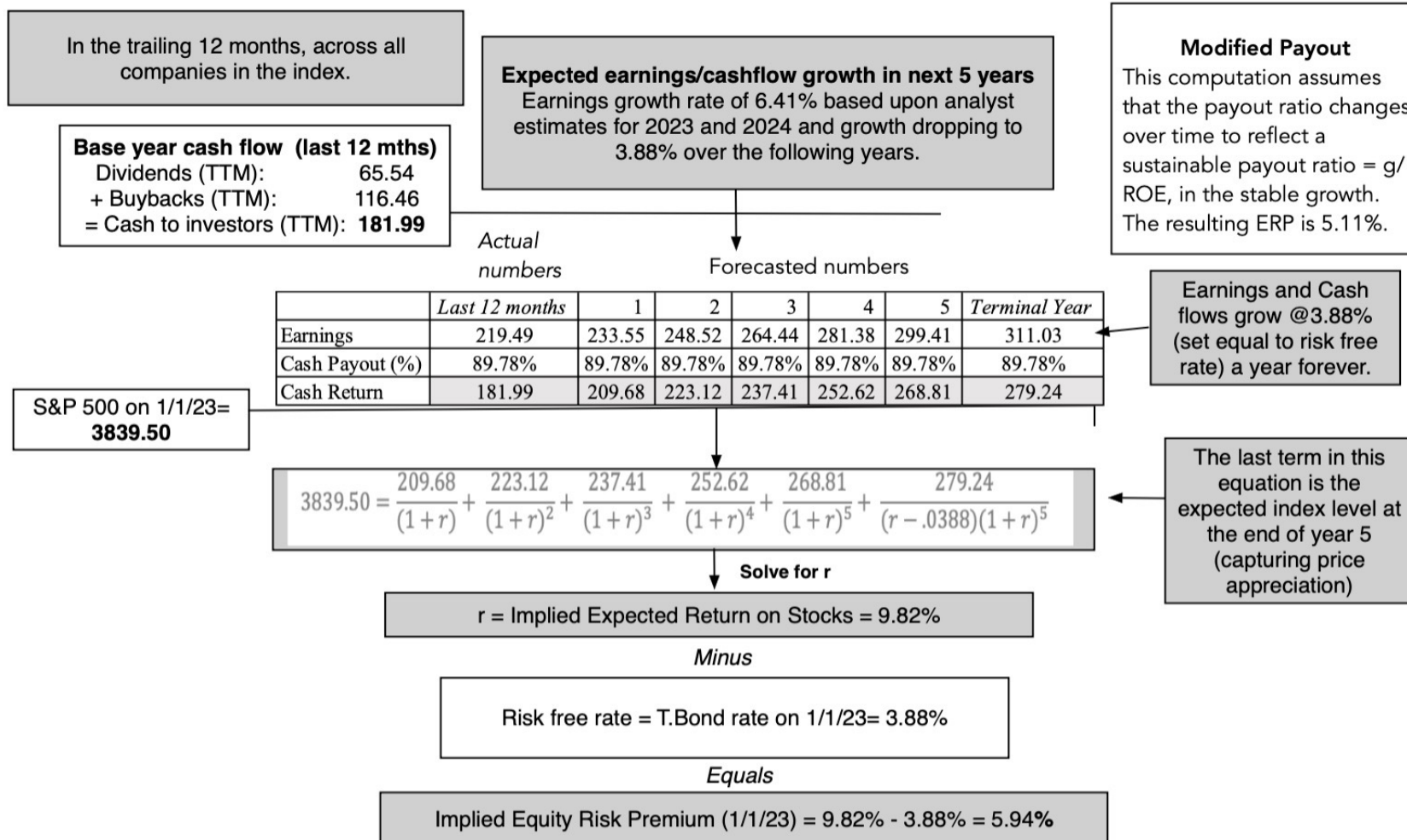
Looking forward..

- While there is comfort in looking backwards, slicing and dicing data in the hope of getting clues for the future, investing is about the future.
- Much as we like to believe that history repeats itself, and find patterns even when they do not exist, the nature of markets makes them difficult to forecast, precisely because they are driven not by what happens on the ground (to the economy, inflation and other fundamentals), but by how these results compare to expectations.
- Going into 2024, investors are clearly in a better mood about what is to come this year, than they were a year ago, but they are pricing in that better mood. To capture the market's mood, I back out the expected return (and equity risk premium) that investors are pricing in, through an implied equity risk premium:

A Forward-looking Expected Return in 2024

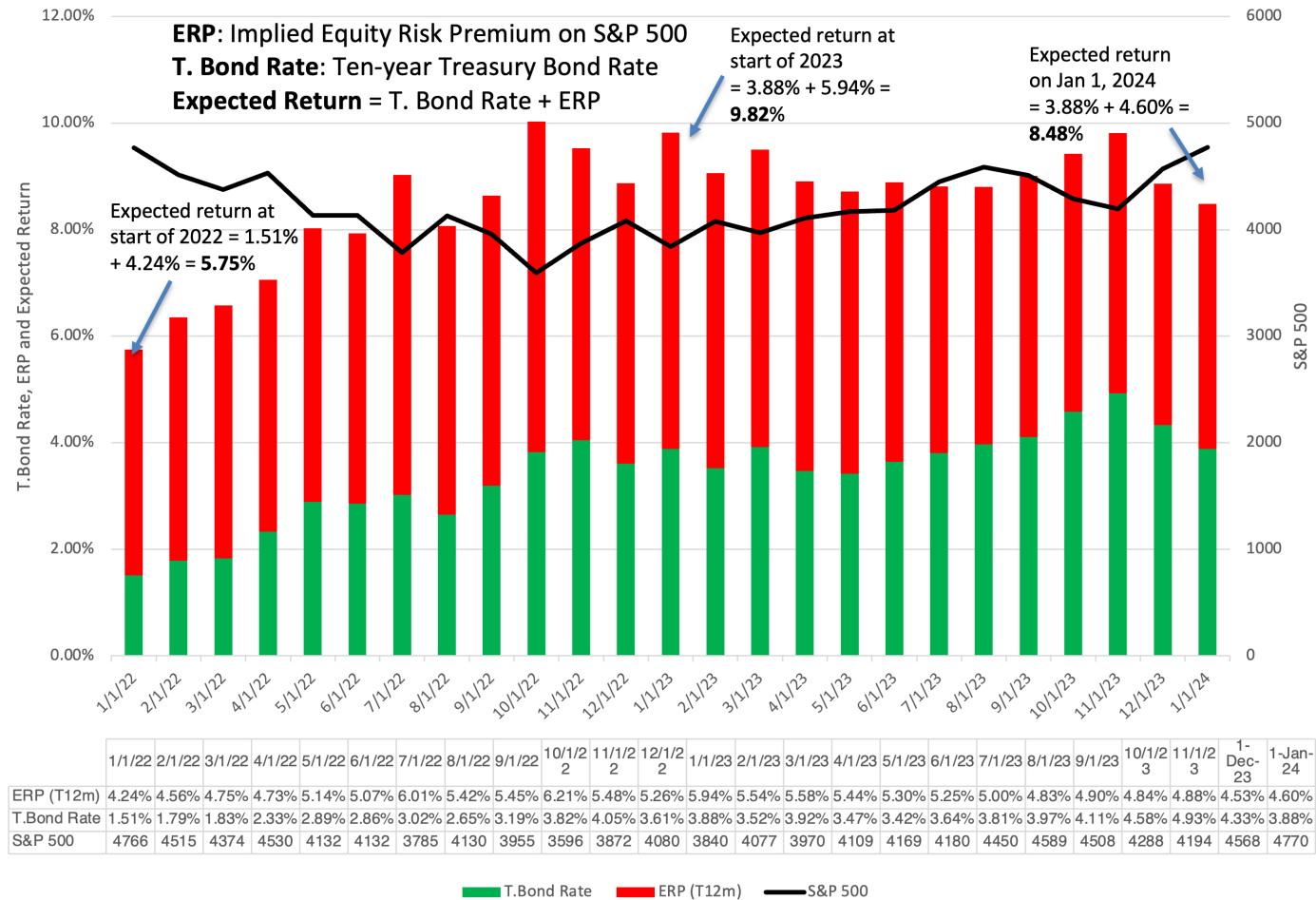


The Contrast with 2023...

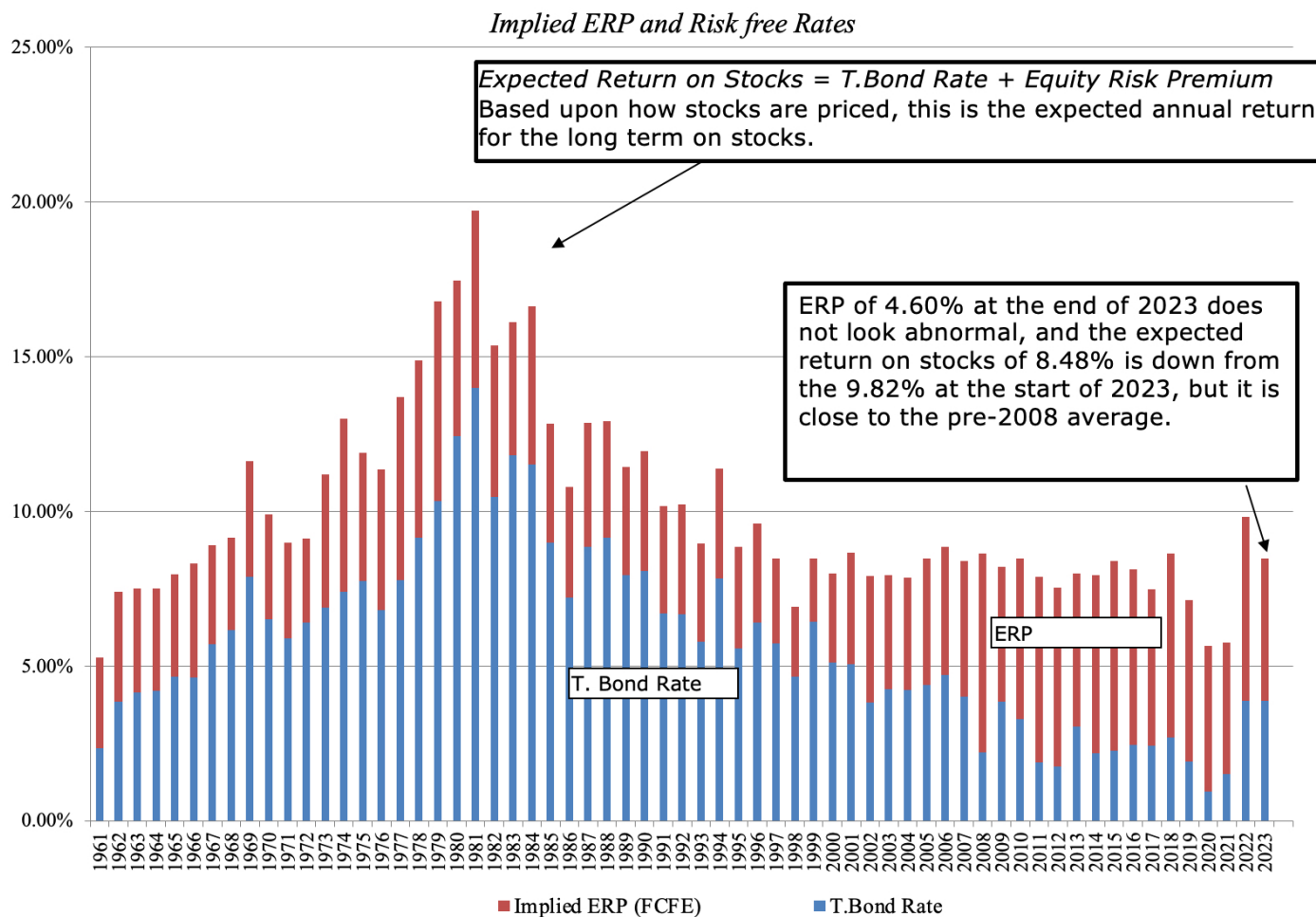


On a monthly basis, in 2022 and 2023..

The S&P 500, ERP and T.Bond Rate in 2022 and 2023



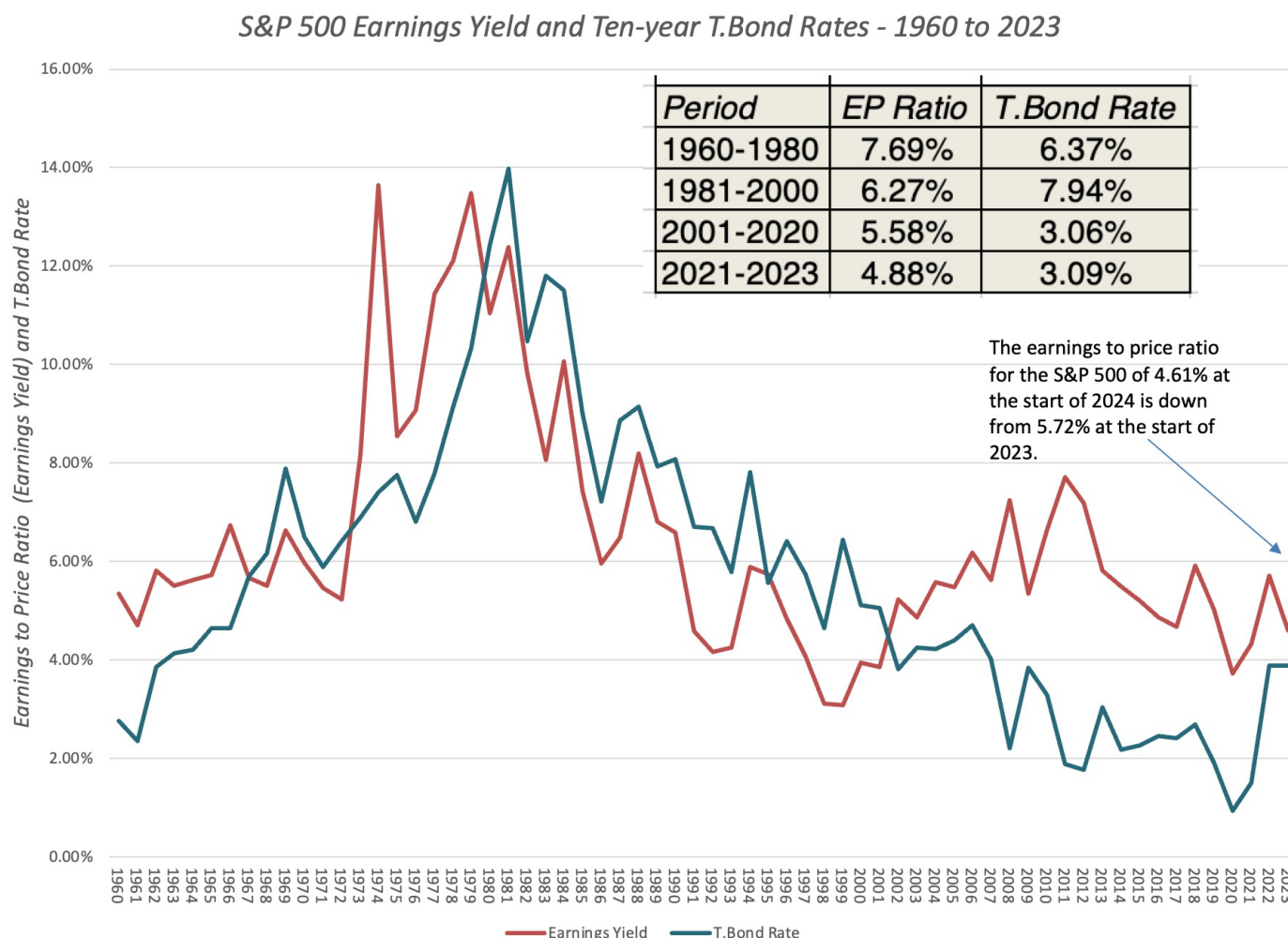
And over time...



Judging the ERP!

	Expected Return on Stocks	Implied ERP
Lowest	5.27%	2.05%
First Quartile	7.97%	3.40%
Median	8.77%	4.04%
Third Quartile	11.39%	5.09%
Highest	19.71%	6.45%
Start of 2022	5.75%	4.24%
Start of 2023	9.82%	5.94%
Start of 2024	8.48%	4.60%

An Alternate (and more Conventional) Metric of Stocks!



Taking a Stand...

- I am not a market timer, but I do value the market at regular intervals, more to get a measure of what the market is pricing in, than to forecast future movements. In valuing the index, I follow the intrinsic value rulebook, where the value is determined by expectations of cash flows in the future, discounted back to adjust their risk.
 - To get expected cash flows, I start with expectations of earnings from the equities that comprise the index. For the S&P 500, the most widely followed equity index, I use the consensus estimates of aggregate earnings for 2024 and 2025, from analysts following the index.
 - The cash flows to equity investors, especially in the United States, have increasingly taken the form of buybacks, rather than just dividends. In 2023, dividends and buybacks on the S&P 500 index amounted to \$1.367 trillion, 164.25 in index units, with 57.6% of these cash flows coming from, buybacks. As a percent of earnings, this represented 74.8% of earnings in that year, representing a decline from payout ratios during this century (2000-2022).

Valuing the Index on 1/1/24

An Intrinsic Value of the S&P 500

At Current Interest Rates and With Market Consensus Earnings Estimates

Earnings estimates: Analyst estimates of earnings for 2024 & 2025, with growth scaling down to steady state growth (set equal to the riskfree rate)

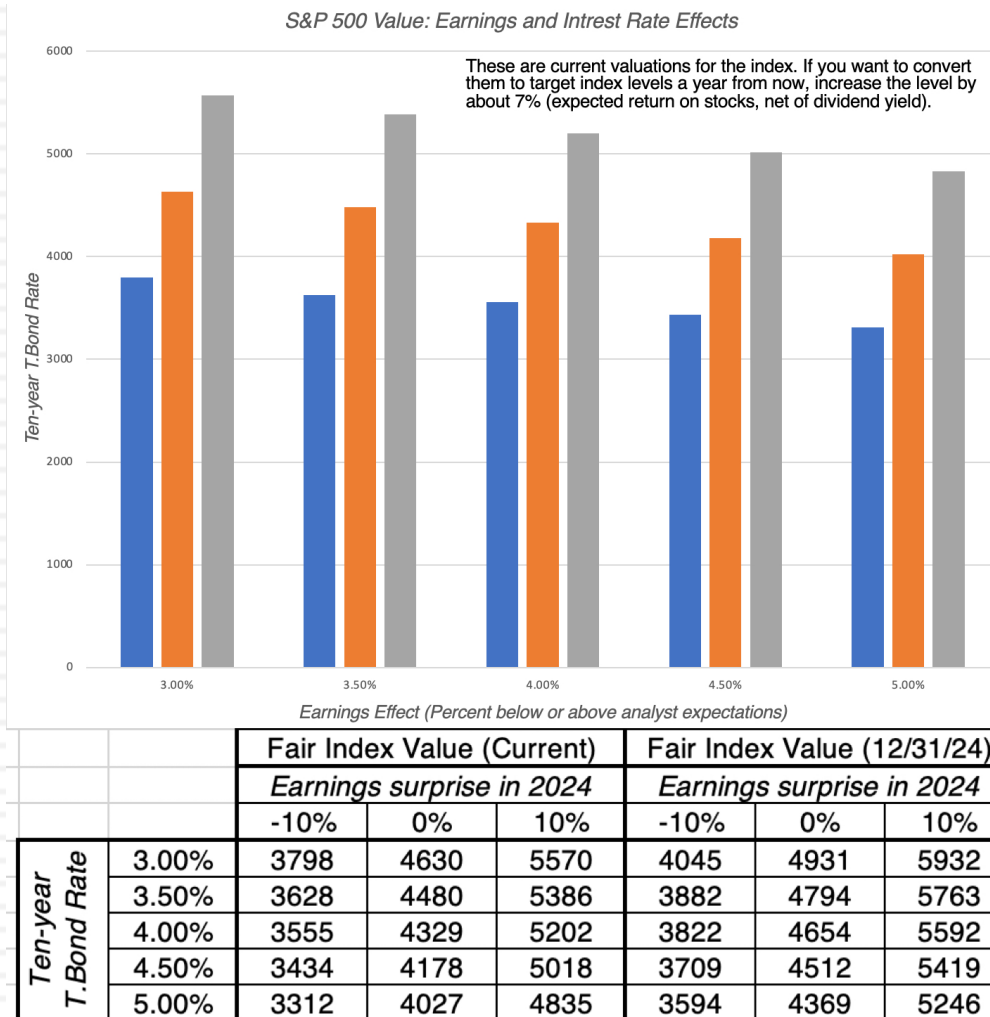
Riskfree rate: The treasury bond rate of 3.88% will remain as the steady state.

ERP: The equity risk premium converges on 5%, the average since 2008.

Intrinsic Value of S&P 500 - January 1, 2024							
	2023	2024	2025	2026	2027	2028	Terminal Year
Expected Earnings	219.70	244.00	274.60	301.11	321.49	333.96	346.92
Earnings Growth Rate		11.06%	12.54%	9.65%	6.77%	3.88%	3.88%
Expected cash payout ratio	74.76%	74.76%	75.38%	76.00%	76.61%	77.23%	77.23%
Expected Dividends + Buybacks =	\$164.25	\$182.42	\$206.99	\$228.83	\$246.30	\$257.92	267.92
Expected Terminal Value =						\$5,358.49	
Riskfree Rate	3.88%	3.88%	3.88%	3.88%	3.88%	3.88%	3.88%
Required Return on Stocks	8.88%	8.88%	8.88%	8.88%	8.88%	8.88%	8.88%
Present Value =		\$167.54	\$174.60	\$177.28	\$175.26	\$3,670.44	
Intrinsic Value of Index =	4365.12						
Intrinsic Trailing PE =	19.87						
Intrinsic Forward PE =	17.89						
Actual Index level =	4769.83						
% Under or Over Valuation =	9.27%						

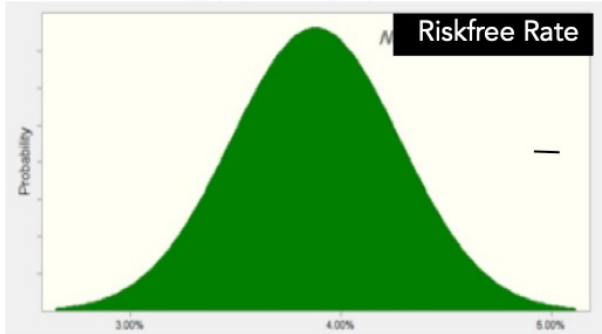
Cash Payout as % of Earnings: Starts at 2023 levels, but changes over time to reflect sustainable payout, given growth and ROE.

What if?



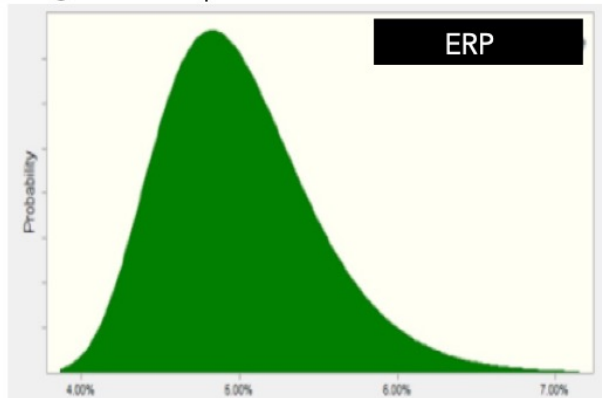
Ten-year T.Bond Rate

Normal: Average = 3.88%, Std Dev = 0.40%



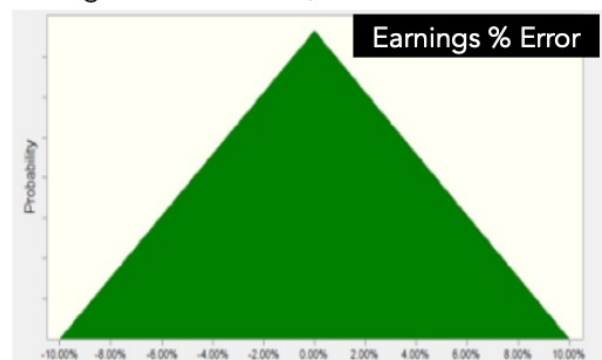
Equity Risk Premium

Lognormal: Expected = 5%, Std Dev = 0.5%



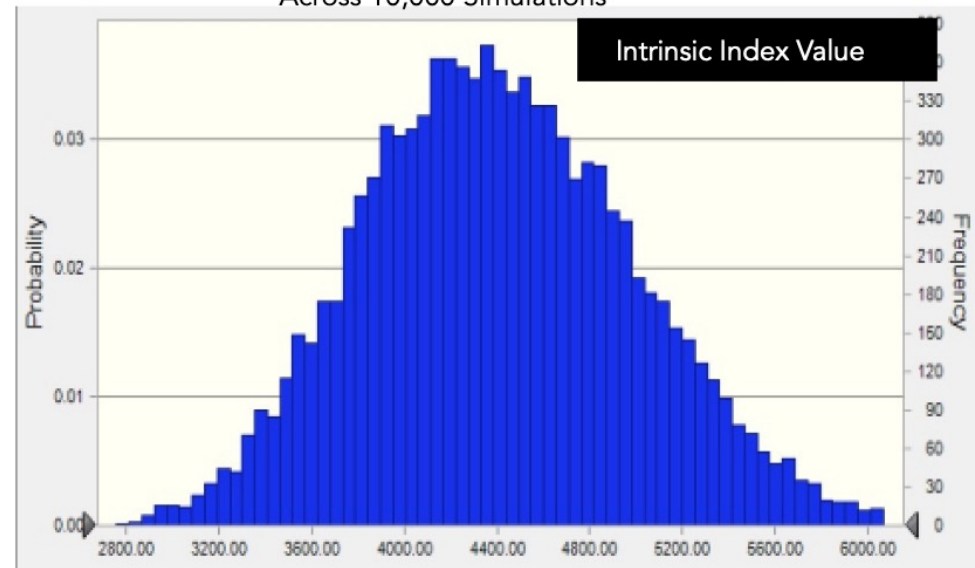
Earnings Error in 2024 and 2025

Traingular: Min = -10%, Max = +10%



Intrinsic Index Value on January 1, 2024

Across 10,000 Simulations



Percentile	Value of Index
Lowest	2414
10%	3672
20.0%	3905
30.0%	4078
40.0%	4232
50.0%	4383
60.0%	4540
70.0%	4710
80.0%	4909
90.0%	5193
Highest	6916

Caveat Emptor!

- Before you take my market prognostications at face, please do consider my open disclosure that I am not a market. I do not plan to act on this market valuation by buying puts on the index or even be altering the equity portion of my portfolio.
- So, why bother? There are times in the past, when the overvaluation of the market is so large that it operates as a red flag on investing in equities, as an asset class, in general. That signal worked in early 2000 but did not in early 2008, and it is thus a noisy one.
- More generally, though, valuing the market gives me perspective, and allows me to put make sense of both bullish and bearish views on the market.
 - Investors and analysts who believe that rates will continue to decline, with a strong economy delivering higher-than-expected earnings, will see significant upside in this market
 - Investors and analysts who believe that stubbornly higher inflation will cause rates to rise, and that earnings will come in below expectations will be more likely to be part of the doomsday crowd.