S&P 500 Monthly Valuation & Analysis Review: 08-31-21 Also, read our commentary on ***why low rates don?t justify high valuations.*** [dmc]

Macro: S&P 500 — *August 2021*

We believe that the chief determinant of future total returns is the relative valuation of the index at the time of purchase. We measure valuation using the Price/*Peak* Earnings multiple as advocated by Dr. John Hussman. We believe the main benefit of using peak earnings is its inherent *conservatism*: not subject to analyst estimates, not subject to the short-term ebbs and flows of business, and not subject to short-term accounting distortions. Annualized total returns can be calculated over a horizon period for given scenarios of multiple expansion or contraction.

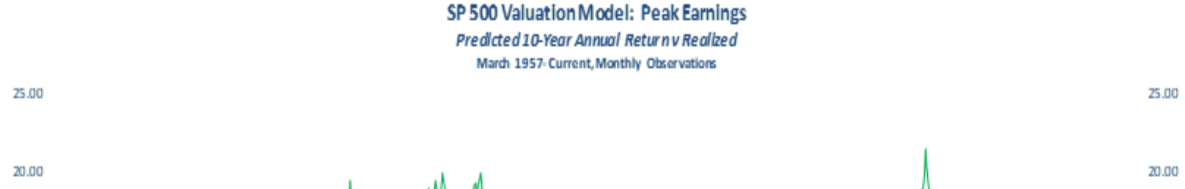
Our analysis highlights expansion/contraction to the minimum, mean, average, and maximum multiples (our data-set begins in January 1900) . The baseline assumptions for nominal growth and horizon period are 4% and 10 years, respectively. We also provide graphical analysis of how predicted returns compare to actual returns historically.

We provide sensitivity analysis to our baseline assumptions. The first sensitivity table, ceterus paribus, shows how future returns are impacted by changing the horizon period. The second sensitivity table, ceterus paribus, shows how future returns are impacted by changing the growth assumption.

We also include the following information: duration, over(under)-valuation, inflation adjusted price/10-year real earnings, dividend yield, option-implied volatility, skew, realized volatility, historical relationships between inflation and p/e multiples, and historical relationship between p/e multiples and realized returns.

Our analysis is not intended to forecast the short-term direction of the SP500 Index. The purpose of our analysis is to identify the relative valuation and inherent risk offered by the index currently.

Predicted Returns — *August 2021*



Predicted Returns: Sensitivity Analysis

August 2021

	Price / Peak Earnings															
Time Horizon	3.0	7.0	9.0	11.0	12.3	13.0	14.0	16.0	18.0	21.0	23.0	25.0	27.0	29.0	31.0	33.5
10	(10.17)	(6.07)	(4.31)	(2.78)	(1.84)	(1.44)	(0.80)	0.36	1.41	2.82	3.67	4.47	5.21	5.91	6.58	7.34
9	(12.19)	(7.43)	(5.45)	(3.73)	(2.68)	(2.23)	(1.51)	(0.22)	0.95	2.53	3.48	4.37	5.21	5.99	6.73	7.59
8	(14.66)	(9.10)	(6.85)	(4.90)	(3.72)	(3.21)	(2.40)	(0.94)	0.38	2.17	3.25	4.25	5.20	6.08	6.92	7.90
7	(17.72)	(11.20)	(8.62)	(6.39)	(5.04)	(4.45)	(3.52)	(1.86)	(0.34)	1.70	2.94	4.10	5.18	6.20	7.17	8.29
6	(21.61)	(13.92)	(10.93)	(8.34)	(6.77)	(6.09)	(5.01)	(3.07)	(1.30)	1.09	2.54	3.89	5.17	6.37	7.50	8.83
5	(26.73)	(17.59)	(14.06)	(10.99)	(9.13)	(8.33)	(7.04)	(4.73)	(2.62)	0.24	1.98	3.61	5.14	6.59	7.97	9.57
4	(33.73)	(22.79)	(18.54)	(14.83)	(12.57)	(11.59)	(10.02)	(7.18)	(4.58)	(1.03)	1.14	3.18	5.11	6.93	8.67	10.71
3	(43.81)	(30.71)	(25.48)	(20.86)	(18.00)	(16.76)	(14.76)	(11.12)	(7.75)	(3.11)	(0.24)	2.47	5.05	7.51	9.86	12.62
2	(59.16)	(44.10)	(37.59)	(31.62)	(27.86)	(26.19)	(23.48)	(18.49)	(13.77)	(7.12)	(2.94)	1.07	4.93	8.66	12.26	16.55
1	(82.16)	(70.10)	(63.00)	(55.70)	(50.71)	(48.40)	(44.56)	(37.06)	(29.53)	(18.19)	(10.61)	(3.02)	4.58	12.19	19.80	29.19

	Price / Peak Earnings															
Growth Rate	3.0	7.0	9.0	11.0	12.3	13.0	14.0	16.0	18.0	21.0	23.0	25.0	27.0	29.0	31.0	33.5
0.06	(8.56)	(4.32)	(2.52)	(0.95)	0.01	0.42	1.08	2.25	3.32	4.77	5.64	6.45	7.21	7.93	8.60	9.39
0.05	(9.36)	(5.20)	(3.42)	(1.86)	(0.92)	(0.51)	0.14	1.31	2.37	3.79	4.66	5.46	6.21	6.92	7.59	8.36
0.04	(10.17)	(6.07)	(4.31)	(2.78)	(1.84)	(1.44)	(0.80)	0.36	1.41	2.82	3.67	4.47	5.21	5.91	6.58	7.34
0.03	(10.97)	(6.94)	(5.21)	(3.69)	(2.77)	(2.37)	(1.73)	(0.59)	0.45	1.84	2.69	3.48	4.21	4.91	5.56	6.32
0.02	(11.77)	(7.82)	(6.10)	(4.60)	(3.69)	(3.30)	(2.67)	(1.54)	(0.51)	0.87	1.71	2.48	3.21	3.90	4.55	5.30
0.01	(12.57)	(8.69)	(7.00)	(5.52)	(4.62)	(4.22)	(3.60)	(2.49)	(1.47)	(0.11)	0.72	1.49	2.22	2.89	3.54	4.28

Valuation Date	8/31/2021
Current Price / Peak Earnings	27.2
Growth Rate	0.04
Time Horizon (Years)	10
Current Dividend Yield	0.0128

Price to Peak Earnings

August 2021



Duration

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As of 08/31/2021: Duration 78.2 years

In the case of equities, *duration measures the percentage change in stock prices in response to a 1% change in the long-term return that stocks are priced to deliver.* So we have a basic financial planning concept. If a buy-and-hold investor with no particular view about market conditions or future returns wishes to have a fairly predictable amount of wealth at some future date, that investor should hold a portfolio with a duration that is roughly equal to the investment horizon. *(Excerpted from Dr. John Hussman)*

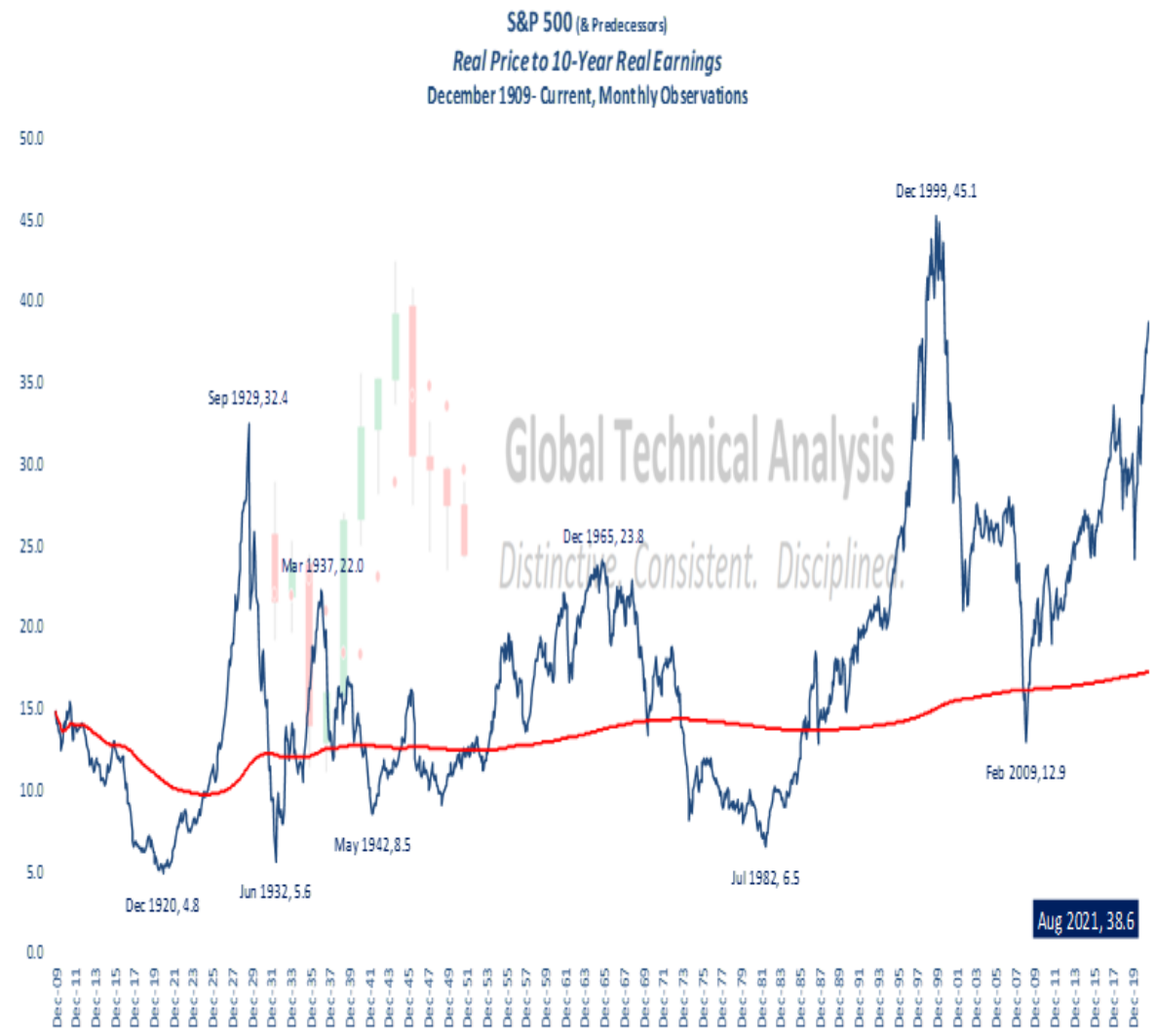
Valuation

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Inflation Adjusted PE

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As of 08/31/2021: Real Price to 10-Year Real Earnings 38.6x

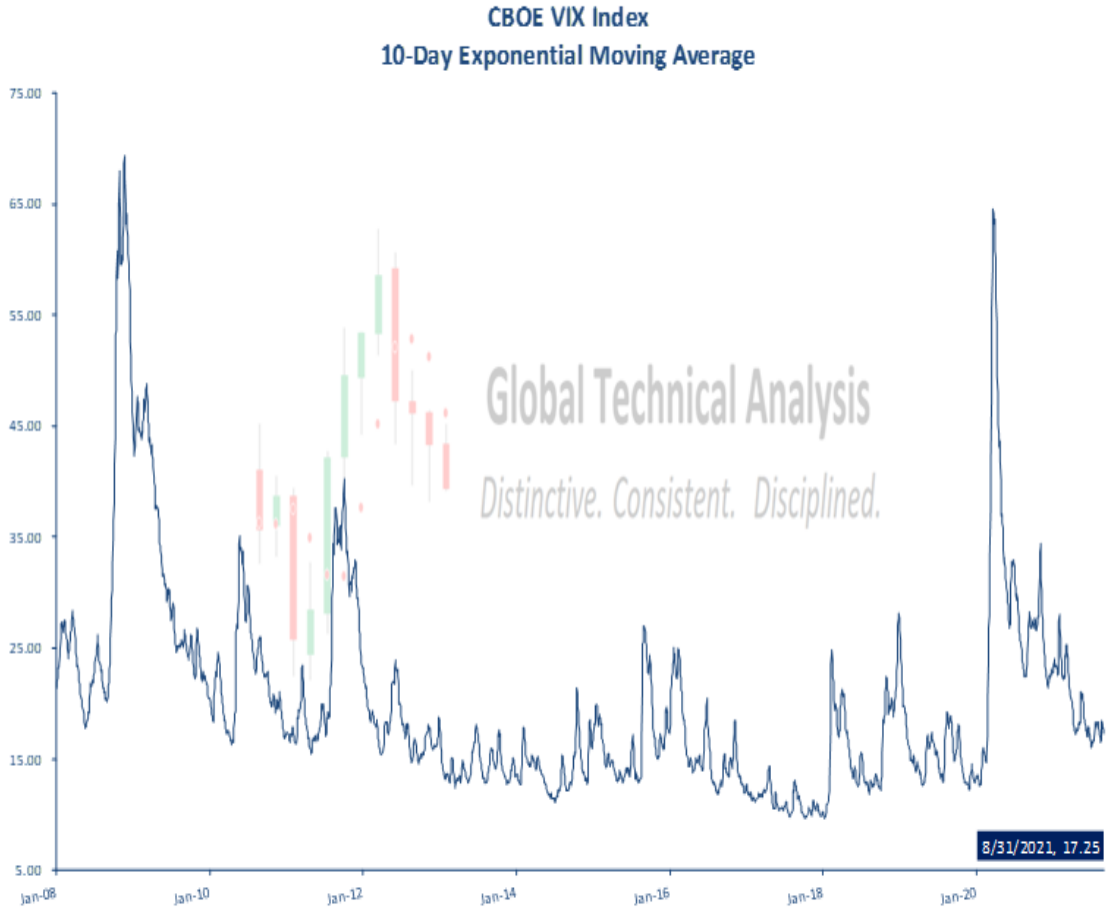
Dividend Yield

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Option Implied Volatility

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VIX measures 30-day expected volatility of the S&P 500 Index. The components of VIX are near- and next-term put and call options, usually in the first and second SPX contract months. "Near-term" options must have at least one week to expiration; a requirement intended to minimize pricing anomalies that might occur close to expiration.

As of 08/31/2021: 10-Day EMA 17.25

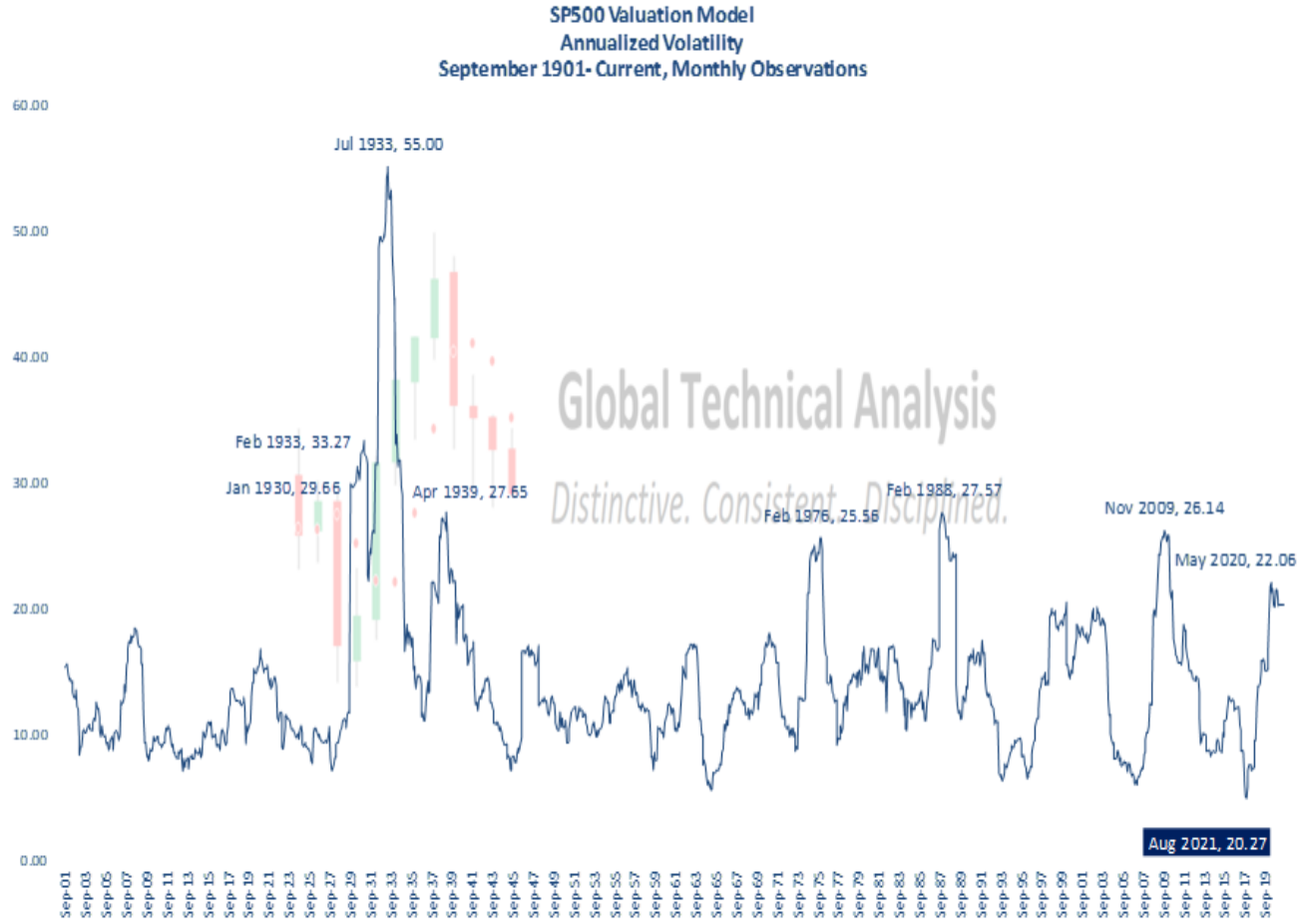
Option Skew

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Realized Volatility

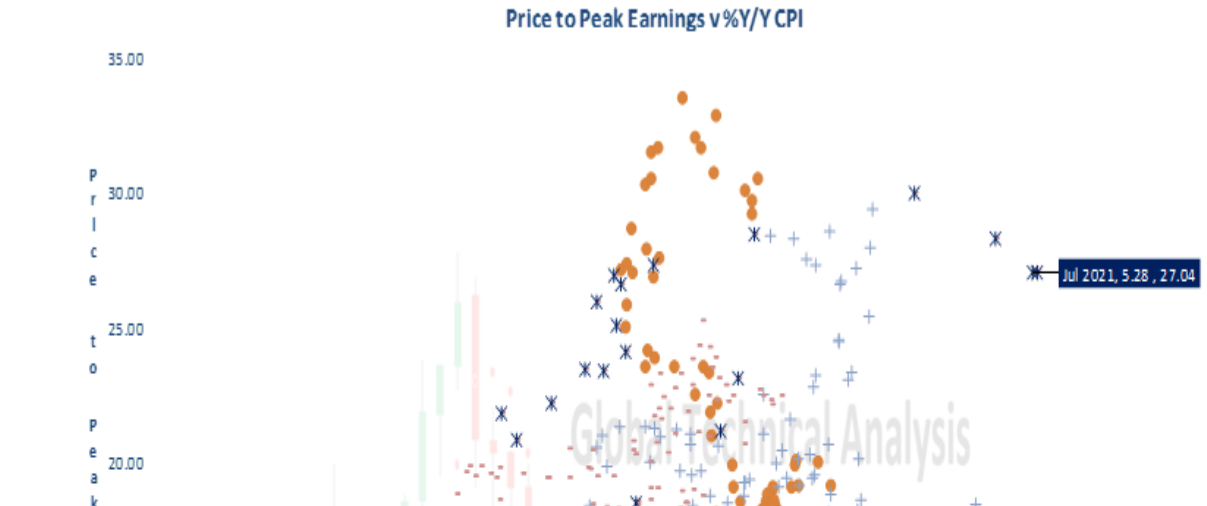
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As of 08/31/2021: 20.27%

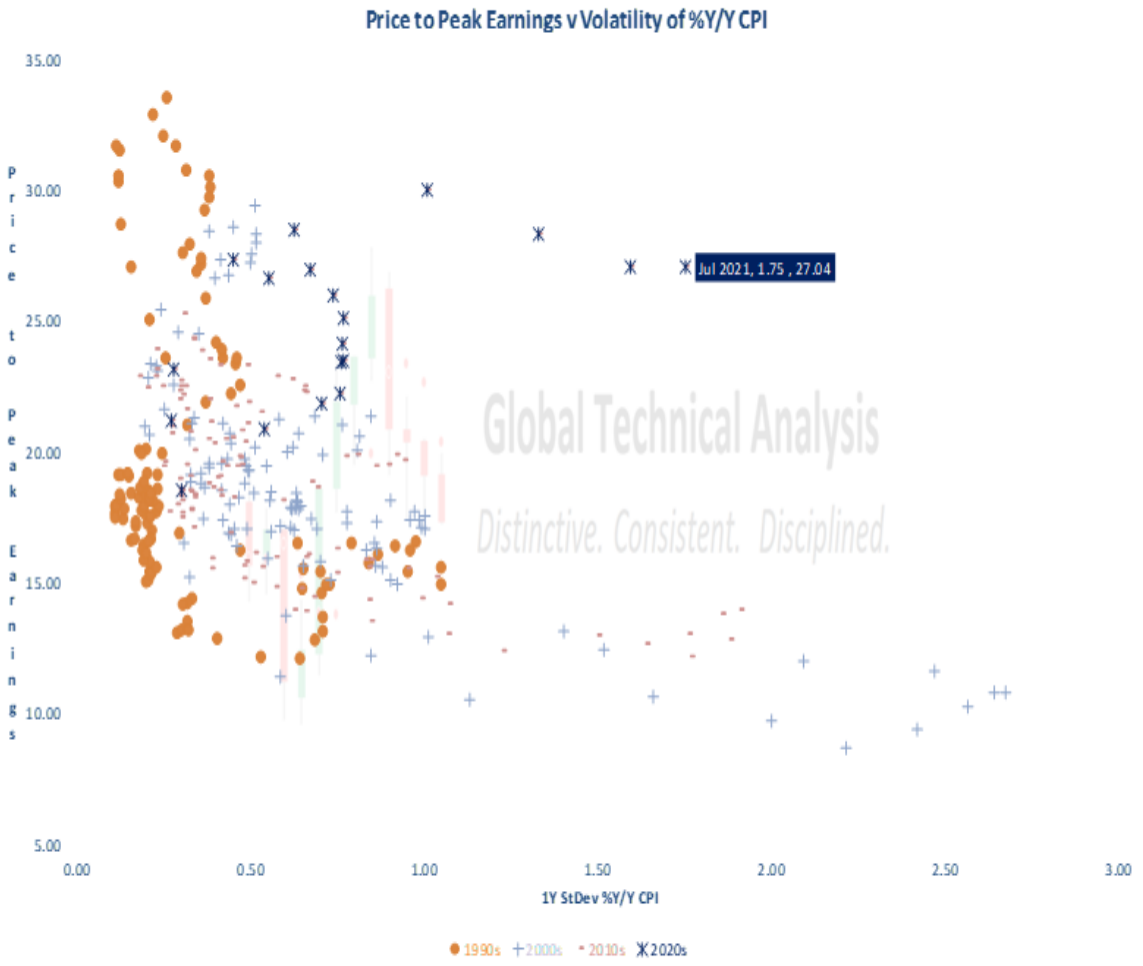
Inflation and PE Multiples

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Inflation and PE Multiples

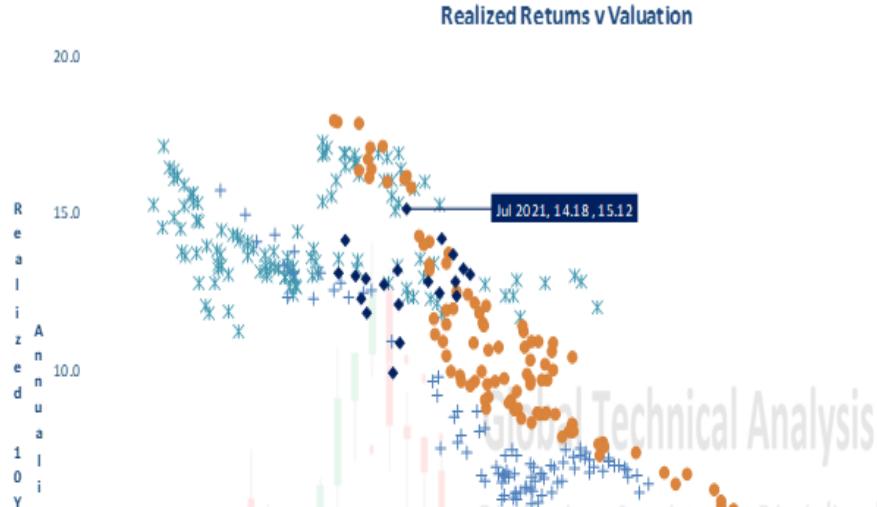
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Lower levels of volatility are rewarded with *higher* earnings multiples.
Higher levels of volatility are punished with *lower* earnings multiples.

PE Multiples and Realized Returns

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J. Brett Freeze, CFA, founder of Global Technical Analysis. Each month Brett will provide you their valuable S&P 500 Valuation Chart Book. This unique analysis provides an invaluable long-term perspective of equity valuations. If you are interested in learning more about their services, please connect with them.