

Comments from Joe Terranova, Virtus Investment Partners
January 2, 2023

“From January 1, 2020 through December 31, 2022, the capital markets endured a global pandemic, war in Eastern Europe, 425 basis points of monetary tightening in six months, and 40-year highs for inflation. Remarkably, the S&P 500® Total Return Index gained 24.72% during this period.”

– Joe Terranova

Capital markets performance recap – 2022

In 2022, time was the enemy as a U-shaped correction unfolded. For 2023, I expect the passage of time to be a friend, offering valuation opportunities across asset classes.

In 2023, investors may wish to prioritize exposure to companies that maintain strong margins, pricing power, and low beta, and return capital to shareholders. Portfolios should employ diversification by asset class, geography, equity size class, and strategy to defend against continued elevated volatility.

Following are statistical reference points for asset price performance in 2022:

Index	Closing Price 12/30/22	2022 YTD
S&P 500® Index	3839.50	-19.44%
S&P 500® Index TR	8178.02	-18.11%
Nasdaq 100 Index	10,939.76	-32.97%
Nasdaq Composite Index	10,466.48	-33.10%
Dow Jones Ind Avg Index	33,147.25	-8.78%
Index	Closing Price 12/30/22	2022 YTD
Russell 2000® Index	1761.25	-21.56%
Russell 1000 Value Index	1497.12	-9.58%
Russell 1000 Growth Index	2158.19	-29.81%
S&P Midcap 400 Index	2430.38	-14.48%
S&P 500 Value Index	1434.59	-7.35%
S&P 500 Growth Index	2361.04	-30.09%
S&P 500 Equal Weight Ind	5739.53	-13.11%
Index	Closing Price 12/30/22	2022 YTD
S&P Muni Bond TR Index	257.35	-8.05%
S&P 500 HY TR Index	966.54	-11.71%
S&P 500 IG TR Index	422.46	-15.08%
MSCI US REIT Index	1153.74	-27.33%
Alerian MLP Index	216.45	+21.63%
Index	Closing Price 12/30/22	2022 YTD
MSCI Emerging Mkt Index	956.38	-22.37%
DAX German Index	13,923.59	-12.35%
FTSE 100 Index	7451.74	+0.91%
Nikkei 225 Index	26,094.50	-9.37%

OBSERVATIONS AND EXPECTATIONS



Shanghai Comp Index	3639.78	-15.13%
S&P Sensex India Index	60,840.74	+4.44%
Brazil Ibovespa Index	109,734.60	+4.69%
Mega-Cap Equities	Closing Price 12/30/22	2022 YTD Total Return
Apple \$2.1t mkt cap	\$129.93	-26.40%
Microsoft \$1.8t mkt cap	\$239.82	-28.02%
Alphabet \$1.1t mkt cap	\$88.23	-39.09%
Amazon \$857bn mkt cap	\$84.00	-49.62%
Tesla \$389bn mkt cap	\$123.18	-65.03%
Meta \$316bn mkt cap	\$120.34	-64.22%
S&P 500® Index Sectors	Index Weighting 12/30/22	2022 YTD Price Return
Energy	+5.23%	+57.60%
Utilities	+3.18%	-1.51%
Consumer Staples	+7.20%	-3.32%
Health Care	+15.82%	-3.58%
Industrials	+8.65%	-7.18%
Financials	+11.66%	-12.42%
Materials	+2.73%	-14.27%
Information Technology	+25.74%	-28.43%
Real Estate	+2.71%	-28.72%
Consumer Discretionary	+9.80%	-36.82%
Communication Services	+7.28%	-38.22%
Miscellaneous	Closing Price 2021	Closing Price 2022
VIX Volatility Index	17.22	21.67
Crude Oil Spot	\$75.21	\$80.26
Natural Gas Spot	\$3.730	\$4.475
Gold Spot	\$1828.60	\$1826.20
Silver Spot	\$23.352	\$24.040
U.S. Dollar Index	95.67	103.522
Euro Spot	1.1370	1.0705
TIPS Bond ETF TIP	\$129.20	\$106.44
Bitcoin	\$46,333.65	\$16,547.50
German 10 Year Govt.	-0.177%	2.571%
U.S. Govt. Bonds	Closing Price 2021	Closing Price 2022
U.S. 3 Month	0.0304%	4.3429%
U.S. 2 Year	0.7322%	4.4258%
U.S. 5 Year	1.2630%	4.0039%
U.S. 10 Year	1.5101%	3.8748%
U.S. 30 Year	1.9032%	3.9630%
U.S. 3 Month vs 10 Year	+145.179 bps	-53.018 bps
U.S. 2 Year vs 5 Year	+52.681 bps	-42.991 bps
U.S. 2 Year vs 10 Year	+77.396 bps	-55.723 bps

Source: Bloomberg. Past performance is not indicative of future results.

Exhibit 1: Federal Reserve 2023 Meeting Schedule

Jan. 31-Feb. 1	July 25-26
March 21-22*	September 19-20*
May 2-3	Oct. 31-Nov. 1
June 13-14*	December 12-13*

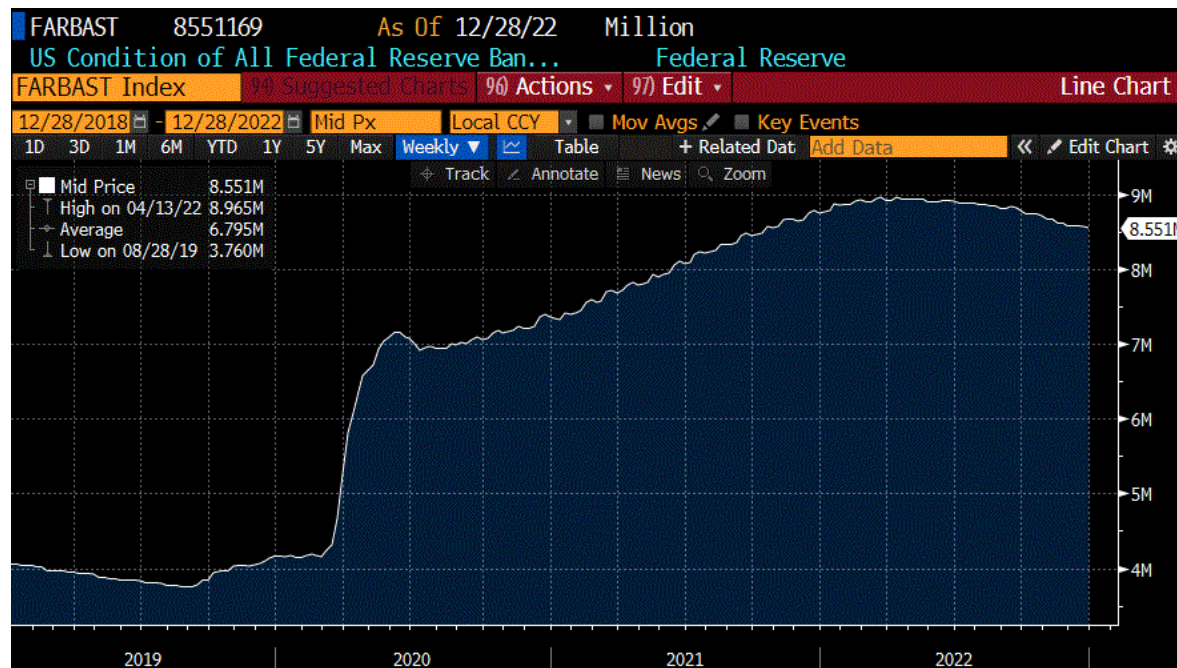
* Indicates a meeting associated with a Summary of Economic Projections.

In March of 2022, the Federal Reserve (the Fed) raised the Fed funds rate for the first time since 2018. An unprecedented six months of monetary tightening by a collective 425 basis points followed. No longer is the speed of rate hikes the focus. Rather, it's the duration of the hikes as the Fed slows the pace to an unknown terminal rate.

More importantly for the capital markets in 2023 will be the intensification of the Fed's balance sheet reduction. In 2022, the Fed had an intended target of \$560 billion in securities that would mature off its balance sheet. The Fed fell short of that target, at only \$400 billion by year end. The balance sheet reduction target for 2023 is \$1.14 trillion. However, with rising mortgage rates, it will be difficult for borrowers to prepay mortgages, therefore constraining the number of mortgage-backed securities that roll off the Fed balance sheet.

Overall, the Fed's balance sheet tightening is likely to stress liquidity conditions and therefore contribute to an environment of persistently elevated volatility.

Federal Reserve Balance Sheet – December 2018 to December 2022



Source: Bloomberg. Past performance is not indicative of future results.

Exhibit 2: The January Effect?

Market historians have tended to use the price action over the first several days of January as a guide for the overall yearly trend. That certainly worked well in 2022, as the S&P 500® Index recorded its high for the year on January 4, 2022, at 4818. However, historical data on the January effect is muddled at best. Since 1990, the average monthly return for January is only 0.1%.

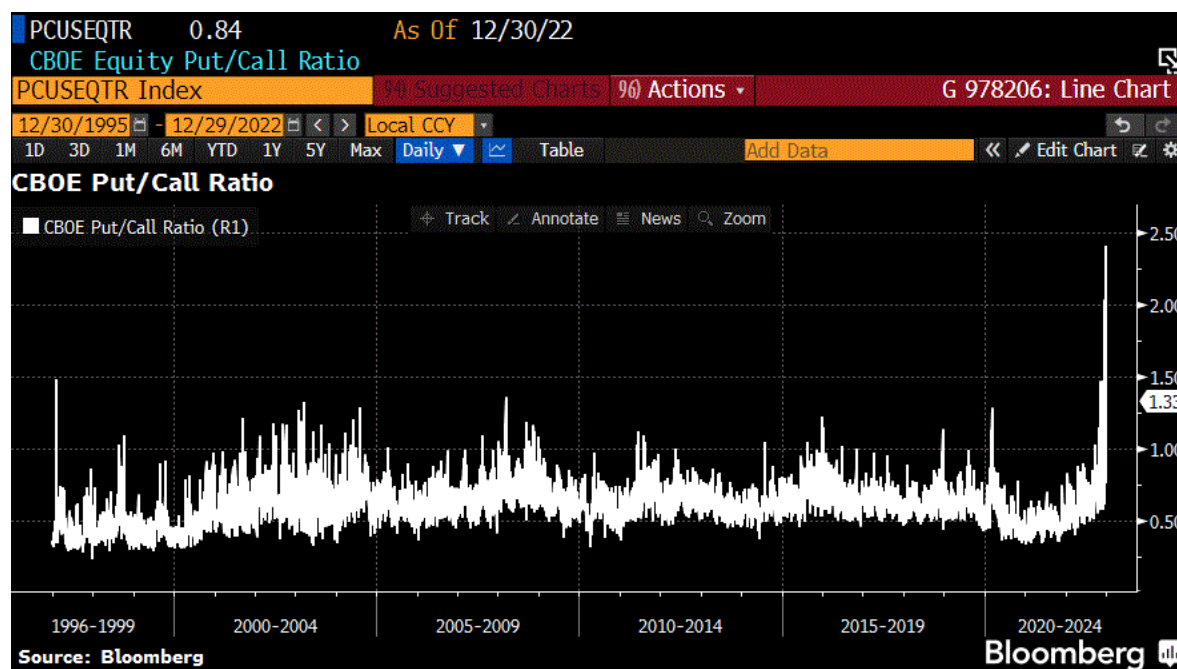
Within that body of evidence is January 2019, which followed a 6.24% annual decline for the S&P 500® Index in 2018 with a 7.8% monthly return, the strongest January since 1987.

Conversely, following the S&P 500® Index's 2008 decline of 38.49%, January 2009 recorded a monthly loss of 8.6%, making it the worst January on record.

What is clear is that the fourth quarter of 2022 offered the most significant tax loss-harvesting opportunities since the end of 2008. In addition, the following three charts highlight the extreme pessimism currently present in the capital markets.

CBOE Put/Call Ratio

On December 28, 2022, the highest ratio skewed to puts since 1995 was recorded, suggesting extreme bearishness in the options hedging market.

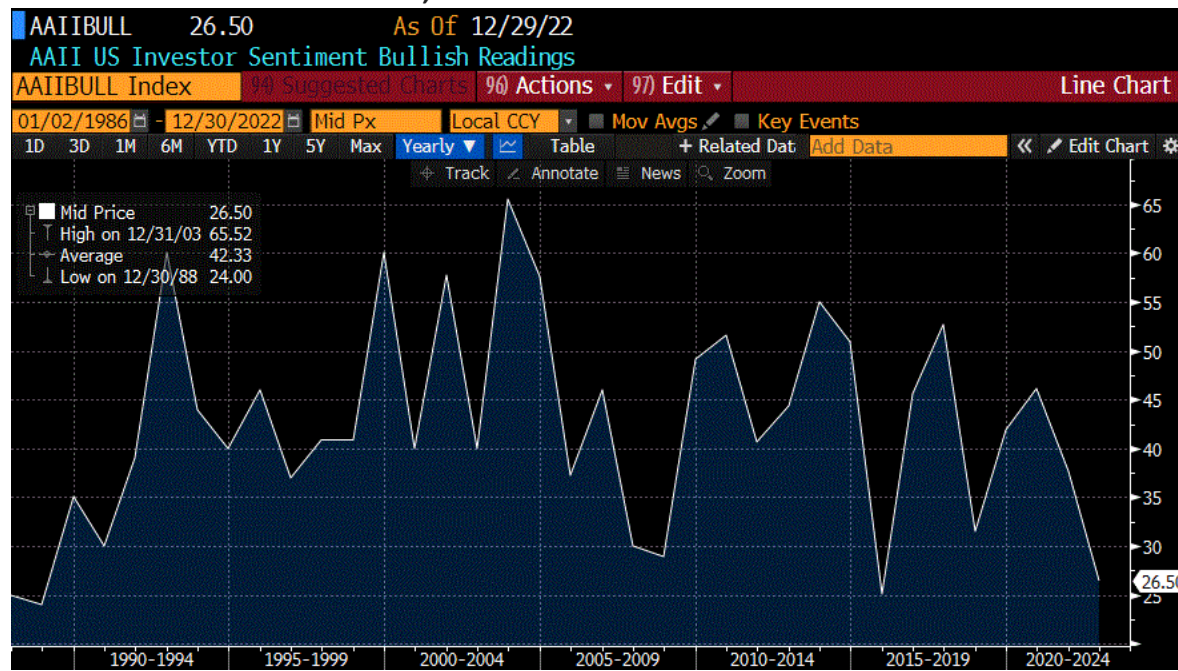


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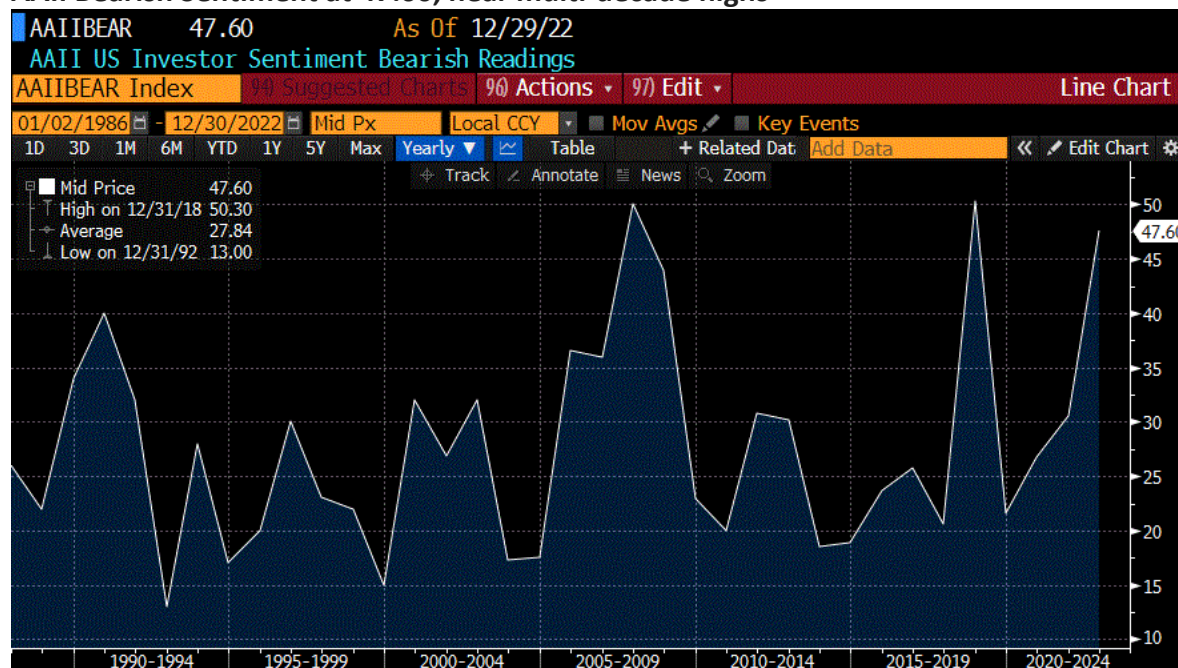
AAII Investor Sentiment Surveys

Since 1987, bull market sentiment has averaged 38% and bear market sentiment 30.5%. That figure represents the number of respondents who expressed confidence that markets will trend higher or lower over the next six months.

AAII Bullish Sentiment at 26.50, near multi-decade lows



AAII Bearish Sentiment at 47.60, near multi-decade highs



Source: Bloomberg. Past performance is not indicative of future results.

Exhibit 3: January Event Calendar

The following key announcements are expected this month, which will likely contribute to the performance of the markets in the near term.

Wednesday, January 4, 2023

10am ISM Manufacturing	Consensus 48.5	Prior Actual 49.0
10am ISM Prices Paid	Consensus 42.9	Prior Actual 43.0
2pm FOMC Meeting Minutes		

Friday, January 6, 2023

8:30am U.S. Nonfarm Payrolls	Consensus +200k	Prior Actual +263k
8:30am Unemployment Rate	Consensus 3.7%	Prior Actual 3.7%
8:30am Avg Hourly Earnings Month-over-Month	Consensus 0.4%	Prior Actual 0.6

Thursday, January 12, 2023

8:30am CPI Year-over-Year	Consensus 6.7%	Prior Actual 7.1%
8:30am CPI Month-over-Month	Consensus 0.0%	Prior Actual 0.1%

Friday, January 13, 2023

S&P 500 Q422 Earnings Reporting Season Begins
Pre-Market: JPM, BAC, C, BLK, WFC

Monday, January 16, 2023

Dr. Martin Luther King, Jr. Federal Holiday

Week of January 17, 2023

S&P 500 Q422 Earnings, 10% of the Index reporting led by Financials

Week of January 23, 2023

S&P 500 Q422 Earnings, 25% of the Index reports led by Technology

Week of January 30, 2023

S&P 500 Q422 Earnings 30% of the Index reports - largest week of the reporting season

Tuesday, January 31, 2023

FOMC Meeting begins, concludes with statement and press conference Wed., Feb. 1, 2023

Source: Bloomberg. **Past performance is not indicative of future results.**

Joe Terranova's industry trends and observations are the result of his research. His observations reflect his industry expertise and have been prepared using sources of information generally believed to be reliable; however, their accuracy is not guaranteed. Opinions represented are subject to change and should not be considered investment advice. Please consult your financial professional for investment advice.

All investments carry a certain degree of risk, including loss of principal.

S&P 500[®] Index: A free-float market-capitalization weighted index of 500 of the largest U.S. companies. The index is calculated on a total return basis with dividends reinvested. S&P 500 Growth and Value Indexes: Each is a market-capitalization weighted index. All the stocks in the underlying parent index are allocated into value or growth. Stocks that do not have pure value or pure growth characteristics have their market caps distributed between the value and growth indexes. MSCI EAFE[®] Index (Net) is a free float-adjusted market capitalization index that measures developed foreign market equity performance, excluding the U.S. and Canada. The index is calculated on a total return basis with net dividends reinvested. The indexes are unmanaged, their returns do not reflect any fees, expenses, or sales charges, and are not available for direct investment.