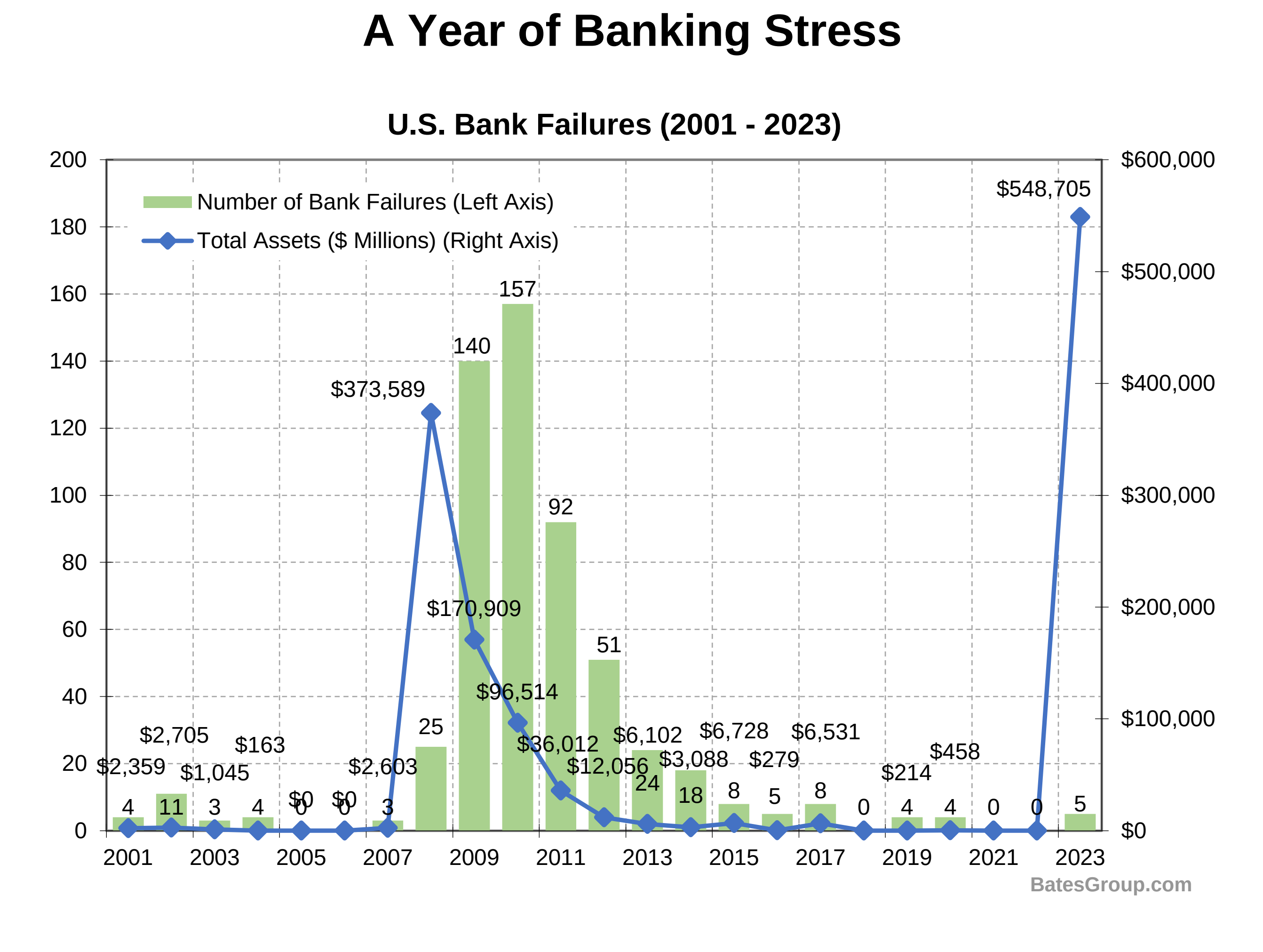
U.S. Chartbook

Economic and Capital Markets Analysis

2023 Year in Review



Source: FDIC

Greg Kyle

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A GOOD YEAR FOR THE ECONOMY, BUT CONCERNS REMAIN

A Goldilocks Landing for the Economy

Heading into 2023, there were widespread concerns that the US economy was heading for a recession. Inflation was running rampant, the Federal Reserve had initiated a series of aggressive rate hikes, there was an inverted yield curve, and market watchers were forecasting negative GDP growth.

Despite such concerns, the US economy defied expectations. Inflation decelerated during the year, the labor market remained resilient, consumer spending was solid, businesses continued to invest particularly in manufacturing, and the inverted yield curve – despite decades as a reliable forecasting tool – failed to accurately herald a recession in 2023.

Inflation was Tamed – Almost

While inflation was the buzzword in 2022 after reaching 40-year highs, 2023 has been a year of decelerating if not declining inflation in food, clothing, energy, and medical care. However, shrinkflation still seems to be an issue as we head into 2024.

As consumers pushed back on higher prices for groceries, many companies resorted to holding prices steady for packaged food and other items, opting instead to reduce the quantity in the packaging. From cereal boxes, paper towels and other groceries to cosmetics, shrinkflation has been the (not so) hidden way companies have continued to raise prices. According to a recent New York Times report, over the past five years shrinkflation has added an additional 2.6 to 3.6 percent to prices, with household paper products experiencing the largest impact in 'downsizing'.

A Solid Employment Situation

On the employment front, job gains remained solid. During 2023, over 3 million jobs were added to payrolls. Although this is less than the 4.5 million jobs added in 2022, it is still a strong performance. The unemployment rate remained below 4% throughout the year and the 'true' unemployment rate (U-6), ended 2023 at 7.1%, down from 20% in 2021. Wage growth, even adjusting for inflation, was positive during the year, making it, all-in-all, a good year for the labor market.

A Challenging Year for the Banking Sector

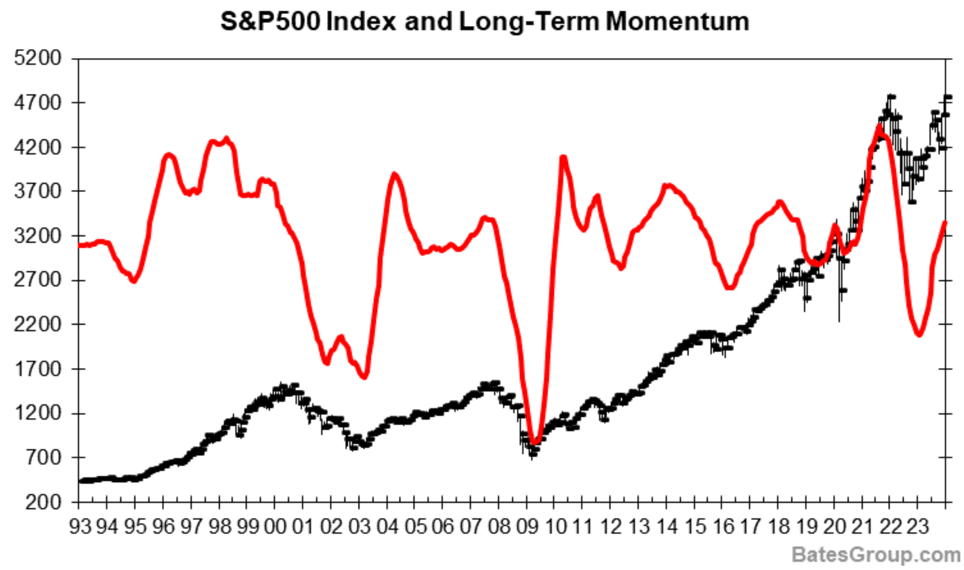
If 2023 was notable for one thing, it was the stress in the banking sector and the rapid collapse of a few banks in 2023. During a span of just one week, SVB, Signature Bank and Silvergate Capital closed doors, leading many to fear that the banking sector was on the verge of another historic collapse. However, the fallout remained limited as investors and depositors realized that overall, the quality of bank assets was strong. Cash and US Government securities accounted for nearly a third of aggregate bank assets, which is at historic highs and more than double the amount during the financial crisis of 2008. Cash as a percent of total deposits were also 4x higher at the end of 2023 than in 2008.

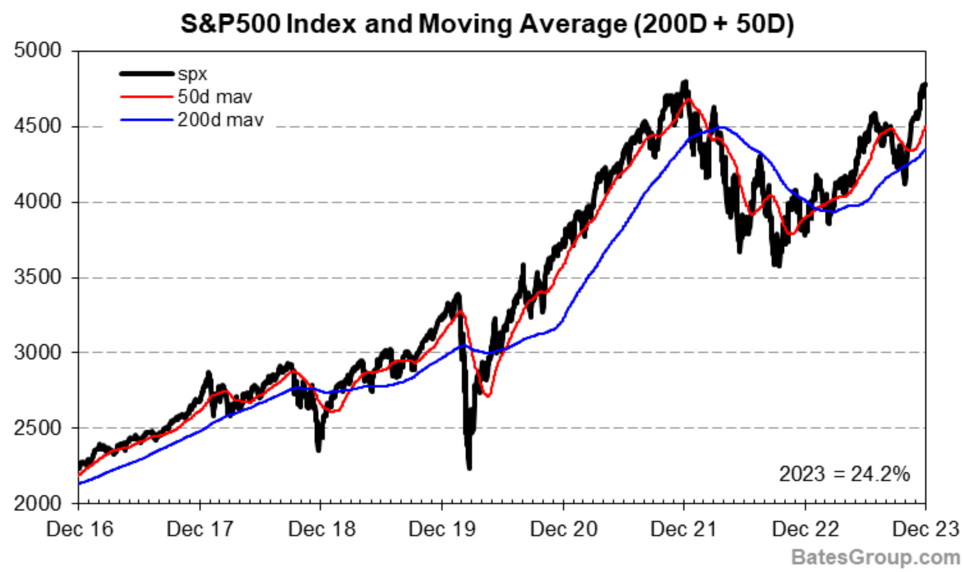
Yet, cash today can be transferred at a speed that was unthinkable just 10 years ago, and that has, in part, led to continued concerns. SVB was a classic example of this new type of bank run when it experienced deposit outflows of 25% of its total deposit base in just a single day! Going forward, expect regulators to take a hard look at strengthening bank capital requirements in an era where massive amounts of cash can flow between institutions in a matter of milliseconds.

Equity Markets – S&P 500 Market Trends

2023 was a banner year for equites with the broader market, as represented by the S&P 500 Index, climbing over 24%.

Overall, the S&P 500 Index was up eight of the twelve months in 2023. Q4 was the strongest quarter of 2023, with the index up 11.2%.





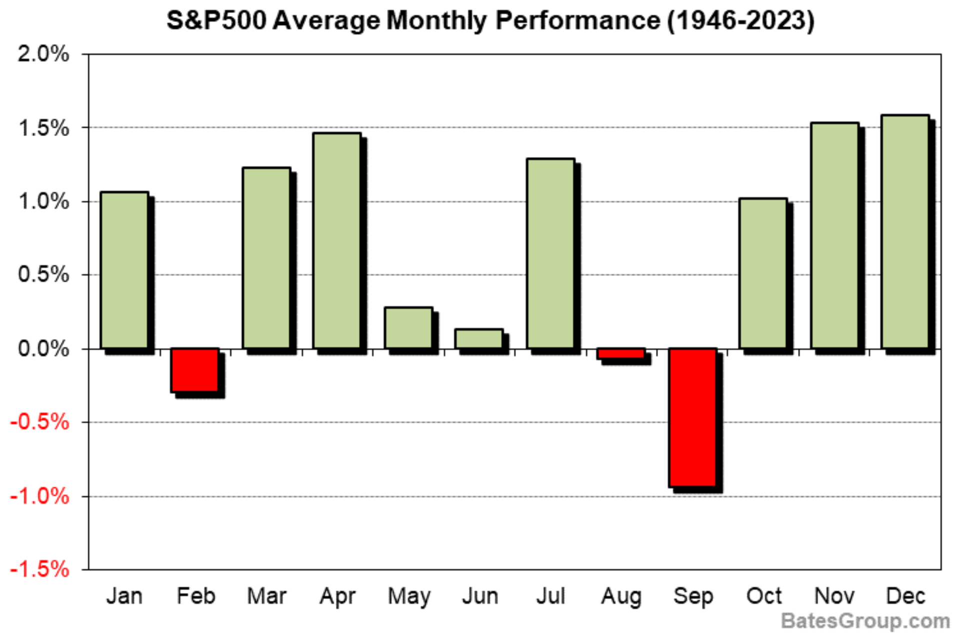
S&P 500 Monthly Performance (% change over previous month)

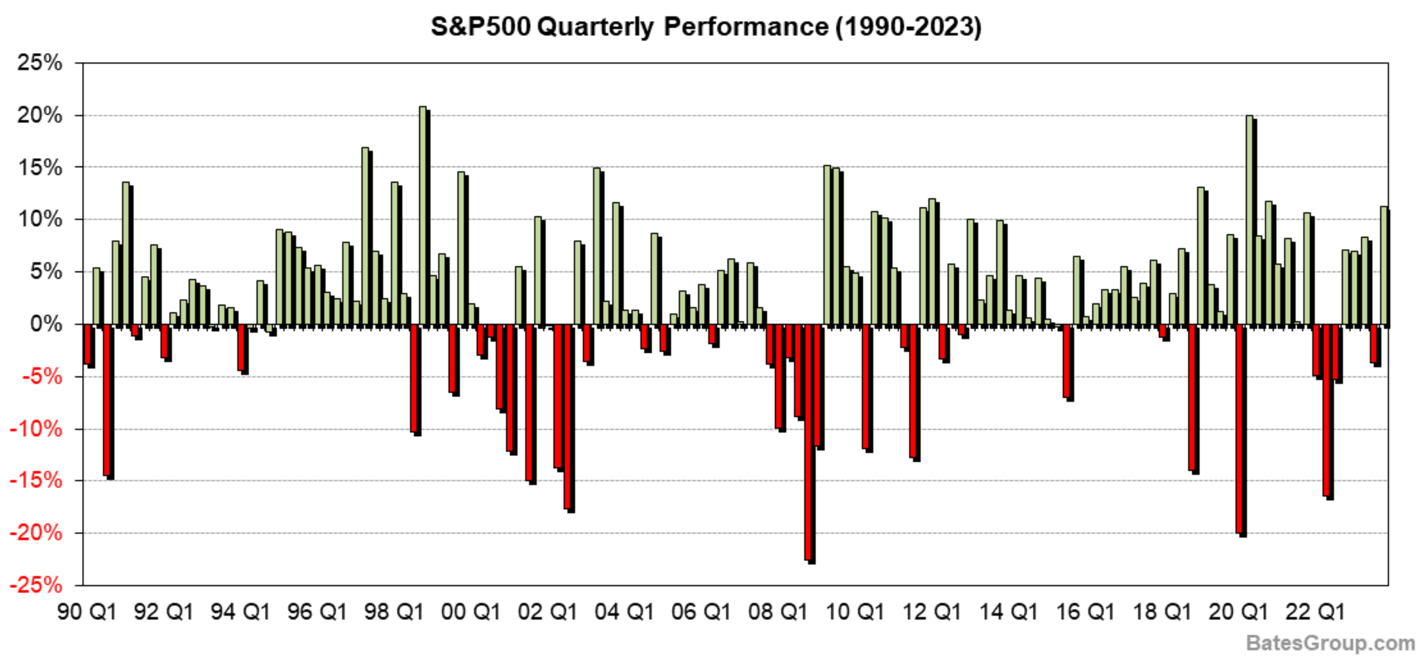
															--- 1946-2023 ---		
Month	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Avg	Min	Max
Jan	-3.7%	2.3%	4.4%	5.0%	-3.6%	-3.1%	-5.1%	1.8%	5.6%	7.9%	-0.2%	-1.1%	-5.3%	6.2%	1.1%	-8.6%	13.2%
Feb	2.9%	3.2%	4.1%	1.1%	4.3%	5.5%	-0.4%	3.7%	-3.9%	3.0%	-8.4%	2.6%	-3.1%	-2.6%	-0.3%	-11.0%	7.1%
Mar	5.9%	-0.1%	3.1%	3.6%	0.7%	-1.7%	6.6%	-0.0%	-2.7%	1.8%	-12.5%	4.2%	3.6%	3.5%	1.2%	-12.5%	9.7%
Apr	1.5%	2.8%	-0.7%	1.8%	0.6%	0.9%	0.3%	0.9%	0.3%	3.9%	12.7%	5.2%	-8.8%	1.5%	1.5%	-9.0%	12.7%
May	-8.2%	-1.4%	-6.3%	2.1%	2.1%	1.0%	1.5%	1.2%	2.2%	-6.6%	4.5%	0.5%	0.0%	0.2%	0.3%	-8.6%	9.2%
Jun	-5.4%	-1.8%	4.0%	-1.5%	1.9%	-2.1%	0.1%	0.5%	0.5%	6.9%	1.8%	2.2%	-8.4%	6.5%	0.1%	-8.6%	8.2%
Jul	6.9%	-2.1%	1.3%	4.9%	-1.5%	2.0%	3.6%	1.9%	3.6%	1.3%	5.5%	2.3%	9.1%	3.1%	1.3%	-7.9%	9.1%
Aug	-4.7%	-5.7%	2.0%	-3.1%	3.8%	-6.3%	-0.1%	0.1%	3.0%	-1.8%	7.0%	2.9%	-4.2%	-1.8%	-0.1%	-14.6%	11.6%
Sep	8.8%	-7.2%	2.4%	3.0%	-1.6%	-2.6%	-0.1%	1.9%	0.4%	1.7%	-3.9%	-4.8%	-9.3%	-4.9%	-0.9%	-14.4%	8.8%
Oct	3.7%	10.8%	-2.0%	4.5%	2.3%	8.3%	-1.9%	2.2%	-6.9%	2.0%	-2.8%	6.9%	8.0%	-2.2%	1.0%	-21.8%	16.3%
Nov	-0.2%	-0.5%	0.3%	2.8%	2.5%	0.1%	3.4%	2.8%	1.8%	3.4%	10.8%	-0.8%	5.4%	8.9%	1.5%	-11.4%	10.8%
Dec	6.5%	0.9%	0.7%	2.4%	-0.4%	-1.8%	1.8%	1.0%	-9.2%	2.9%	3.7%	4.4%	-5.9%	4.4%	1.6%	-9.2%	11.2%

On a month-to-month basis, December has historically been the strongest performing month, while September has been the weakest.

The summer months, with the exception of July, have also been historically weak. This has led to the old Wall Street adage, *"Sell in May, go away."*

In terms of quarterly returns, the fourth quarter has historically been the strongest quarter for the S&P 500 Index, with an average gain of 3.7% (1946-2023 average).

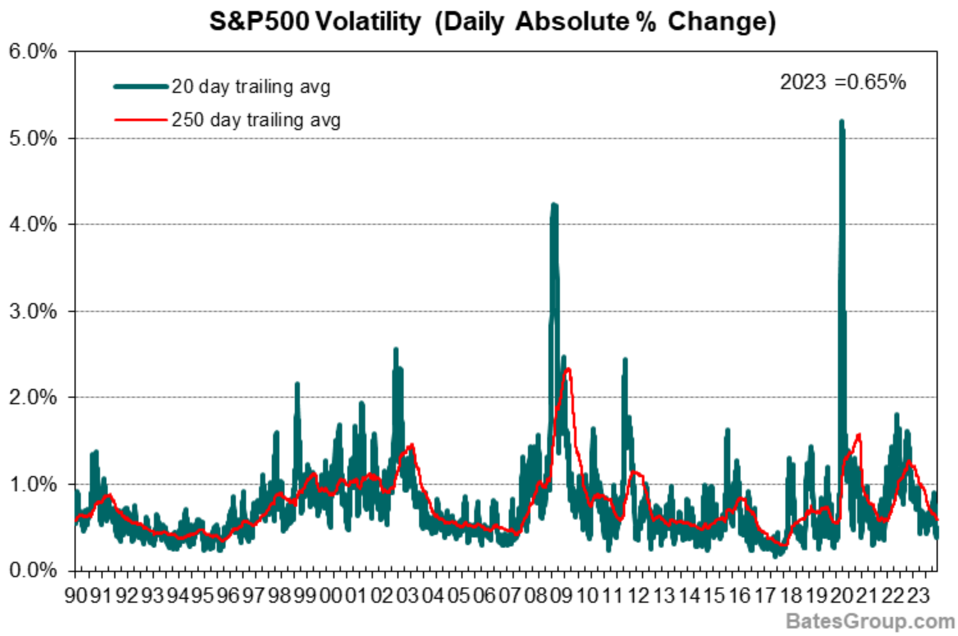




In 2023, volatility for the broader market continued to trend lower as the S&P 500 Index climbed out of the bear market in 2022.

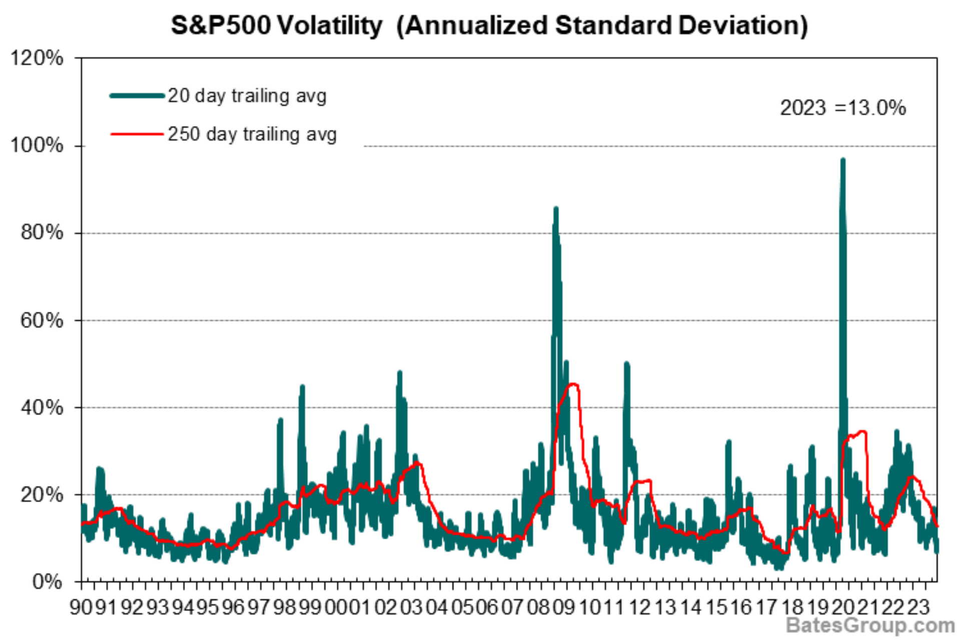
During the year, the S&P 500 Index moved up or down 0.65% each day on average. This compares with average absolute daily price swings of 1.19% in 2022.

In comparison, over the past 30 years the average daily absolute price swing has been 0.79%.



In terms of annualized standard deviation, the S&P500's volatility was 13.0% in 2023, down nearly by half from 24.1% in 2022.

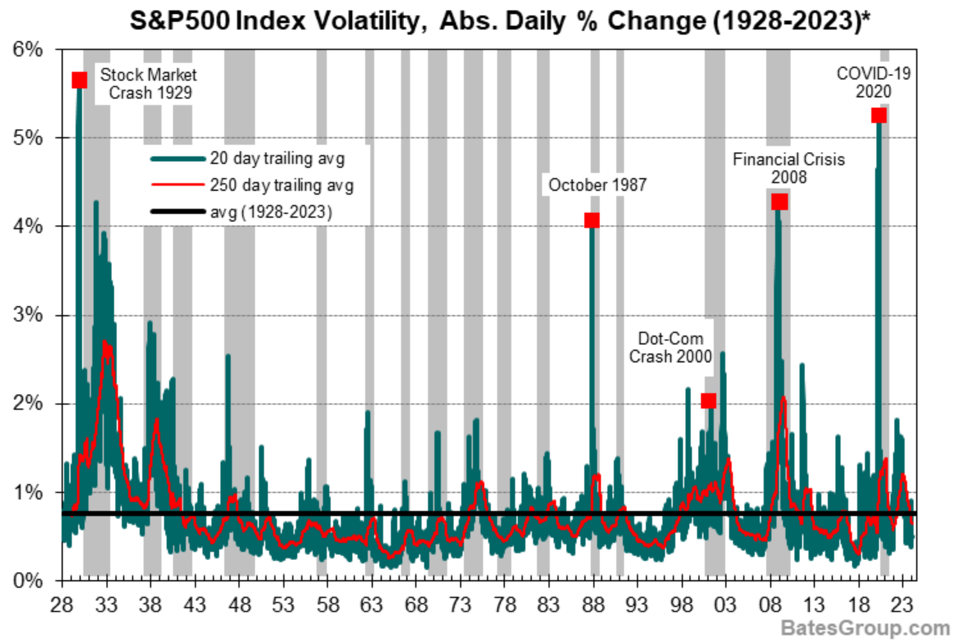
In comparison, the average volatility over the past thirty years has been 18.7%.



The chart to the right shows volatility for the broader market over the past nearly 100 years.

Not surprisingly, the pandemic had a significant impact on the equity markets, with the markets experiencing some of the highest volatility levels in history, even surpassing the crash of October 1987.

In 2023, the S&P 500 experienced 64 days of 1% or greater daily price moves. This compares to 122 days in 2022.



A History of Bear Markets (1929-2023)

-------- Date -------- Start	End	----- Index Value ----- Start	End	Percent Loss	Duration (Months)	Recession	Years to Recover	Comments
16-Sep-1929	1-Jun-1932	31.86	4.40	-86%	33	Yes	25.0	Crash of 1929
10-Mar-1937	28-Apr-1942	18.67	7.47	-60%	61	Yes	8.9	Austerity measures, WWII
29-May-1946	13-Jun-1949	19.25	13.55	-30%	36	Yes	4.0	Post WWII inventory recession
2-Aug-1956	22-Oct-1957	49.74	38.98	-22%	15	Yes	2.1	Cold War concerns
12-Dec-1961	26-Jun-1962	72.64	52.32	-28%	6	No	1.7	Bay of Pigs, Cold War escalation
9-Feb-1966	7-Oct-1966	94.06	73.20	-22%	8	No	1.2	Vietnam War concerns
29-Nov-1968	26-May-1970	108.37	69.29	-36%	18	Yes	3.3	Vietnam tensions in U.S.
11-Jan-1973	3-Oct-1974	120.24	62.28	-48%	21	Yes	7.5	OPEC oil embargo
28-Nov-1980	12-Aug-1982	140.52	102.42	-27%	21	Yes	1.9	Volker high interest rates (20%)
25-Aug-1987	4-Dec-1987	336.77	223.92	-34%	3	No	1.9	Black Monday crash
16-Jul-1990	11-Oct-1990	368.95	295.46	-20%	3	Yes	0.6	Iraq invades Kuwait (Iraq War)
24-Mar-2000	9-Oct-2002	1527.46	776.76	-49%	31	Yes	7.2	Dot-com crash
9-Oct-2007	9-Mar-2009	1565.15	676.53	-57%	17	Yes	5.5	Financial crisis
20-Sep-2018	24-Dec-2018	2930.75	2351.10	-20%	3	No	0.6	US-China trade war
19-Feb-2020	23-Mar-2020	3386.15	2237.40	-34%	1	Yes	0.5	COVID-19
3-Jan-2022	12-Oct-2022	4796.56	3577.03	-25%	9	No	2.0	Inflation concerns
Average		**--**	**--**	**-37%**	**18**	**Yes**	**4.6**	**--**

** Shaded areas represent bear markets*

S&P 500 Historical Volatility Table*

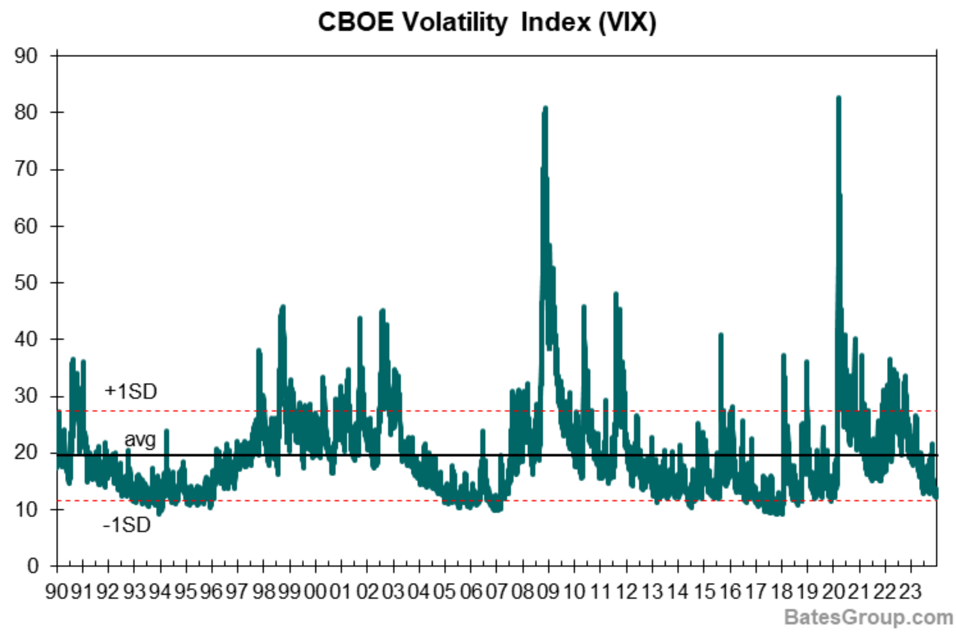
Number of Days with Percentage Moves Greater Than …

	<-1.0%	>1.0%	Total	<-2.0%	>2.0%	Total	<-4.0%	>4.0%	Total	<-5.0%	>5.0%	Total	abs % ch	Annual. StDev
1970	34	31	65	4	7	11	0	1	1	0	1	1	0.69%	15.10%
1971	14	18	32	0	1	1	0	0	0	0	0	0	0.48%	10.17%
1972	6	4	10	0	0	0	0	0	0	0	0	0	0.40%	7.93%
1973	43	35	78	6	9	15	0	0	0	0	0	0	0.78%	15.76%
1974	67	47	114	15	17	32	0	3	3	0	0	0	1.06%	21.73%
1975	35	45	80	3	8	11	0	0	0	0	0	0	0.79%	15.37%
1976	14	25	39	0	0	0	0	0	0	0	0	0	0.57%	11.06%
1977	12	5	17	0	0	0	0	0	0	0	0	0	0.45%	9.04%
1978	24	19	43	1	3	4	0	0	0	0	0	0	0.61%	12.55%
1979	13	17	30	1	2	3	0	0	0	0	0	0	0.51%	10.80%
1980	37	43	80	7	4	11	0	0	0	0	0	0	0.82%	16.40%
1981	30	24	54	4	3	7	0	0	0	0	0	0	0.66%	13.40%
1982	38	44	82	6	11	17	0	1	1	0	0	0	0.85%	18.18%
1983	26	29	55	1	3	4	0	0	0	0	0	0	0.66%	13.27%
1984	16	25	41	0	7	7	0	0	0	0	0	0	0.61%	12.70%
1985	7	21	28	0	1	1	0	0	0	0	0	0	0.50%	10.12%
1986	25	35	60	6	3	9	1	0	1	0	0	0	0.67%	14.64%
1987	42	53	95	20	20	40	4	3	7	3	2	5	1.13%	32.01%
1988	31	37	68	5	11	16	2	0	2	1	0	1	0.74%	17.02%
1989	14	26	40	2	2	4	1	0	1	1	0	1	0.58%	13.01%
1990	42	33	75	8	5	13	0	0	0	0	0	0	0.77%	15.89%
1991	25	34	59	2	7	9	0	0	0	0	0	0	0.67%	14.24%
1992	11	17	28	0	0	0	0	0	0	0	0	0	0.46%	9.64%
1993	7	10	17	1	0	1	0	0	0	0	0	0	0.40%	8.57%
1994	15	12	27	1	1	2	0	0	0	0	0	0	0.46%	9.80%
1995	4	9	13	0	0	0	0	0	0	0	0	0	0.37%	7.78%
1996	17	21	38	3	0	3	0	0	0	0	0	0	0.56%	11.73%
1997	31	50	81	6	9	15	1	1	2	1	1	2	0.85%	18.06%
1998	32	47	79	12	11	23	1	2	3	1	1	2	0.92%	20.21%
1999	40	52	92	9	14	23	0	0	0	0	0	0	0.91%	18.00%
2000	54	48	102	19	18	37	1	1	2	1	0	1	1.06%	22.13%
2001	54	51	105	13	12	25	2	2	4	0	1	1	1.03%	21.47%
2002	72	53	125	29	23	52	1	5	6	0	2	2	1.27%	25.94%
2003	37	45	82	5	10	15	0	0	0	0	0	0	0.83%	17.00%
2004	20	21	41	0	0	0	0	0	0	0	0	0	0.54%	11.05%
2005	17	13	30	0	0	0	0	0	0	0	0	0	0.52%	10.24%
2006	13	16	29	0	2	2	0	0	0	0	0	0	0.47%	10.00%
2007	34	31	65	11	6	17	0	0	0	0	0	0	0.72%	15.92%
2008	75	59	134	41	31	72	15	13	28	11	7	18	1.74%	40.79%
2009	55	62	117	28	27	55	6	5	11	1	2	3	1.24%	27.18%
2010	37	39	76	10	12	22	0	1	1	0	0	0	0.80%	17.98%
2011	48	48	96	21	14	35	4	3	7	1	0	1	1.04%	23.18%
2012	21	29	50	3	3	6	0	0	0	0	0	0	0.59%	12.72%
2013	17	21	38	2	2	4	0	0	0	0	0	0	0.54%	11.02%
2014	19	19	38	4	2	6	0	0	0	0	0	0	0.53%	11.33%
2015	31	41	72	6	4	10	0	0	0	0	0	0	0.72%	15.43%
2016	22	26	48	5	4	9	0	0	0	0	0	0	0.58%	13.04%
2017	4	4	8	0	0	0	0	0	0	0	0	0	0.30%	6.66%
2018	32	32	64	15	5	20	1	1	2	0	0	0	0.74%	16.98%
2019	15	22	37	5	2	7	0	0	0	0	0	0	0.57%	12.42%
2020	45	64	109	25	19	44	9	8	17	5	5	10	1.35%	34.29%
2021	21	34	55	5	2	7	0	0	0	0	0	0	0.63%	13.05%
2022	63	59	122	23	23	46	2	1	3	0	1	1	1.19%	24.08%
2023	28	36	64	1	1	2	0	0	0	0	0	0	0.65%	13.04%
Av28-23	**30**	**32**	**61**	**9**	**8**	**17**	**2**	**1**	**3**	**1**	**1**	**2**	**0.76%**	**18.69%**

** Based on daily closing prices*

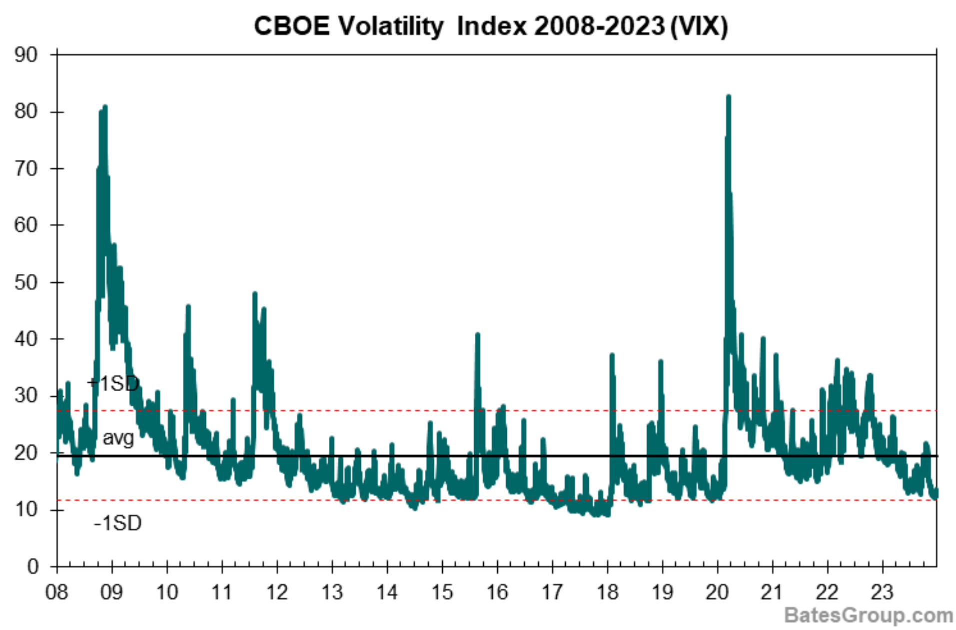
The VIX Index is a measure of *investors' expectation* of future short-term volatility and is composed of S&P 500 call and put options over a wide range of strike prices, with expirations between 23 and 37 days.

After a historic Covid-induced high in 2020, equity market volatility, as measured by the CBOE Volatility (VIX) Index, continued to decline in 2023.



The two days with the greatest single-day increase in the history of the VIX occurred in March 2020.

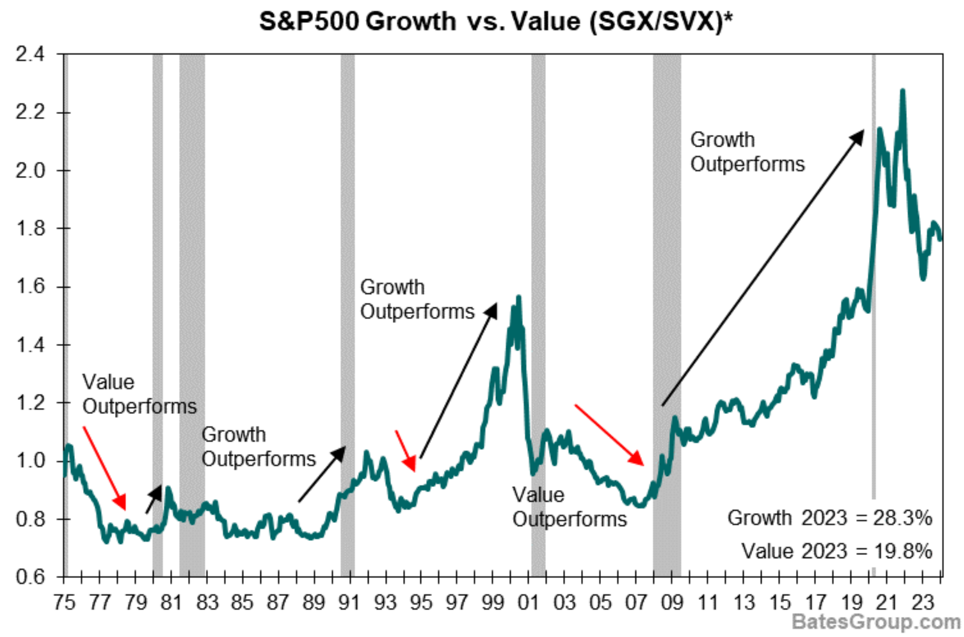
On March 12, as the S&P Index, driven by COVID pandemic fears, fell 9.5% the VIX Index jumped 21.57 points. Two trading days later on March 16, the VIX surged another 24.86 points as the S&P Composite Index plunged 12%.



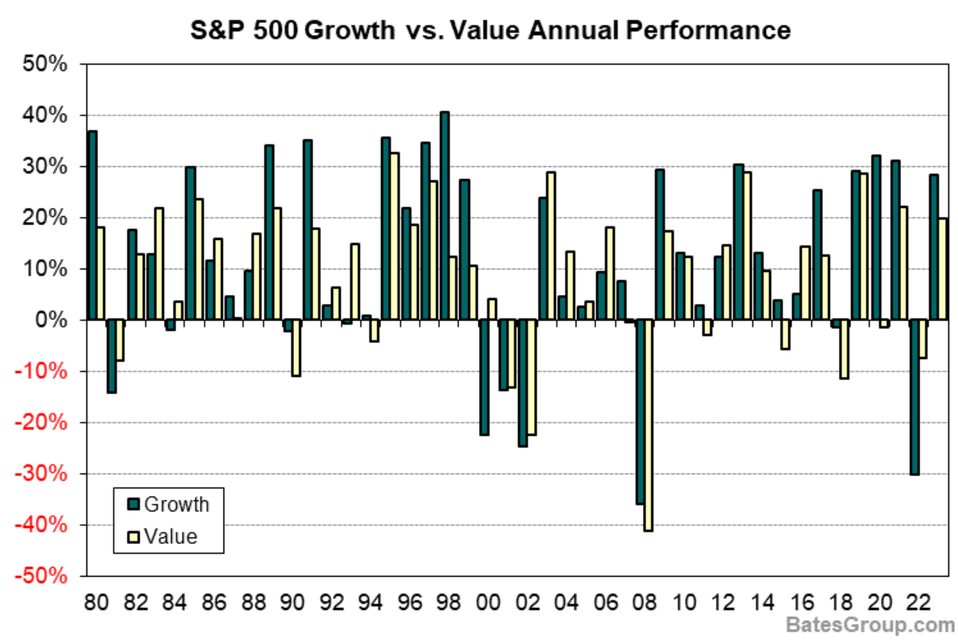
Source: Bloomberg, Chicago Board Options Exchange

Growth vs. Value

In the trade-off between growth and value, growth stocks outperformed value stocks in 2023 with the S&P Growth Index up 28% for the year. In comparison, the S&P Value Index was up nearly 20%.



The chart to the right provides a more detailed performance comparison between growth and value styles over the past 40 years.

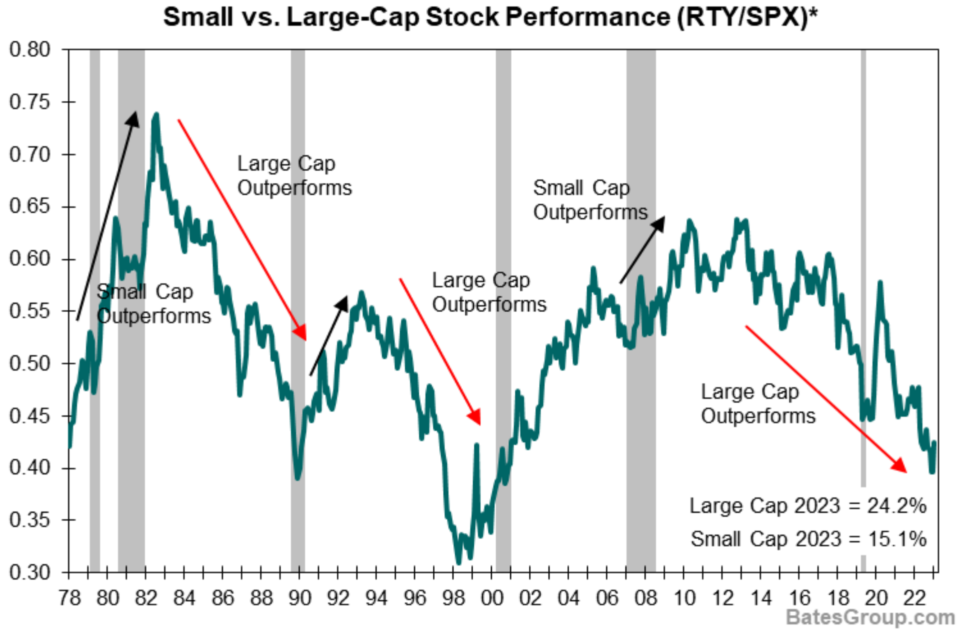


** Shaded areas represent recessions*
Source: Bloomberg, Standard & Poor's

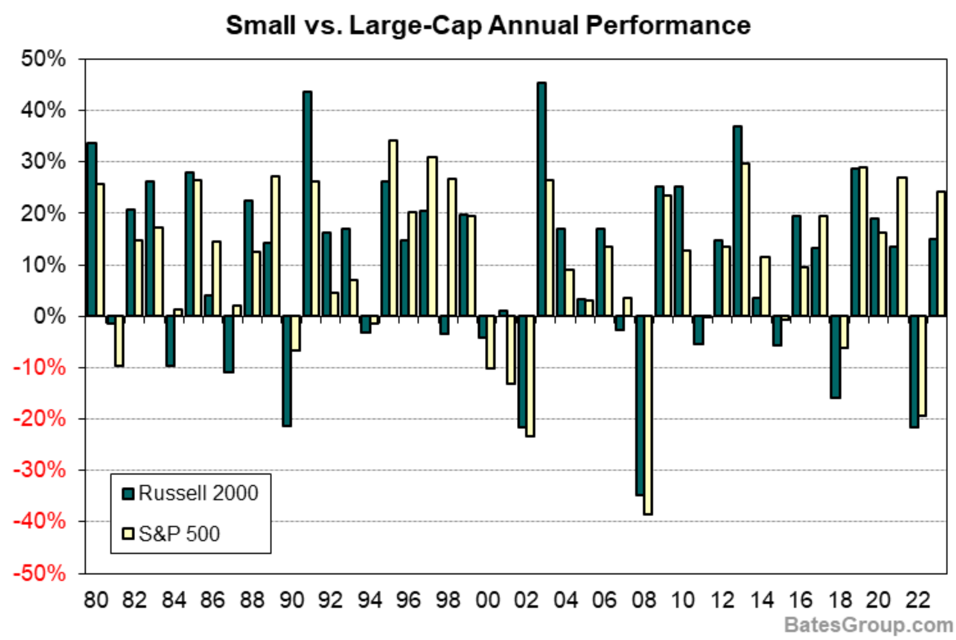
Large vs. Small

Continuing a trend of the last few years, large cap stocks outperformed small cap stocks in 2023.

Large capitalization stocks, as represented by the S&P 500, were up 24.2% in 2023. In comparison, small capitalization stocks, as represented by the Russell 2000 Index, were up 15% during the year.



Historically during recessions, neither investment styles tend to provide shelter. This can be seen in the chart to the right in which both indices declined during the 1990, 2000, 2008 and most recent recessions.



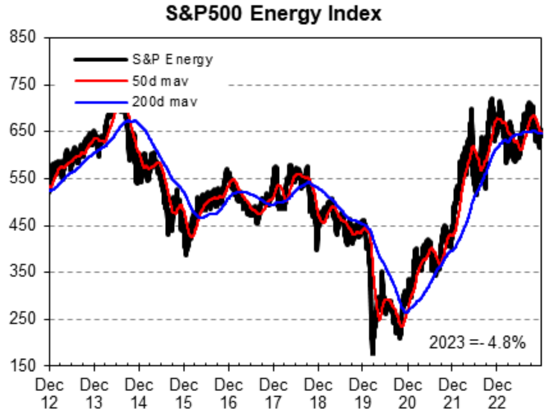
** Shaded areas represent recessions*
Source: Bloomberg, Standard & Poor's

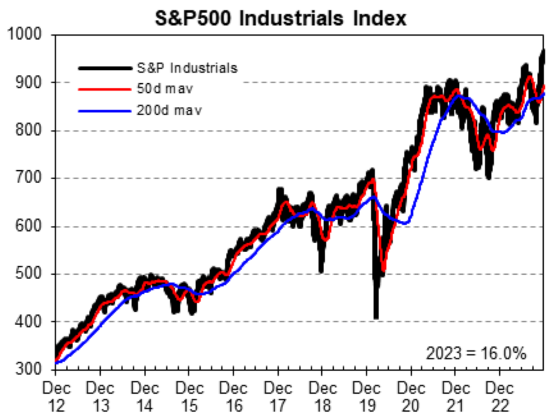
S&P 500 Sector Trends

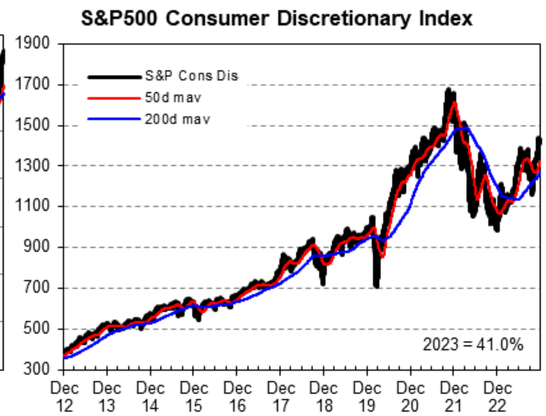
The breadth of the stock market in 2023 was overall strong with most of the S&P 500 sectors closing the year in the black.

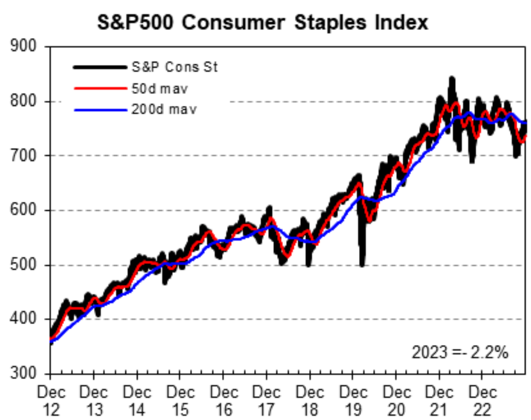
The Information Technology sector led the gains, with a strong 56.4% finish. Communication Services finished 2023 up 54.4%.

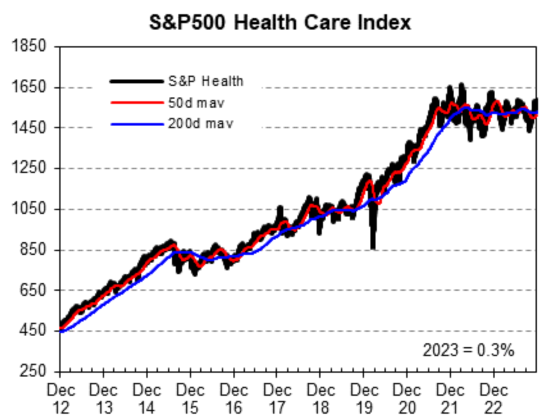
The weakest sector was Utilities which was down 10.2% in 2023. Energy was the next weakest sector declining 4.8% in the year.

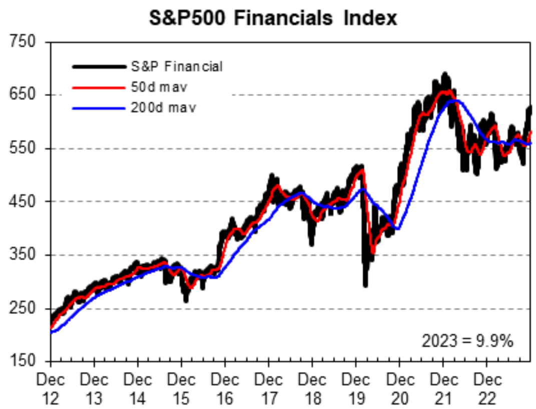


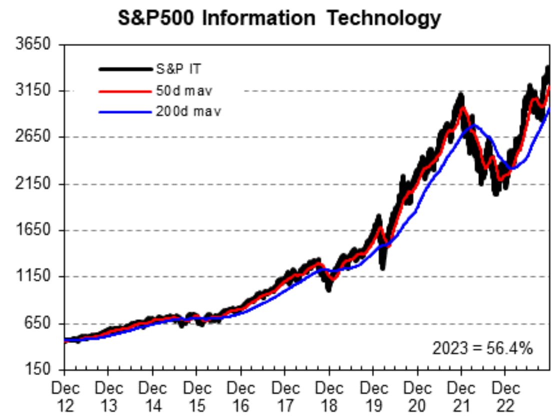


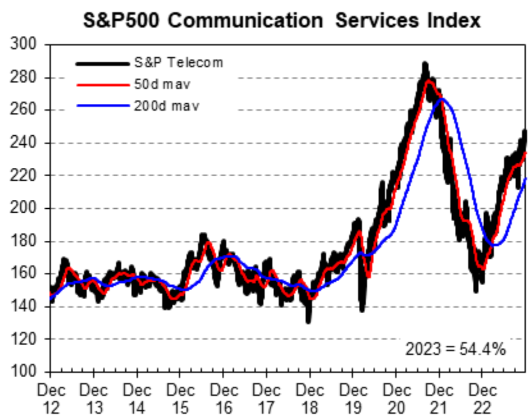


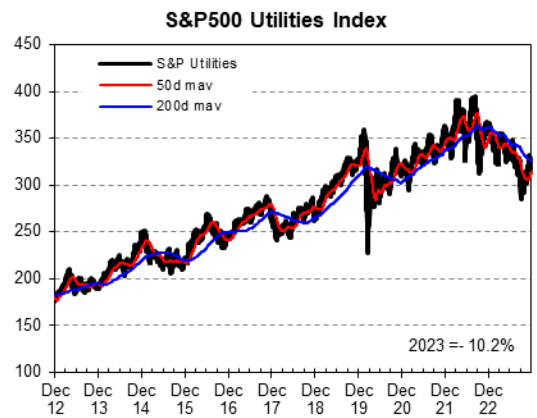








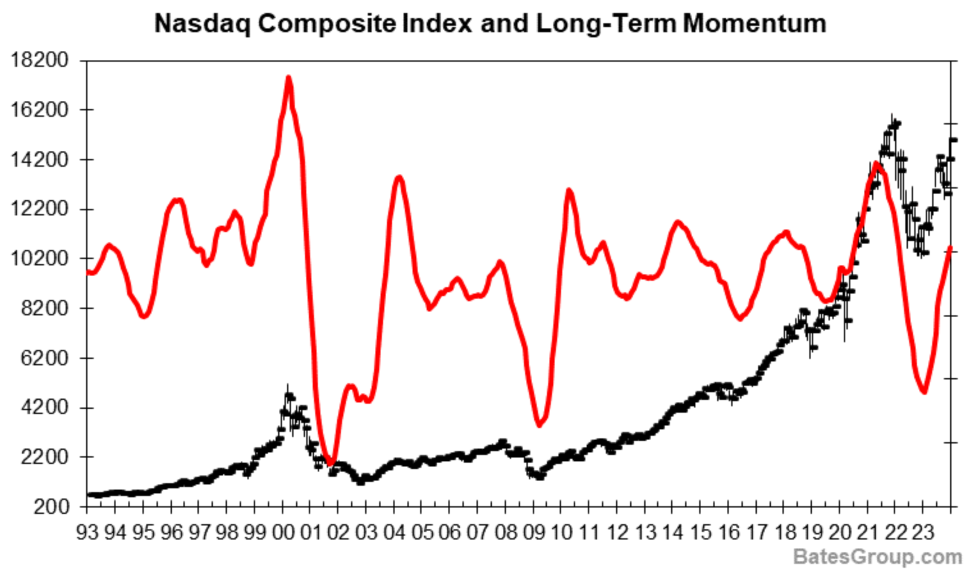




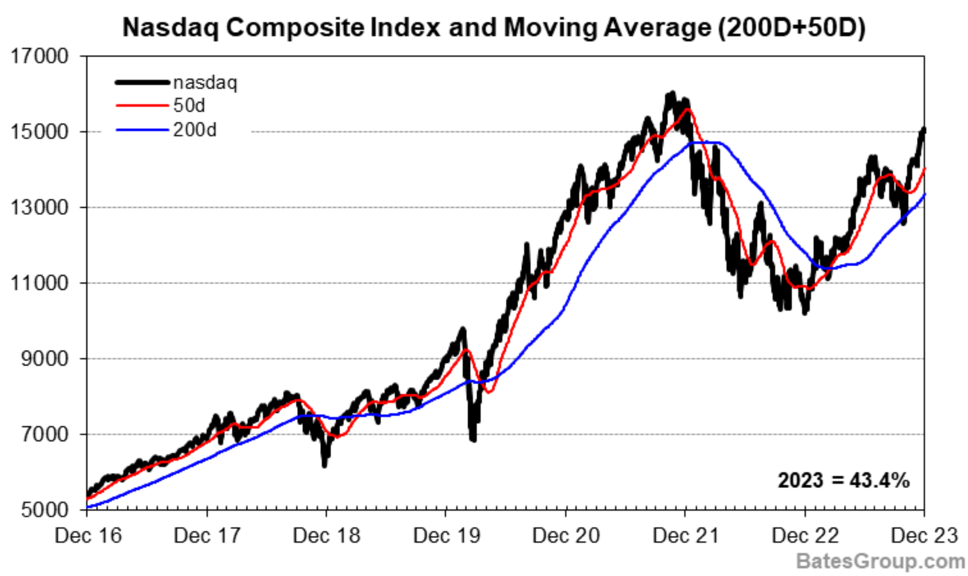
Source: Bloomberg, Standard & Poor's

Nasdaq Market Trends

The tech-focused Nasdaq Composite Index finished 2023 up over 43%, after bouncing back from 2022's 33% decline.



In 2023 the Nasdaq Composite Index posted gains in eight of the twelve months of the year.

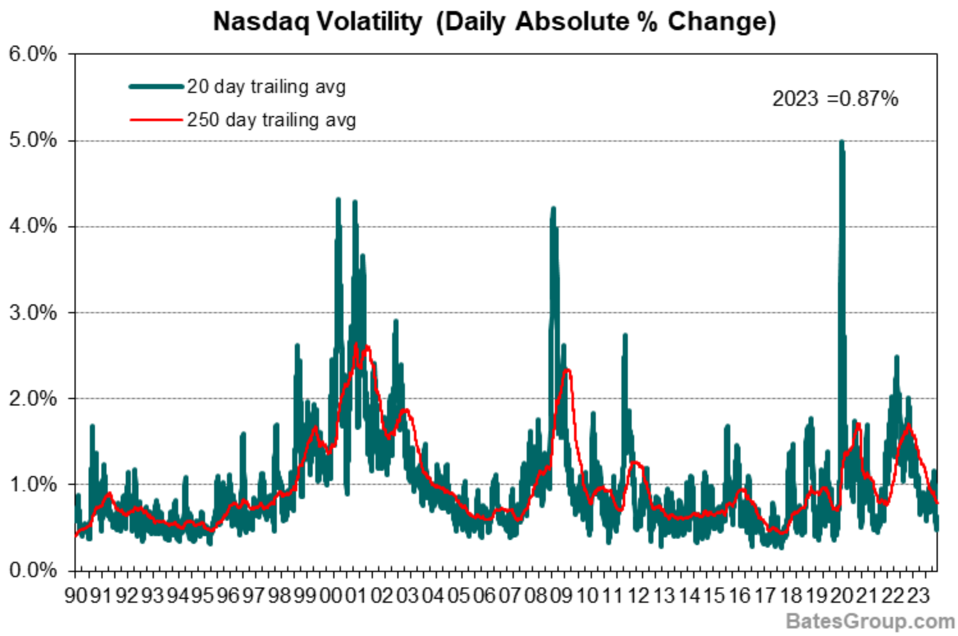


Nasdaq Monthly Performance (% change over previous month)

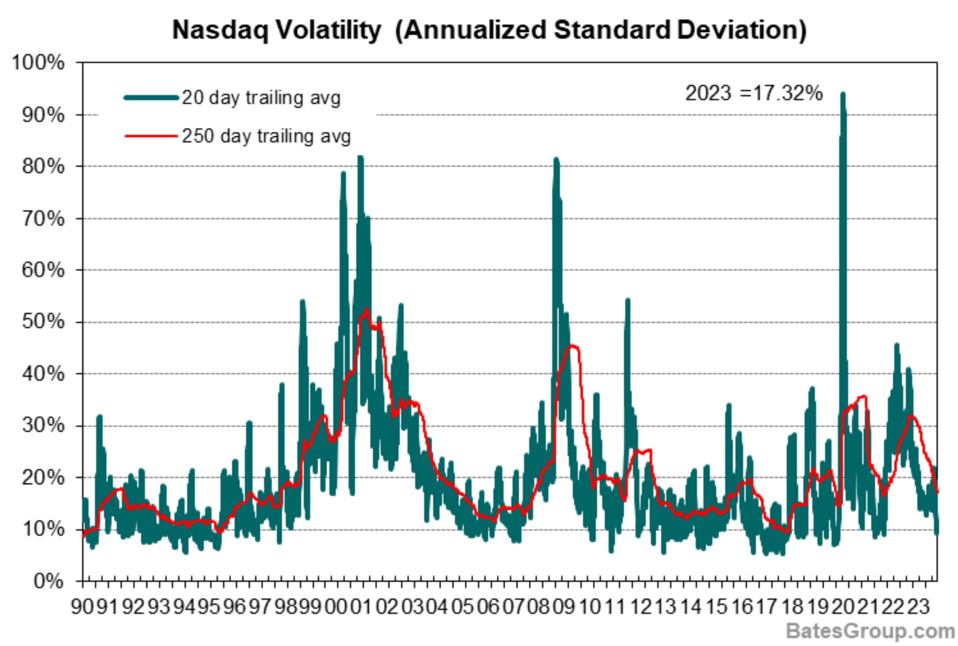
Month	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	85-23 Avg
Jan	-9.9%	-6.4%	-5.4%	1.8%	8.0%	4.1%	-1.7%	-2.1%	-7.9%	4.3%	7.4%	9.7%	2.0%	1.4%	-9.0%	10.7%	2.5%
Feb	-5.0%	-6.7%	4.2%	3.0%	5.4%	0.6%	5.0%	7.1%	-1.2%	3.8%	-1.9%	3.4%	-6.4%	0.9%	-3.4%	-1.1%	0.7%
Mar	0.3%	10.9%	7.1%	-0.0%	4.2%	3.4%	-2.5%	-1.3%	6.8%	1.5%	-2.9%	2.6%	-10.1%	0.4%	3.4%	6.7%	0.9%
Apr	5.9%	12.3%	2.6%	3.3%	-1.5%	1.9%	-2.0%	0.8%	-1.9%	2.3%	0.0%	4.7%	15.4%	5.4%	-13.3%	0.0%	1.2%
May	4.6%	3.3%	-8.3%	-1.3%	-7.2%	3.8%	3.1%	2.6%	3.6%	2.5%	5.3%	-7.9%	6.8%	-1.5%	-2.1%	5.8%	1.4%
Jun	-9.1%	3.4%	-6.5%	-2.2%	3.8%	-1.5%	3.9%	-1.6%	-2.1%	-0.9%	0.9%	7.4%	6.0%	5.5%	-8.7%	6.6%	0.9%
Jul	1.4%	7.8%	6.9%	-0.6%	0.2%	6.6%	-0.9%	2.8%	6.6%	3.4%	2.2%	2.1%	6.8%	1.2%	12.3%	4.0%	1.3%
Aug	1.8%	1.5%	-6.2%	-6.4%	4.3%	-1.0%	4.8%	-6.9%	1.0%	1.3%	5.7%	-2.6%	9.6%	4.0%	-4.6%	-2.2%	0.2%
Sep	-11.6%	5.6%	12.0%	-6.4%	1.6%	5.1%	-1.9%	-3.3%	1.9%	1.0%	-0.8%	0.5%	-5.2%	-5.3%	-10.5%	-5.8%	-1.1%
Oct	-17.7%	-3.6%	5.9%	11.1%	-4.5%	3.9%	3.1%	9.4%	-2.3%	3.6%	-9.2%	3.7%	-2.3%	7.3%	3.9%	-2.8%	0.9%
Nov	-10.8%	4.9%	-0.4%	-2.4%	1.1%	3.6%	3.5%	1.1%	2.6%	2.2%	0.3%	4.5%	11.8%	0.3%	4.4%	10.7%	2.2%
Dec	2.7%	5.8%	6.2%	-0.6%	0.3%	2.9%	-1.2%	-2.0%	1.1%	0.4%	-9.5%	3.5%	5.7%	0.7%	-8.7%	5.5%	1.8%

Volatility, as measured by daily price swings, declined in 2023 with the Nasdaq Composite Index moving up or down 0.87% each day on average. In comparison, the absolute average daily price change in 2022 was 1.61%.

The long-term average volatility, as measured by absolute daily price swings is ±0.94%.



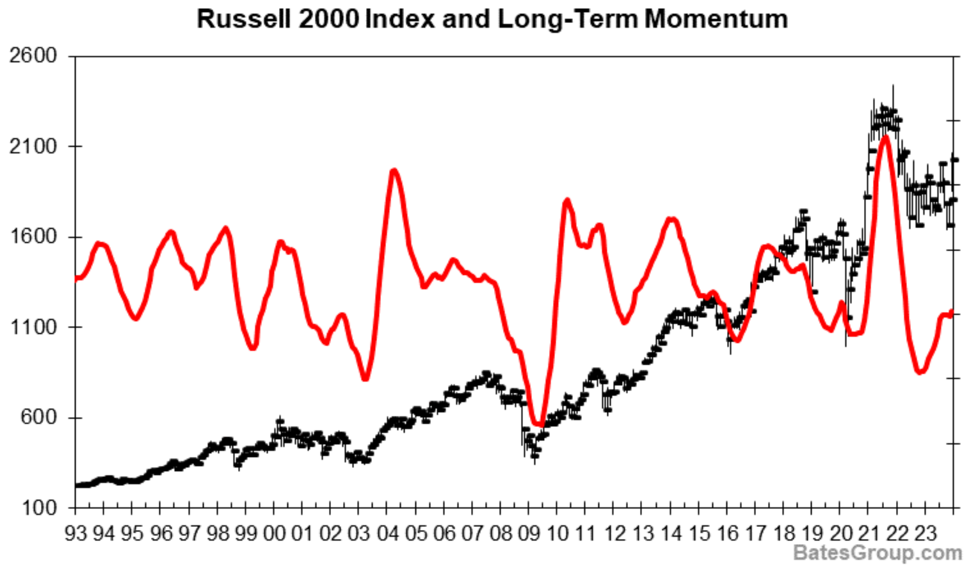
Volatility as measured by the traditional metric of annualized standard deviation was 17.32% in 2023. This was below the long-term average annual volatility (1985-2023) for the Nasdaq Composite Index of 22.3%.

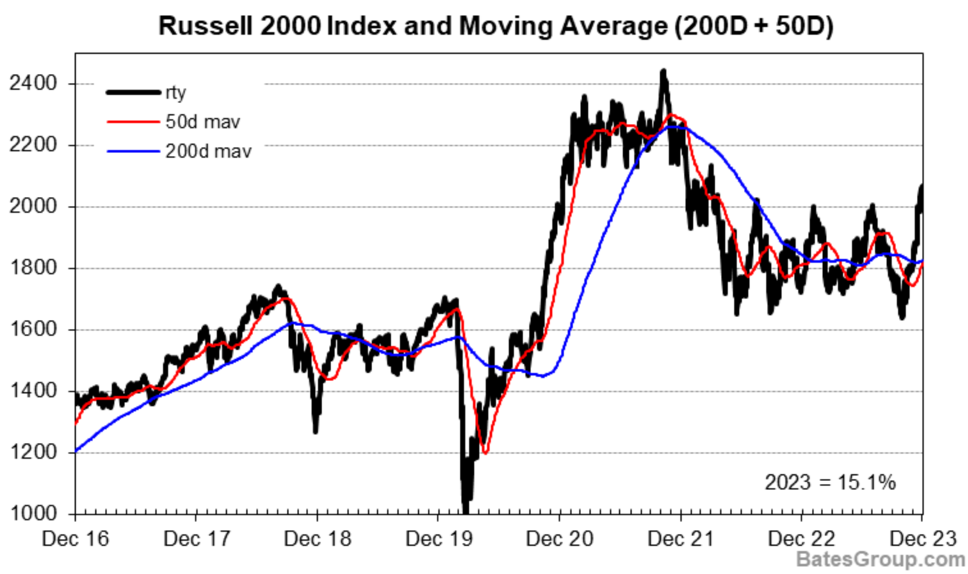


Russell 2000 Market Trends

Small cap stocks as measured by the Russell 2000 Index closed the year up 15.1%.

Most of the gains in the small cap index were due to a strong fourth quarter. In the last quarter of 2023, the Russell 2000 Index was up 13.6%.





Russell 2000 Monthly Performance (% change over previous month)

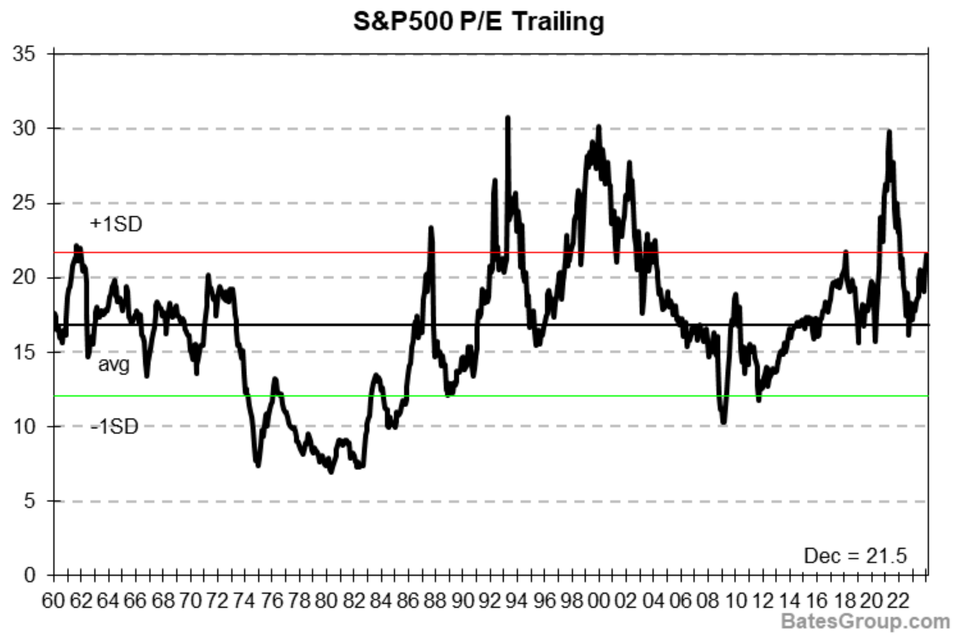
Month	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	86-23 Avg
Jan	-6.9%	-11.2%	-3.7%	-0.3%	7.0%	6.2%	-2.8%	-3.3%	-8.8%	0.3%	2.6%	16.0%	-3.2%	5.0%	-9.7%	9.7%	1.1%
Feb	-3.8%	-12.3%	4.4%	5.4%	2.3%	1.0%	4.6%	5.8%	-0.1%	1.8%	-4.0%	5.1%	-8.5%	6.1%	1.0%	-1.8%	1.4%
Mar	0.3%	8.7%	8.0%	2.4%	2.4%	4.4%	-0.8%	1.6%	7.8%	-0.1%	1.1%	-2.3%	-21.9%	0.9%	1.1%	-5.0%	0.8%
Apr	4.1%	15.3%	5.6%	2.6%	-1.6%	-0.4%	-3.9%	-2.6%	1.5%	1.0%	0.8%	3.3%	13.7%	2.1%	-10.0%	-1.9%	1.2%
May	4.5%	2.9%	-7.7%	-2.0%	-6.7%	3.9%	0.7%	2.2%	2.1%	-2.2%	5.9%	-6.6%	6.4%	0.1%	-0.0%	-1.1%	1.1%
Jun	-7.8%	1.3%	-7.9%	-2.5%	4.8%	-0.7%	5.2%	0.6%	-0.2%	3.3%	0.6%	5.5%	3.4%	1.8%	-8.4%	7.9%	0.6%
Jul	3.6%	9.5%	6.8%	-3.7%	-1.4%	6.9%	-6.1%	-1.2%	5.9%	0.7%	1.7%	0.5%	2.7%	-3.6%	10.4%	6.1%	0.1%
Aug	3.5%	2.8%	-7.5%	-8.8%	3.2%	-3.3%	4.8%	-6.4%	1.6%	-1.4%	4.2%	-5.1%	5.5%	2.1%	-2.2%	-5.2%	-0.3%
Sep	-8.1%	5.6%	12.3%	-11.4%	3.1%	6.2%	-6.2%	-5.1%	0.9%	6.1%	-2.5%	1.9%	-3.5%	-3.1%	-9.7%	-6.0%	-0.7%
Oct	-20.9%	-6.9%	4.0%	15.0%	-2.2%	2.5%	6.5%	5.6%	-4.8%	0.8%	-10.9%	2.6%	2.0%	4.2%	10.9%	-6.9%	-0.5%
Nov	-12.0%	3.0%	3.4%	-0.5%	0.4%	3.9%	-0.0%	3.1%	11.0%	2.8%	1.4%	4.0%	18.3%	-4.3%	2.2%	8.8%	2.0%
Dec	5.6%	7.9%	7.8%	0.5%	3.3%	1.8%	2.7%	-5.2%	2.6%	-0.6%	-15.7%	2.7%	8.5%	2.1%	-6.6%	12.1%	2.5%

 BATESGROUP

Equity Valuation

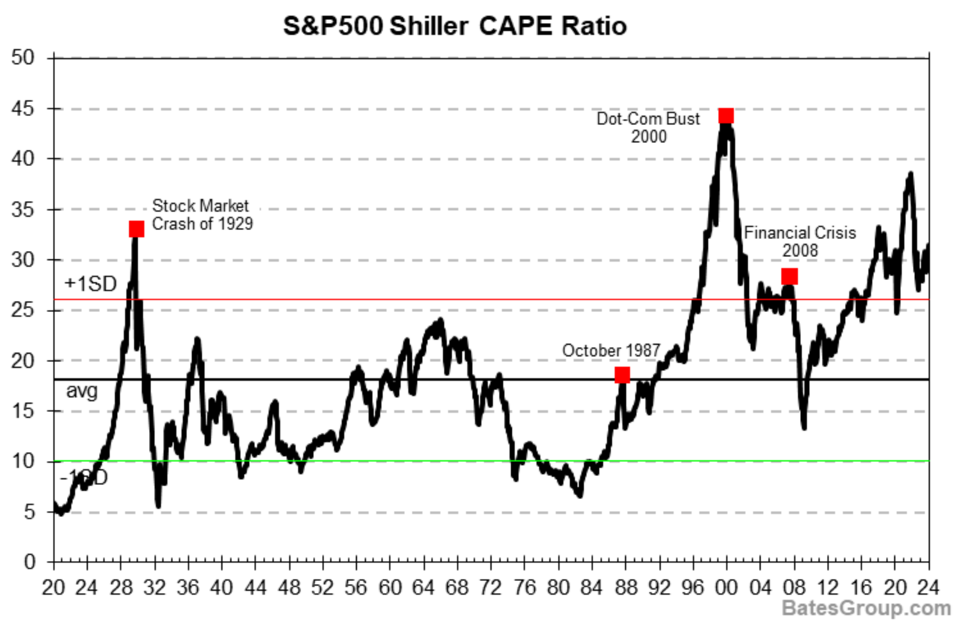
Based on S&P estimates for trailing four quarter operating earnings, the S&P 500 Index is at the upper range of fair values in terms of P/E ratios.

As of the end of December 2023 the S&P 500 Index traded at 21.5 times trailing 4Q earnings. This is down significantly from a record 30.7 times in early 2021, but still above the long-term average of 16.8.



The CAPE ratio has declined from historical levels but is still much higher than the long-term average, suggesting an overvalued market.

The CAPE ratio, developed by Nobel Laureate Robert Shiller, is a cyclically adjusted price/earnings ratio. This valuation measure smooths out economic cycles by using 10-year average earnings.

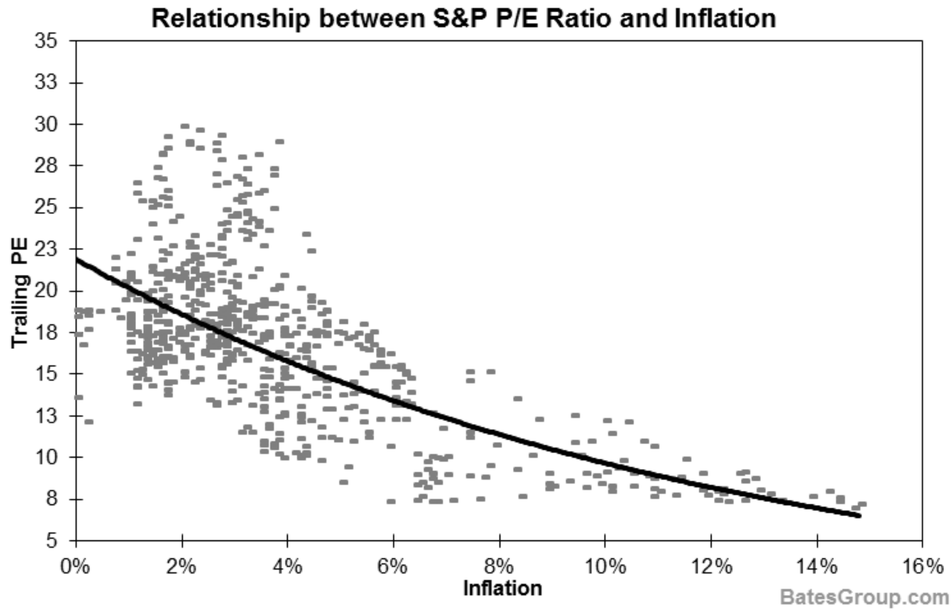


Source: Bloomberg, Robert Shiller

Lower inflation rates tend to lead to higher equity market valuations and vice versa.

The chart to the right shows the relationship between P/E ratios (S&P 500) and inflation over the past 70 years.

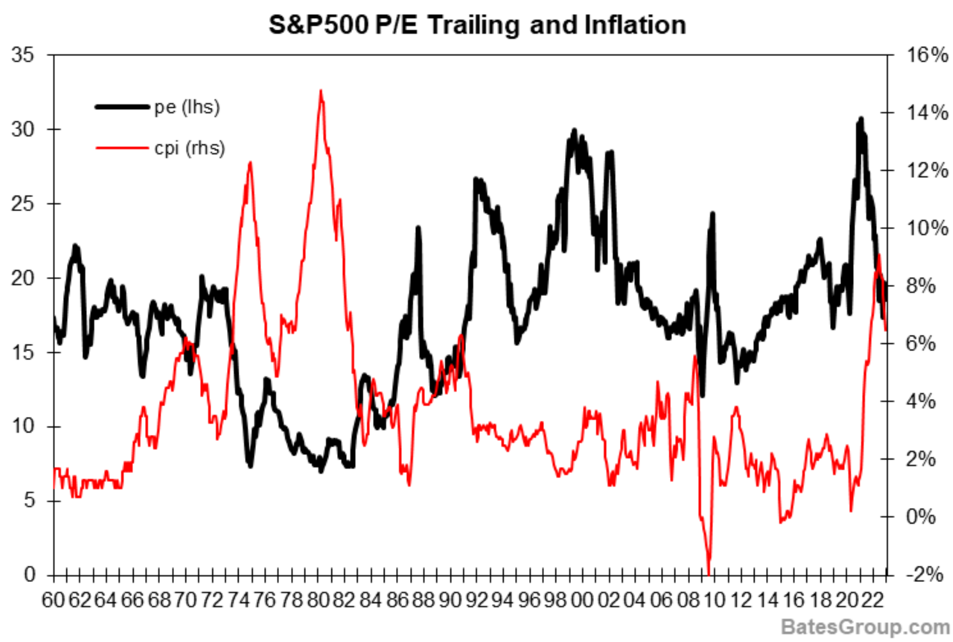
In similar periods when inflation has been above 5%, the S&P 500 has traded in a range of 8 to 18 times trailing earnings.



Here is another view showing the relationship between P/E ratios and inflation.

P/Es have tended to be higher in low inflation periods and vice versa.

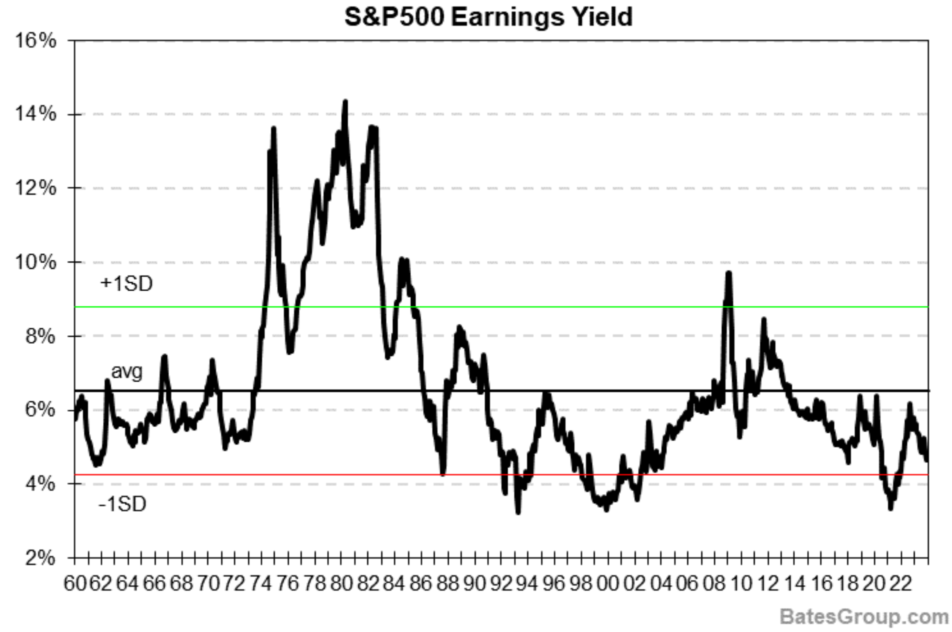
Trailing P/E if inflation is:	<3.5%	3.5-5%	>5%
Low	9.8	9.8	7.0
Avg.	**18.9**	**15.8**	**12.6**
High	30.7	29.7	29.6
-1SD	14.8	11.9	7.7
+1SD	23.0	19.8	17.5



Source: Bloomberg, Standard & Poor's

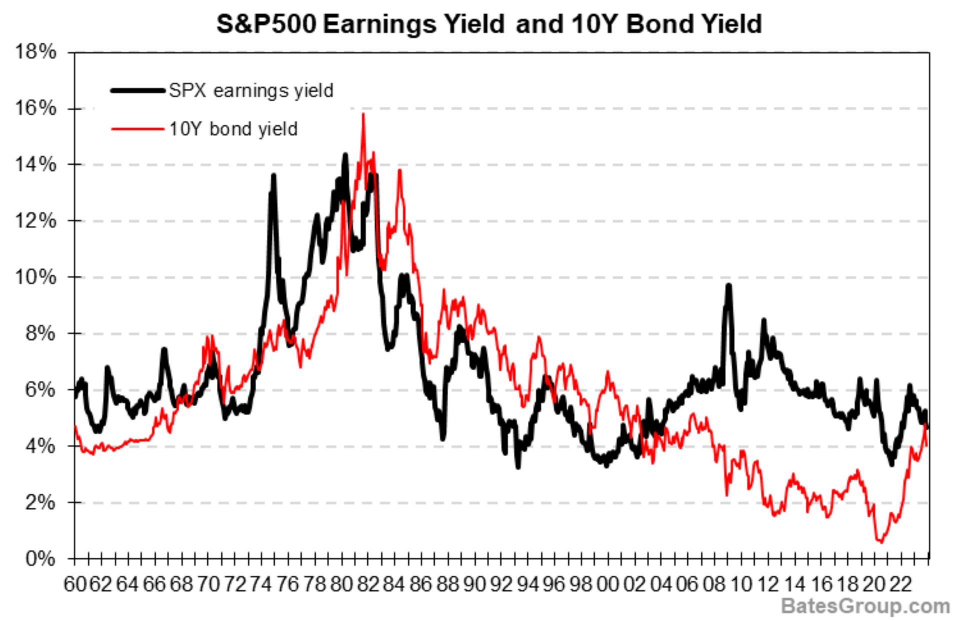
The earnings yield (inverse of the P/E ratio) has remained below the long-term average in 2022 suggesting a slightly overvalued market.

It's worth noting, that the high earnings yield (and low P/Es) of the 1970's and early 1980's was a function of high inflation and double-digit interest rates.



Historically, there has been a high correlation between the level of interest rates and equity market valuations.

As can be seen by the chart on the right, there tends to be is a positive relationship between the earnings yield for the S&P500 Index and interest rates. When interest rates increase, the earnings yield has also tended to increase (indicating a decline in P/E ratios).

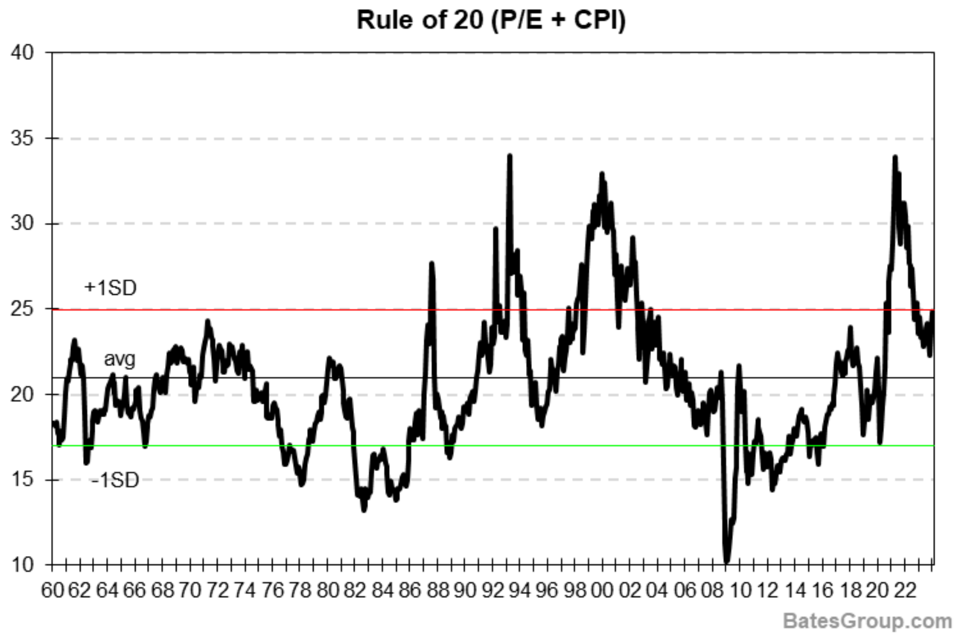


Source: Bloomberg, Standard & Poor's

The Rule of 20 is a popular measure used to assess P/E ratios for the broader market, adjusting for inflation.

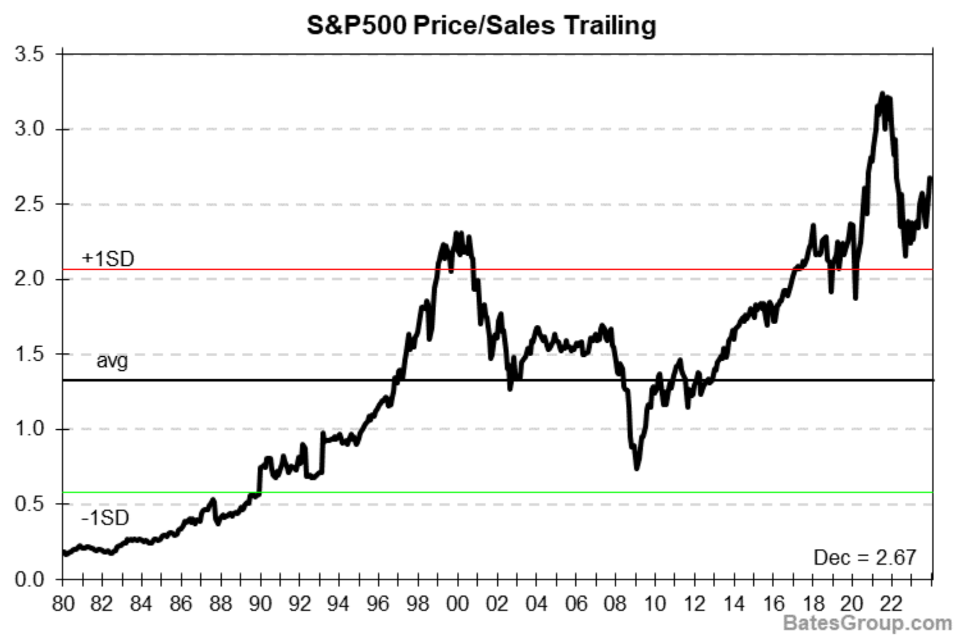
Taking inflation into account, but ignoring the impact of interest rates, the S&P 500 appears to be overvalued.

As of the end of 2023, this valuation measure is one standard deviation above the average for the past 60 years.



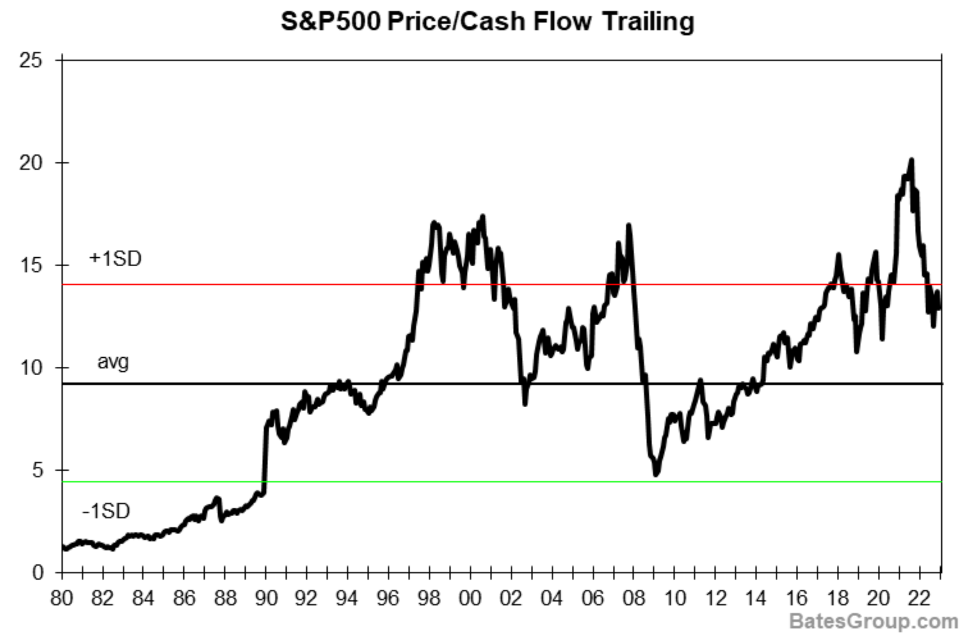
Using another measure of equity market valuation, the S&P 500 is trading significantly above long-term average levels.

Currently, investors are paying 2.7 times trailing 12-month sales for the broader market. The historic average has been 1.3x sales.

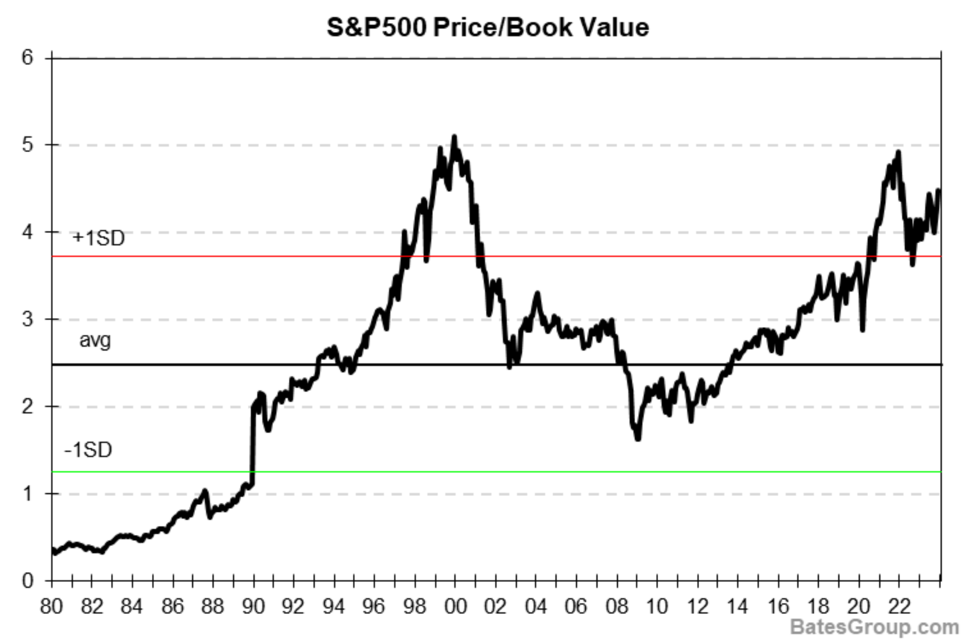


Source: Bloomberg, Standard & Poor's

Valuation for the broader market, if measured by price to cash flow is also at the higher end of the range, although not as high as during the periods just prior to the Dot-com crash in 2000 and the financial crisis in 2008.



Price-to-book value is another common valuation metric. By this measure, the S&P 500 Index also appears significantly overvalued.



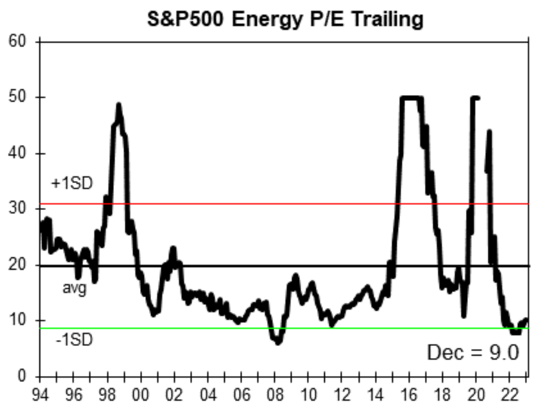
Source: Bloomberg, Standard & Poor's

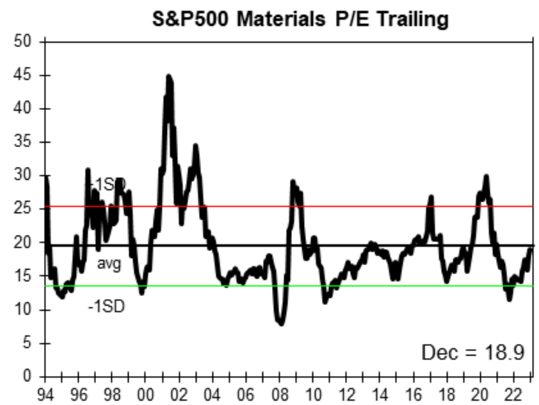
S&P 500 Sector Valuations*

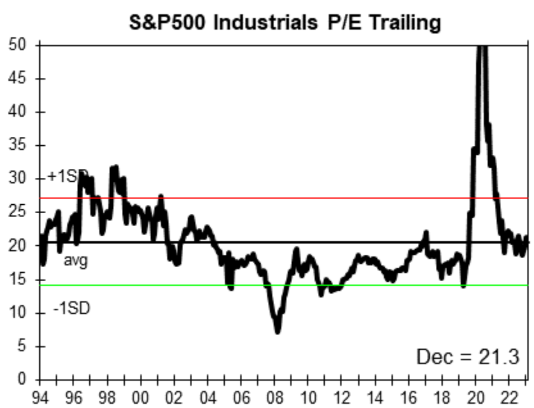
In 2022, valuation compression across the various S&P 500 sectors was widespread, with all but one sector experiencing PE contraction.

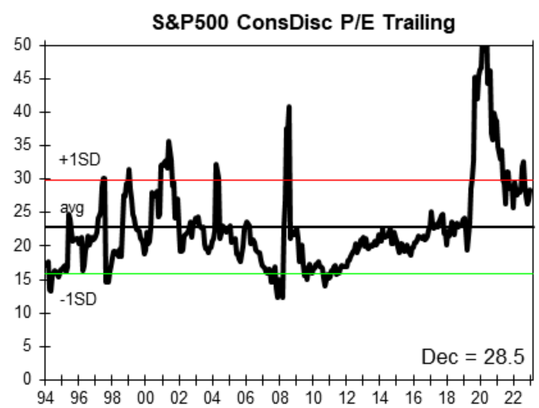
That changed in 2023, with many sectors returning to either their long term average valuations or above.

Excluding the extreme valuations during the dot-com bubble, the average P/E ratio for the Technology sector from 2004-2023 has been 20.7x trailing earnings. Currently, it is above 30x.

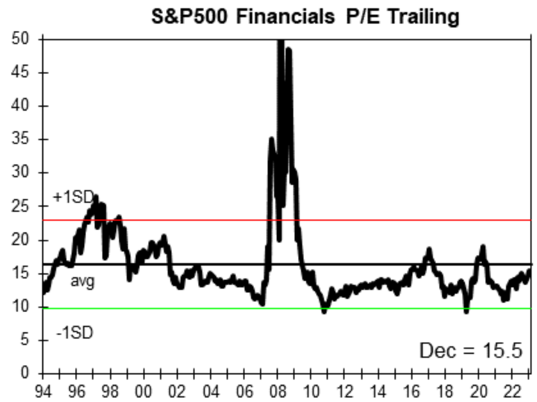


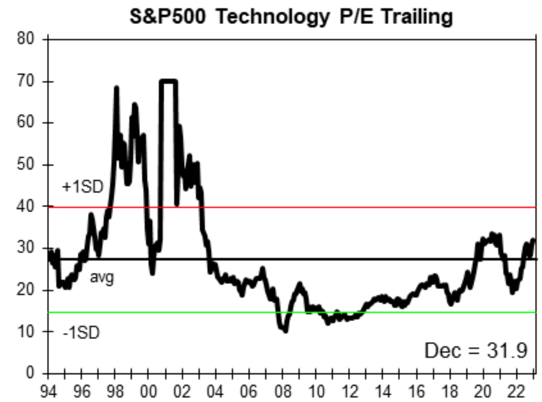


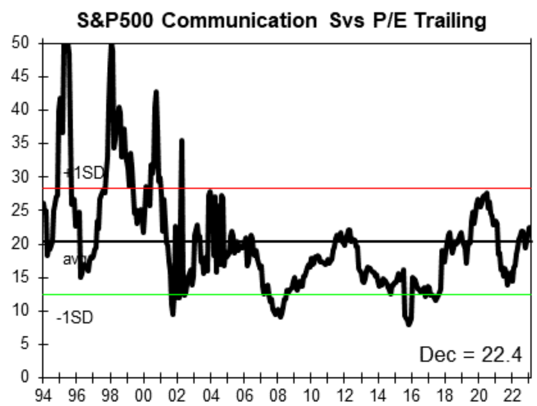


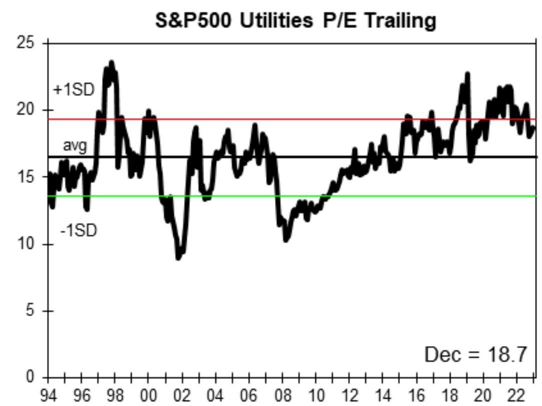


** Some P/E ratios are capped at 50 (or 70 for the Technology sector) due to extreme values*
Source: Bloomberg, Standard & Poor's







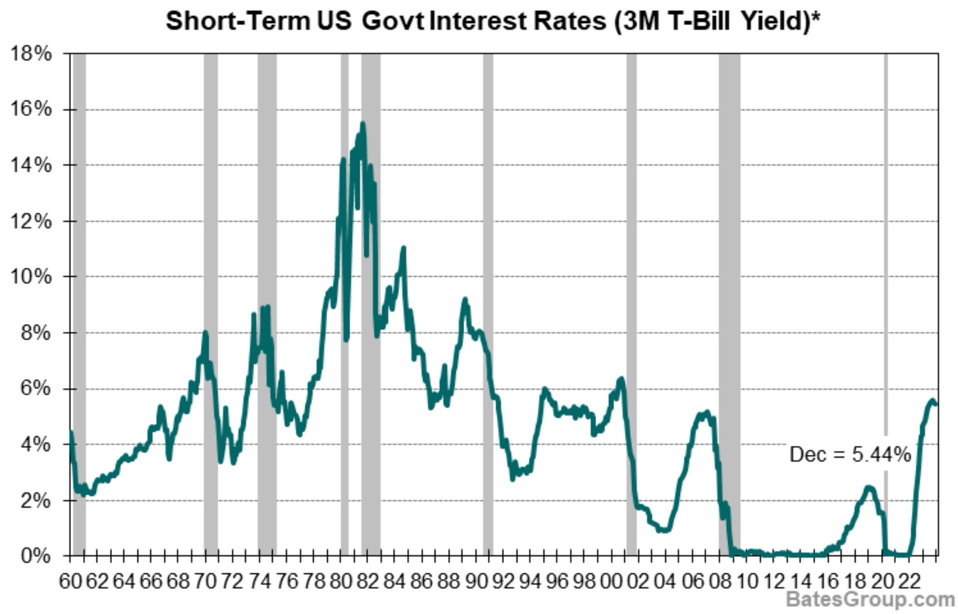


** Some extreme values in P/E ratios are capped at 50 (or 70 for the Technology sector)*
Source: Bloomberg, Standard & Poor's

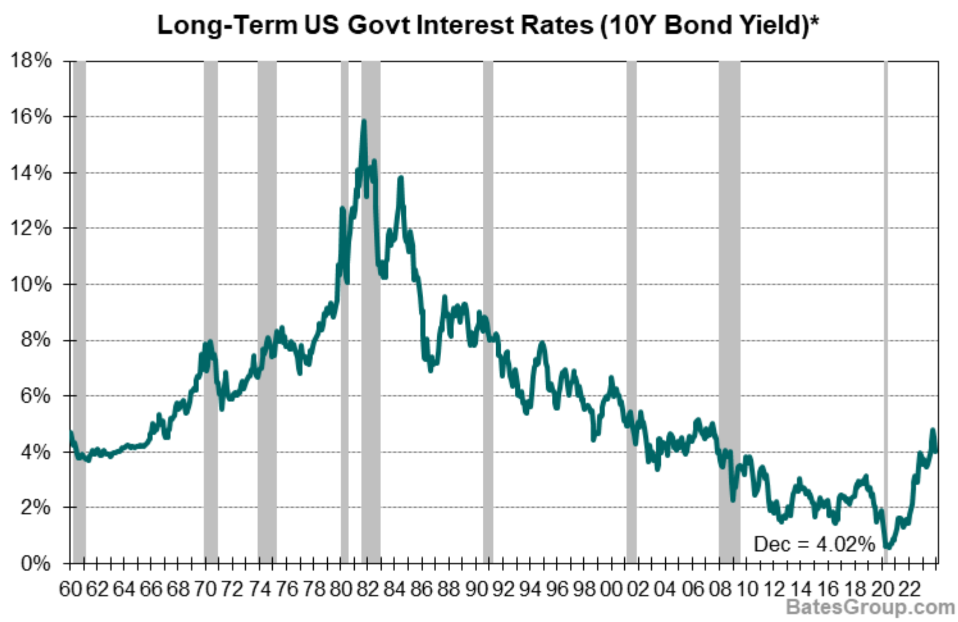
Credit Market Trends – Interest Rates

During 2023 the yield on three-month (3M) Treasury bills climbed from 4.10% at the end of 2022 to 5.44% at the end of December.

The sharp rise in yields, which began in 2022, has been in response to the Federal Reserve's efforts to rein in inflation through a series of aggressive interest rate hikes.

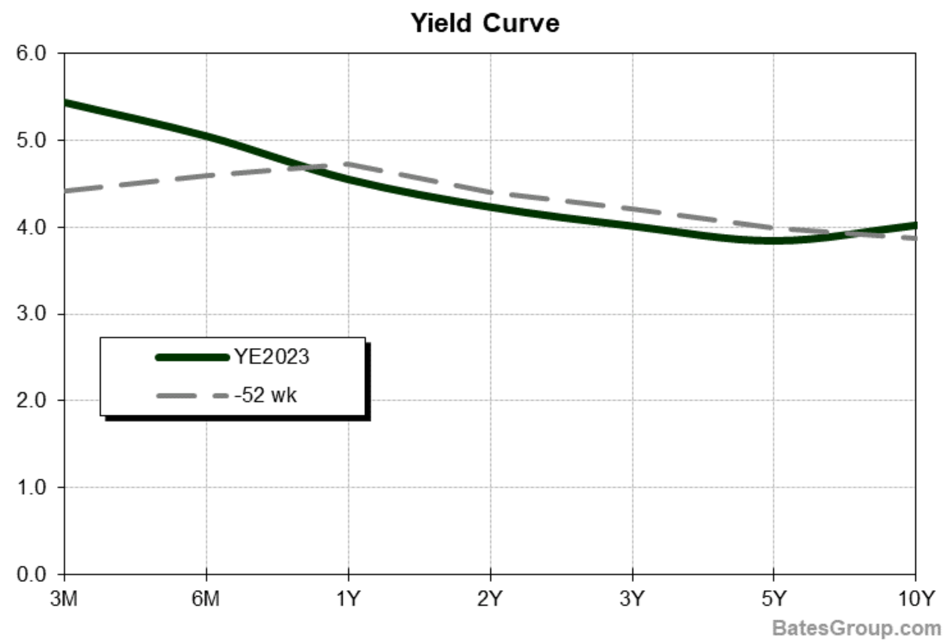


Long-term Treasury yields (10Y) climbed in 2023 to finish the fourth quarter at 4.02%. This is up from 3.62% at the end of 2022.



** Shaded areas represent recessions*
Source: Federal Reserve, Bates Research

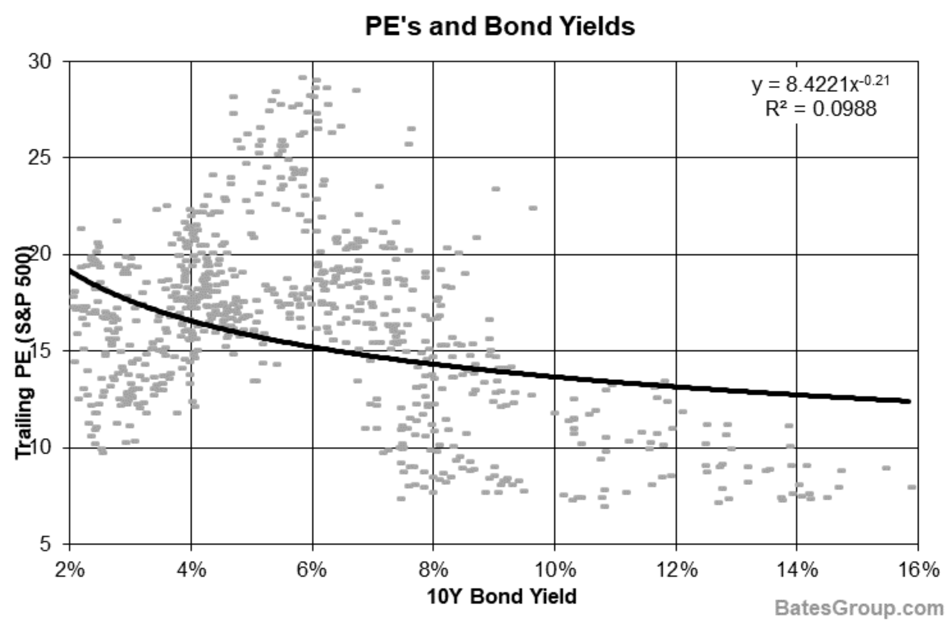
At the end of 2023, the yield curve was lower at the long end of the curve. This is known as an inverted yield curve and has historically been a “powerful predictor of future recessions” according to the Federal Reserve. However, this forecasting tool (inverted yield curve) to-date, has proven incorrect in 2023.



To the right is a view of the relationship between interest rates and equity valuations.

PEs tend to be higher when long-term rates are low and vice versa.

PE if interest rates:	<4%	4-8%	>8%
Low	9.8	7.3	7.0
Avg.	**17.8**	**18.6**	**11.5**
High	30.7	30.0	23.4
-1SD	13.8	14	8.0
+1SD	21.7	23.3	15.0

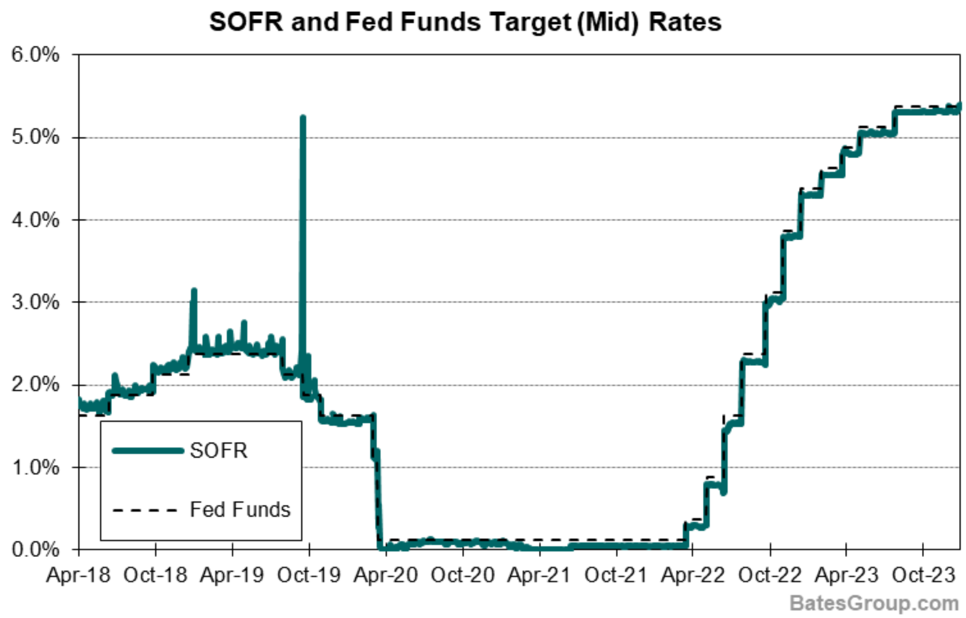


** Shaded areas represent recessions*
Source: Federal Reserve, Bates Research

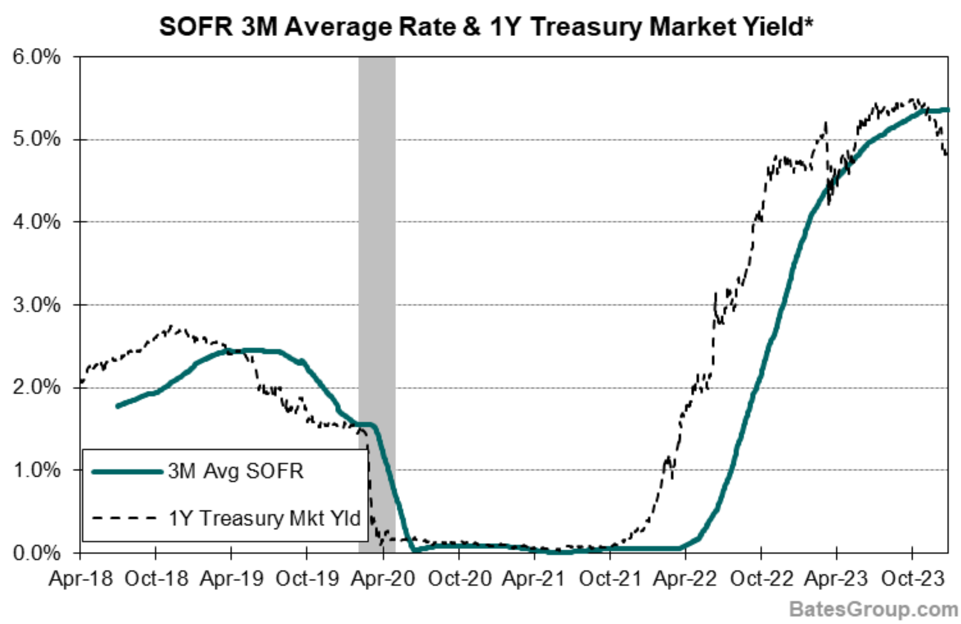
SOFR Rates

Since launching in early April 2018, SOFR has closely tracked Federal Funds target rates, with the exception of a spike in September 2019.**

SOFR, or the Secured Overnight Funding Rate, is based on observable, or actual transactions of overnight lending rates and replaced LIBOR as a benchmark overnight lending rate for US Dollar transactions.



Towards the end of 2023, the market yield on one year Treasuries trended lower than average overnight SOFR rates (three month rolling average). This is similar to the inverse rate in mid- to late-2019 that preceded the recession in 2020.

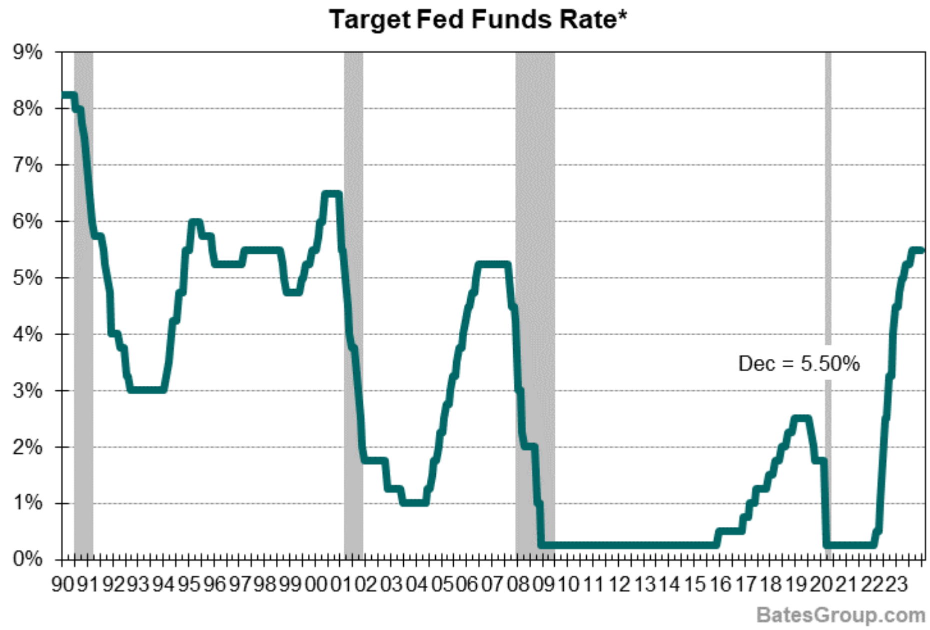


** Shaded areas represent recessions*
*** This spike was, according to the Federal Reserve, due to a "momentaneous shortage in liquidity resulted in a momentous increase in secured borrowing costs".*
Source: Federal Reserve, Bates Research

Federal Funds Rate

In response to a rapid rise in inflation, the Federal Reserve began to raise interest rates in March 2022 and continued through 2023.

By December 2023, the Federal Funds Rate had risen to a range of 5.25% to 5.50%, up from 0% to 0.25% in early 2022.



Changes in the Federal Funds Rate (2005-2023)

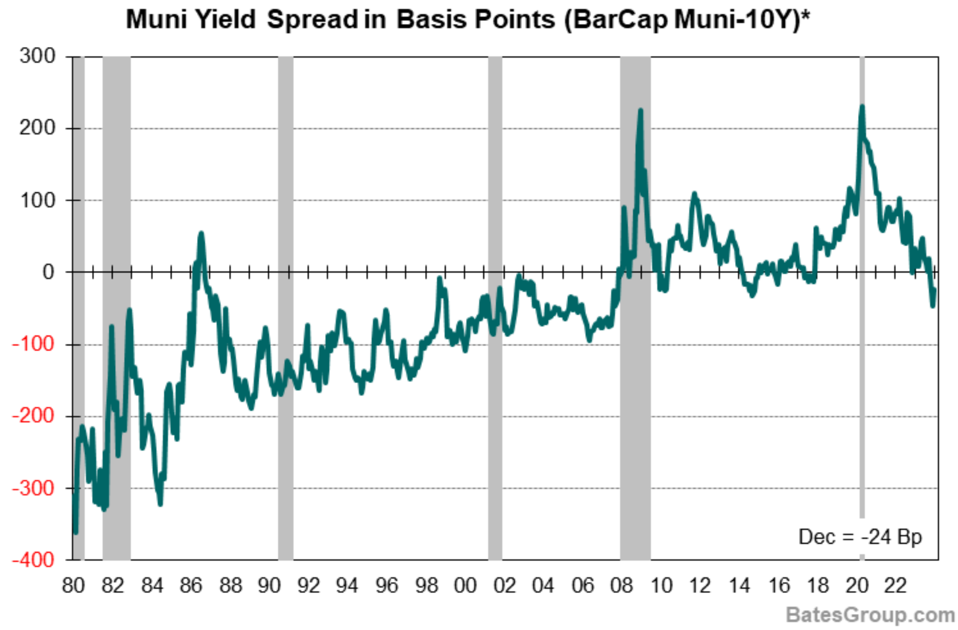
	Change (basis points)				Change (basis points)				Change (basis points)		
Date	**(+)**	**(-)**	**Level (%)**	**Date**	**(+)**	**(-)**	**Level (%)**	**Date**	**(+)**	**(-)**	**Level (%)**
2023				**2018**				22-Jan	...	75	3.50
26-Jul	25		5.25-5.50	20-Dec	25	...	2.25-2.50	**2007**	...		
3-May	25	...	5.00-5.25	27-Sep	25	...	2.00-2.25	11-Dec	...	25	4.250
22-Mar	25	...	4.75-5.00	14-Jun	25	...	1.75-2.00	31-Oct	...	25	4.500
1-Feb	25	...	4.50-4.75	22-Mar	25	...	1.50-1.75	18-Sep	...	50	4.750
2022				**2017**				**2006**			
14-Dec	50	...	4.25-4.50	14-Dec	25	...	1.25-1.50	29-Jun	25	...	5.250
2-Nov	75	...	3.75-4.00	15-Jun	25	...	1.00-1.25	10-May	25	...	5.000
21-Sep	75	...	3.00-3.25	16-Mar	25	...	0.75-1.00	31-Jan	25	...	4.750
27-Jul	75	...	2.25-2.50	**2016**				**2005**			
16-Jun	75	...	1.50-1.75	15-Dec	25	...	0.50-0.75	13-Dec	...	25	4.250
5-May	50	...	0.75-1.00	**2015**				1-Nov	...	25	4.000
17-Mar	25	...	0.25-0.50	17-Dec	25	...	0.25-0.50	20-Sep	...	25	3.750
2020				**2008**				9-Aug	25	...	3.500
15-Mar	...	100	0.00-0.25	16-Dec	...	75-100	0.00-0.25	30-Jun	25	...	3.250
4-Mar	...	50	1.00-1.25	29-Oct	...	50	1.00	3-May	25	...	3.000
2019				8-Oct	...	50	1.50	22-Mar	25	...	2.750
31-Oct	...	25	1.50-1.75	30-Apr	...	25	2.00	2-Feb	25	...	2.500
19-Sep	...	25	1.75-2.00	18-Mar	...	75	2.25				
1-Aug	...	25	2.00-2.25	30-Jan	...	50	3.00				

** Shaded areas represent recessions*
Source: Federal Reserve, Pegasus Research

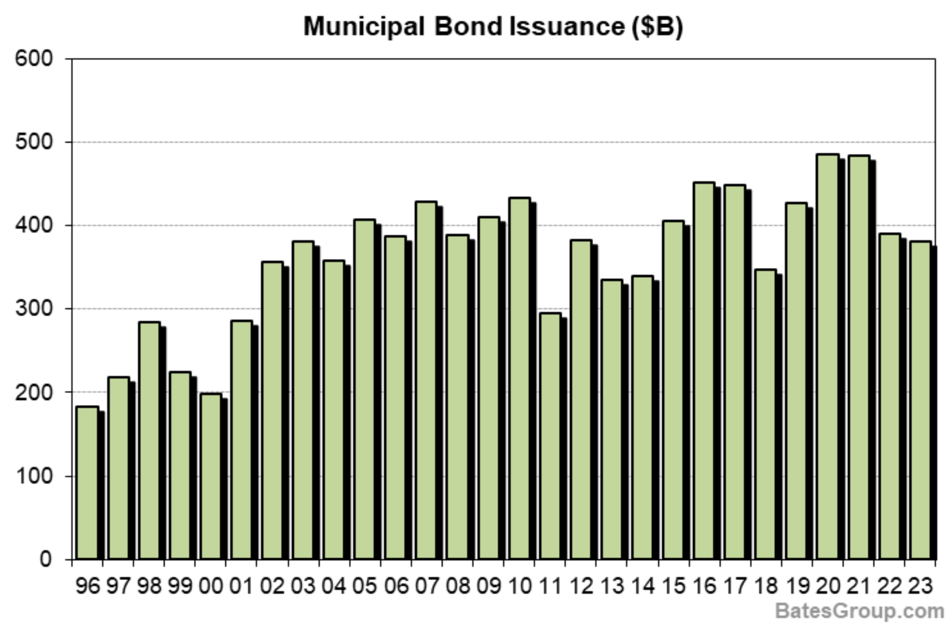
Municipal Bonds

2023 was initially a tough year for municipal bonds, but a late-year rally helped the Bloomberg Municipal Bond Index close the year with a 6.4% return. High yield municipal bonds returned 9.2% for the year.

For the year ended in December, the yield on the S&P Municipal Bond Index was 3.8%.



Municipal bond issuance declined an estimated 2.6% in 2023 to $380.5 billion.

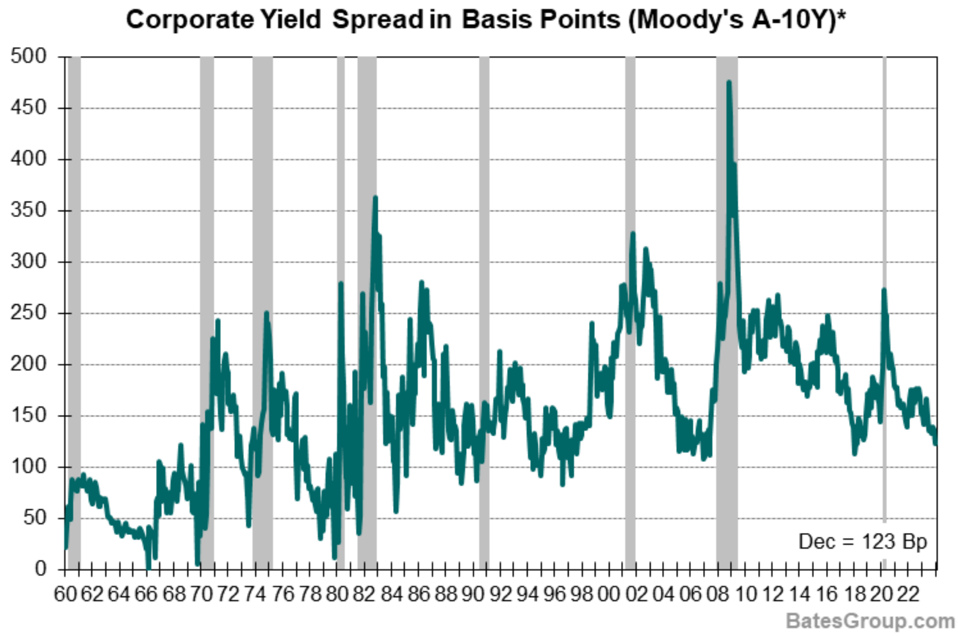


** Shaded areas represent recessions*
Source: Bloomberg, SIFMA, Standard & Poor's, Thomson Reuters, MSRB

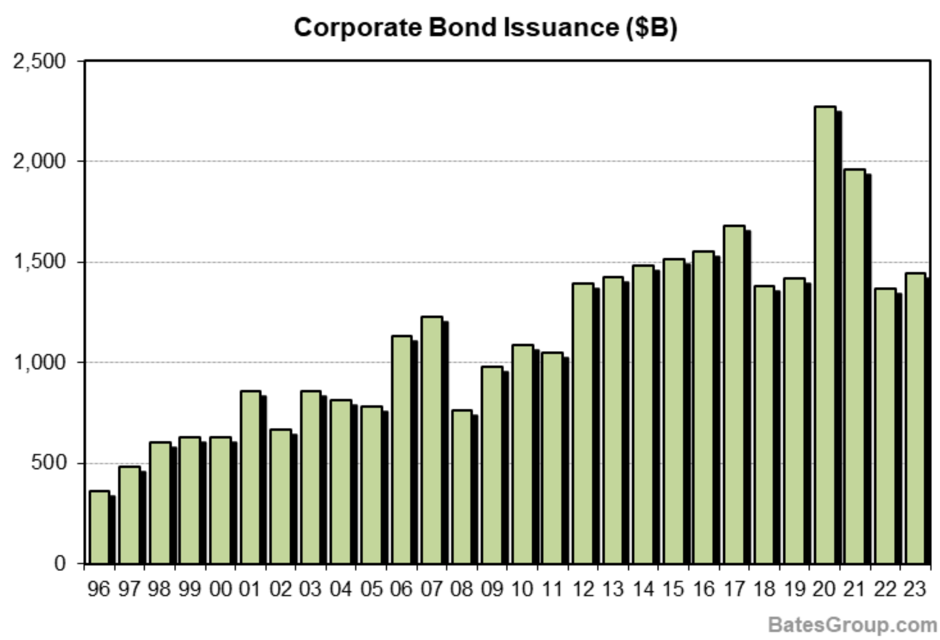
Corporate Bonds

After posting one of the worst returns in 2022, U.S. corporate bonds rallied to close 2023 with an 8.5% return while U.S. aggregate bond performance was up 3.7%.

U.S. corporate bond spreads widened during the year, with the spread on Moody's A-rated Bond Index closing the year at 123 basis points. This compares to a risk premium of 151 basis points in December 2022.



U.S. corporate bond issuance totaled an estimated $1,444.3 billion in 2023, up 5.4% from the prior year.

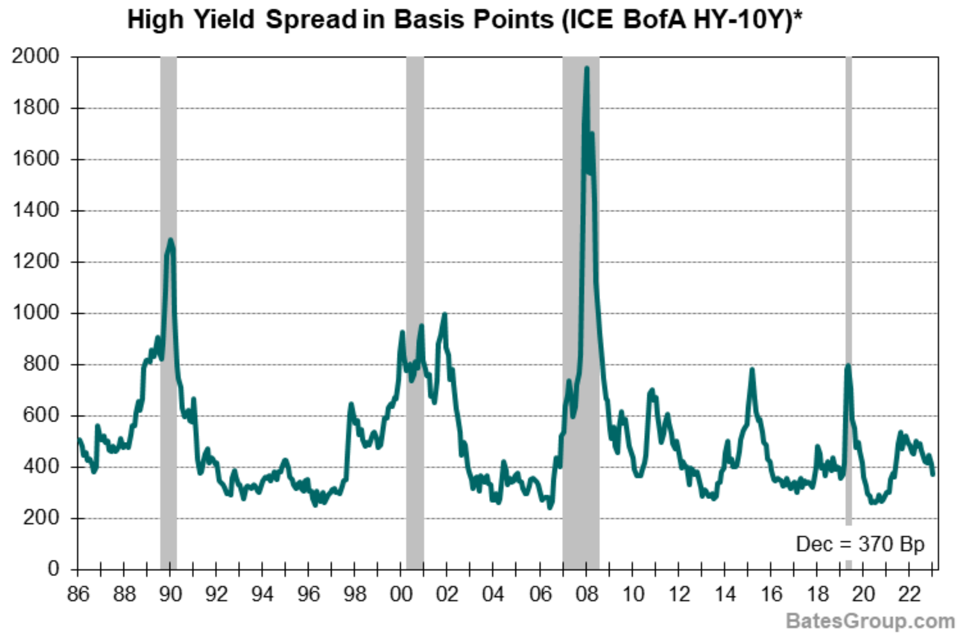


** Shaded areas represent recessions*
Source: Bloomberg, Thomson Reuters, SIFMA

High Yield Securities

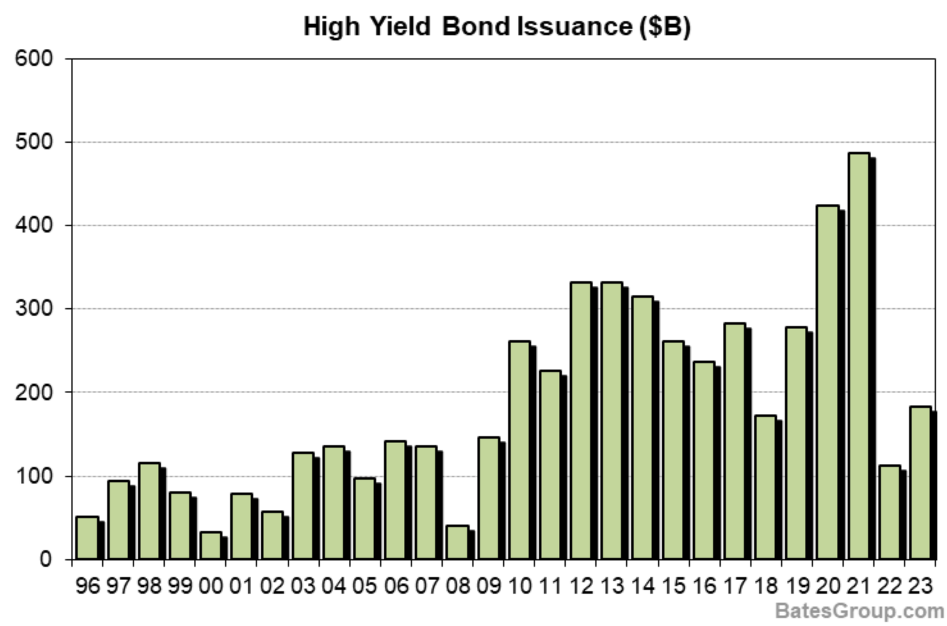
High yield risk spreads declined 114 basis points in 2023 to 370 Bp, with yields declining to 7.72% in December from 8.46% at the end of 2022.

The 12-month trailing U.S. corporate speculative-grade default rate was 4.5% in December 2023.



High yield issuance rebounded strongly in 2023, with total issuance up 64% in 2023 to an estimated $183.6 billion.

In comparison, high yield bond issuance in 2022 was only $112 billion, the lowest level in nearly 15 years.

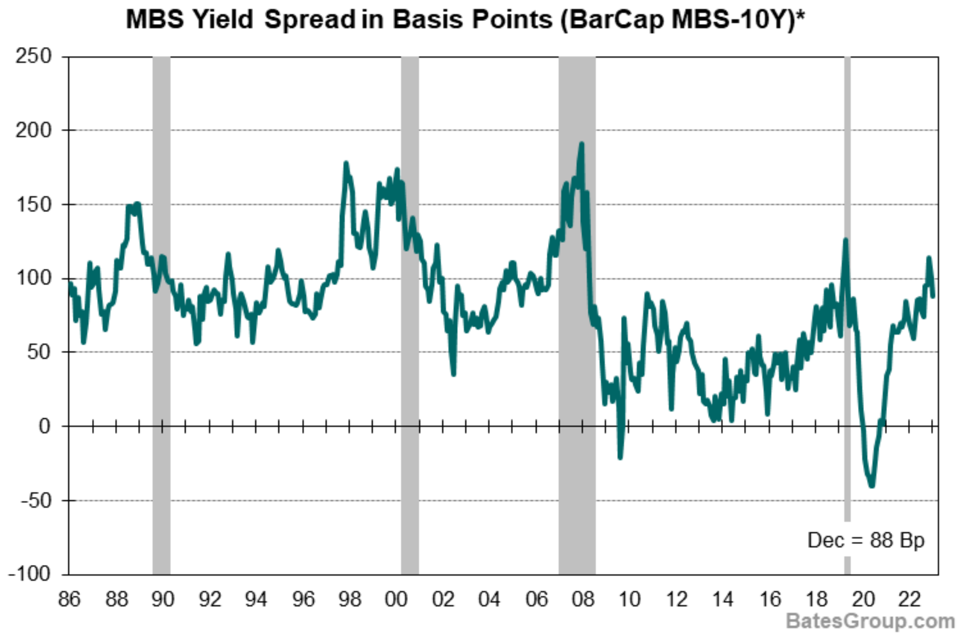


** Shaded areas represent recessions*
Source: Bloomberg, Moody's, SIFMA, Standard & Poor's

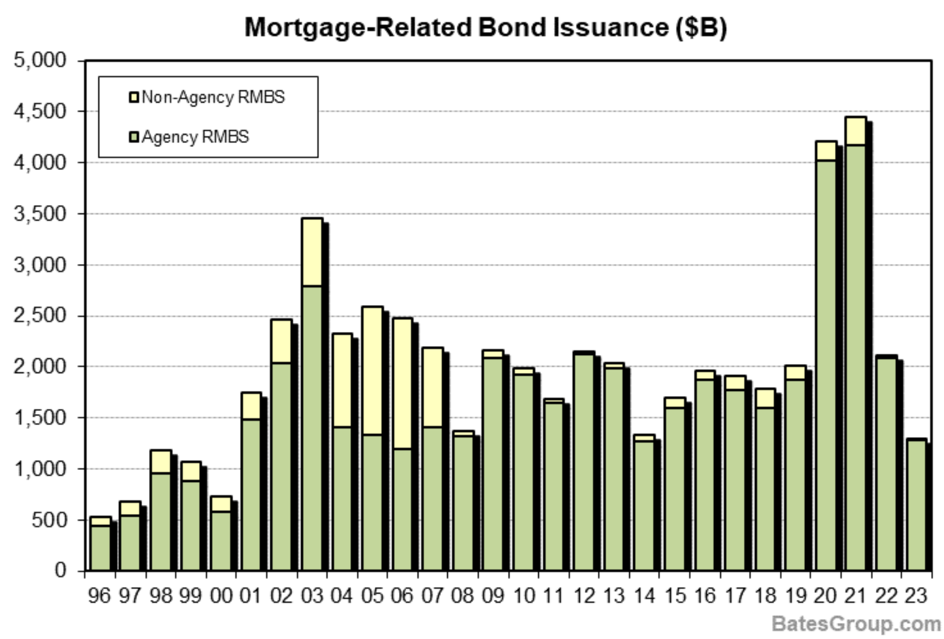
Mortgage-Backed Securities

MBS yield spreads increased in 2023 to 88 basis points from 69 basis points in December 2022.

MBS performance rebounded in 2023 with a 5.05% return for the Bloomberg MBS Index.after 2022's poor -11.8% return.



Mortgage-related bond issuance fell further in 2023, totaling only $1,386.6 billion. Agency RMBS was $1,287 billion while non-agency or private RMBS issuance was just $11.4 billion in 2023.



** Shaded areas represent recessions*
Source: Bloomberg, Thomson Reuters, SIFMA for the Bloomberg MBS Index.

Fixed Income Securities Total Returns (2000-2023)

2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Long Govt 20.27%	Corp Bonds 10.31%	Intl Govt 19.59%	High Yield 28.97%	High Yield 11.13%	Long Govt 6.50%	High Yield 11.85%	Intl Govt 10.57%	Long Govt 24.03%	High Yield 58.21%	High Yield 15.12%	Long Govt 29.93%
Munis 11.68%	Short Govt 8.39%	Long Govt 16.79%	Intl Govt 14.78%	Intl Govt 10.33%	Munis 3.51%	Intl Govt 6.44%	Long Govt 9.81%	Intl Govt 10.23%	Corp Bonds 18.68%	Long Govt 9.38%	Munis 10.70%
MBS 11.16%	MBS 8.22%	Corp Bonds 10.12%	Corp Bonds 8.24%	Long Govt 7.70%	High Yield 2.74%	MBS 5.22%	Short Govt 7.31%	MBS 8.34%	Munis 12.91%	Corp Bonds 9.00%	Corp Bonds 8.15%
Corp Bonds 9.08%	High Yield 5.28%	Munis 9.60%	Munis 5.31%	Corp Bonds 5.39%	MBS 2.61%	Munis 4.84%	MBS 6.90%	Short Govt 6.67%	MBS 5.89%	Intl Govt 5.90%	Intl Govt 6.33%
Short Govt 8.05%	Munis 5.13%	MBS 8.75%	MBS 3.07%	MBS 4.70%	Corp Bonds 1.68%	Corp Bonds 4.30%	Corp Bonds 4.56%	Munis -2.47%	Intl Govt 2.63%	MBS 5.37%	MBS 6.23%
Intl Govt 1.43%	Long Govt 4.21%	Short Govt 5.87%	Long Govt 2.48%	Munis 4.48%	Short Govt 1.62%	Short Govt 3.93%	Munis 3.36%	Corp Bonds -4.94%	Short Govt 0.80%	Short Govt 2.40%	High Yield 4.98%
High Yield -5.86%	Intl Govt -1.37%	High Yield -1.41%	Short Govt 1.92%	Short Govt 0.91%	Intl Govt -6.66%	Long Govt 1.85%	High Yield 1.87%	High Yield -26.16%	Long Govt -12.92%	Munis 2.38%	Short Govt 1.55%

2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
High Yield 15.81%	High Yield 7.44%	Long Govt 25.07%	Munis 3.30%	High Yield 17.13%	Long Govt 8.53%	Short Govt 1.56%	Long Govt 14.83%	Long Govt 17.70%	High Yield 5.28%	Short Govt -3.82%	High Yield 13.45%
Corp Bonds 9.82%	Short Govt 0.36%	Munis 9.05%	MBS 1.51%	Corp Bonds 6.11%	High Yield 7.50%	Munis 1.28%	Corp Bonds 14.54%	Corp Bonds 9.89%	Munis 1.52%	Munis -8.53%	Corp Bonds 8.52%
Munis 6.78%	MBS -1.41%	Corp Bonds 7.46%	Short Govt 0.56%	MBS 1.67%	Intl Govt 7.29%	MBS 0.99%	High Yield 14.32%	Intl Govt 9.50%	Short Govt -0.60%	High Yield -11.19%	Munis 6.40%
Long Govt 3.56%	Corp Bonds -1.53%	MBS 6.08%	Corp Bonds -0.68%	Intl Govt 1.65%	Corp Bonds 6.42%	Intl Govt -0.38%	Munis 7.54%	High Yield 7.11%	Corp Bonds -1.04%	MBS -11.81%	MBS 5.05%
MBS 2.59%	Munis -2.55%	High Yield 2.45%	Long Govt -1.21%	Long Govt 1.33%	Munis 5.45%	Long Govt -1.84%	MBS 6.35%	Munis 5.21%	MBS -1.04%	Corp Bonds -15.76%	Short Govt 4.29%
Intl Govt 1.83%	Intl Govt -4.30%	Short Govt 0.63%	Intl Govt -3.29%	Short Govt 0.86%	MBS 2.47%	High Yield -2.08%	Intl Govt 5.59%	MBS 3.87%	Long Govt -4.65%	Intl Govt -17.47%	Intl Govt 4.18%
Short Govt 0.43%	Long Govt -12.7%	Intl Govt -0.8%	High Yield -4.5%	Munis 0.2%	Short Govt 0.4%	Corp Bonds -2.5%	Short Govt 3.6%	Short Govt 3.2%	Intl Govt -6.6%	Long Govt -29.3%	Long Govt 3.1%

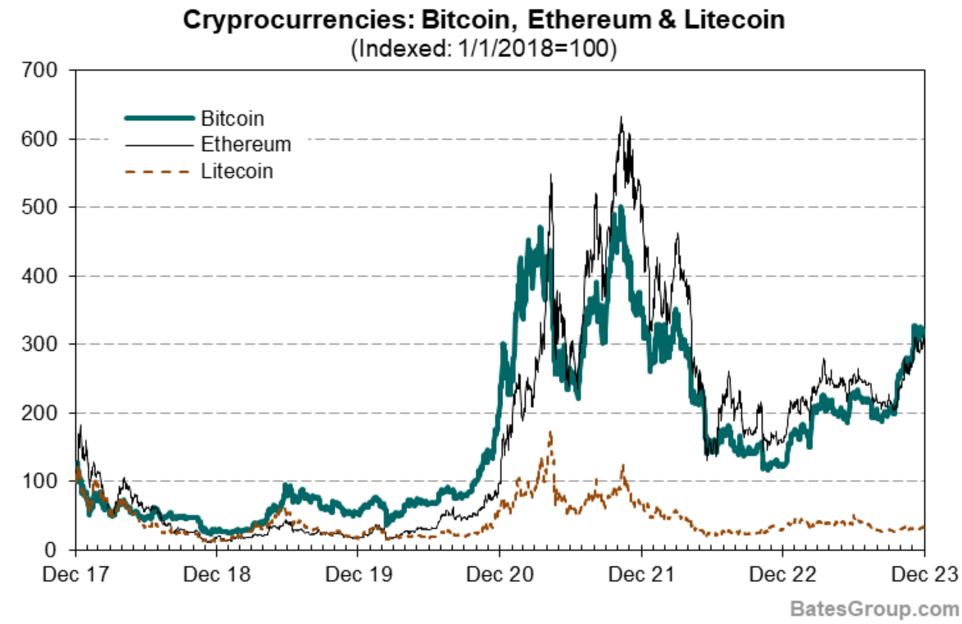
Source: Bloomberg, Bates Research

Cryptocurrency Trends

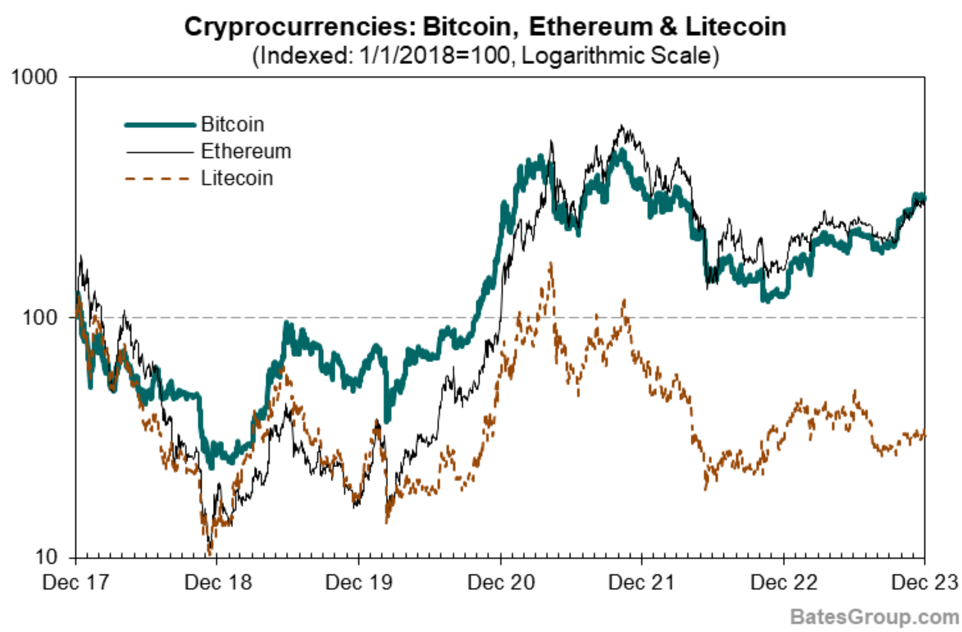
Cryptocurrencies bounced back in 2023 with Bitcoin rising 156% to close 2023 at $42,300. In comparison, Ethereum gained 91% to finish 2023 at $2,281. Litecoin was up 4% in 2023 to $73.

Although crypto currencies are continuing to gain traction as a financial asset/currency, the crypto market is still just a fraction of the size of the fixed income and equity markets.

The crypto market value was an estimated $1.7 trillion at the end of last year. In comparison, the global bond market is approximately $127 trillion, while the global stock markets have an estimated value of $125 trillion.



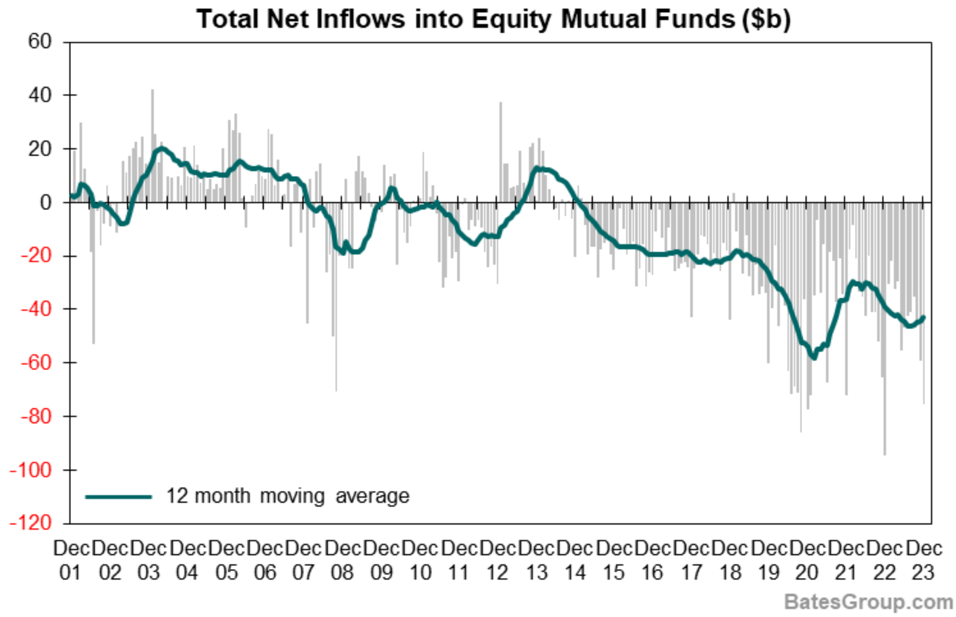
The chart to the right shows changes in three cryptocurrencies on a logarithmic scale. A logarithmic scale better shows percentage changes in large prices movements than a linear scale.



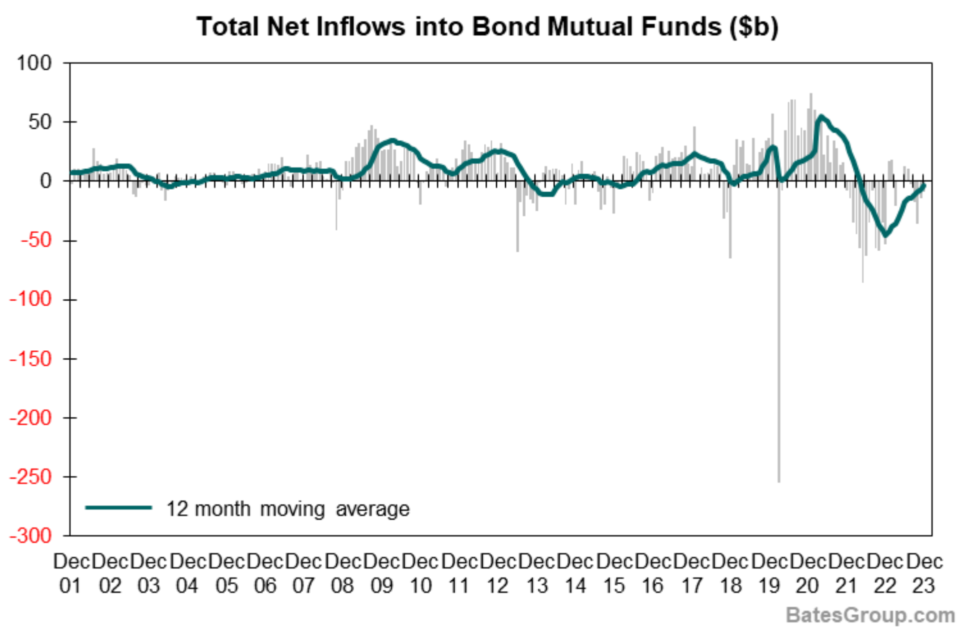
** Shaded areas represent recessions*
Source: Federal Reserve FRED, Coinbase, SIFMA, CoinMarketCap

Mutual Fund Flows

Total net assets for equity mutual funds continued to decline in 2023 to an estimated $19,560 billion. In comparison total net assets of equity mutual funds was $22,108 billion at the end of 2022.

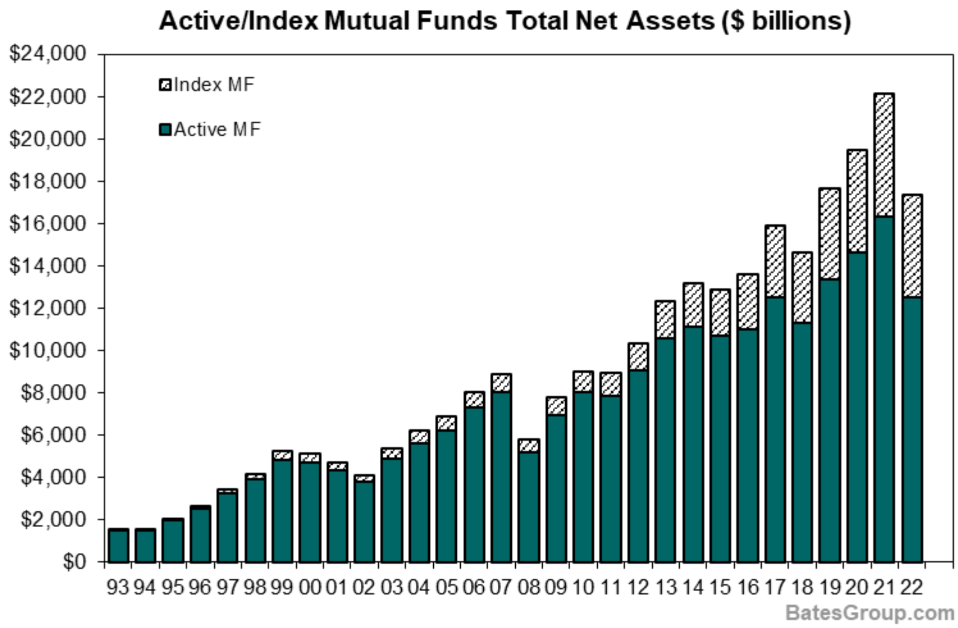


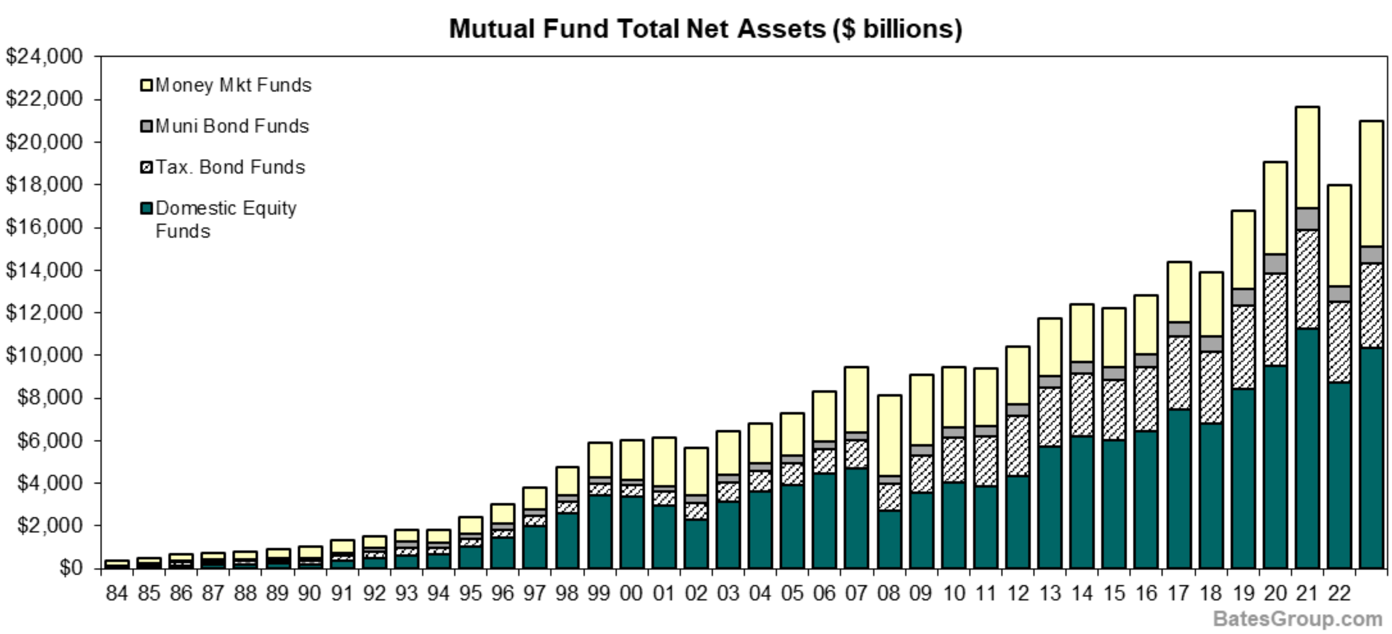
With the rising interest environment appearing to stabilize in 2023, bond funds began to see net inflows again during the early part of 2023. The estimated total assets for bond mutual funds was $3,990 billion at the end of 2023 compared t0 $3,775 billion in 2022.



Source: Investment Company Institute

In terms of total net assets, actively managed mutual funds accounted for 72% of all mutual funds, compared to just 18% for indexed funds.



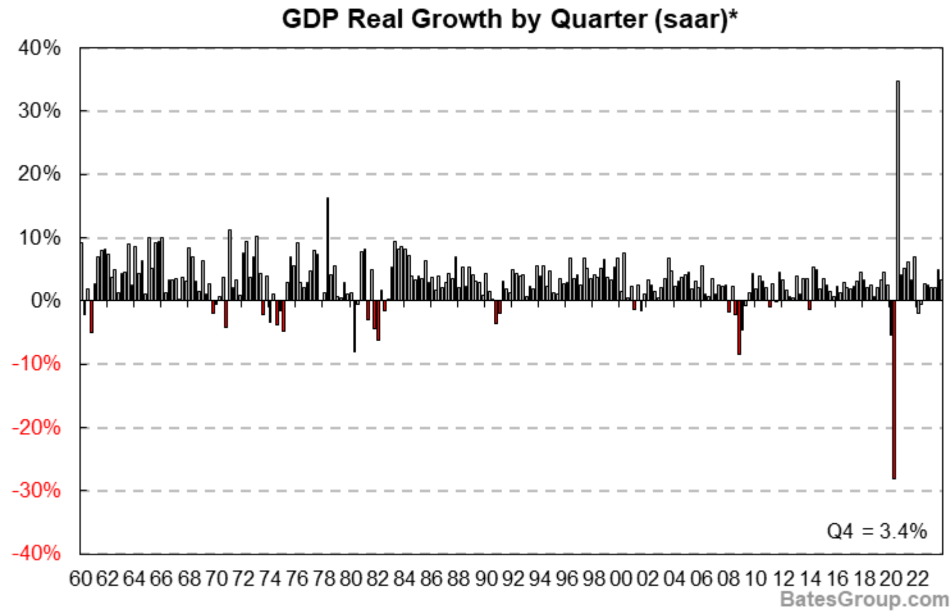


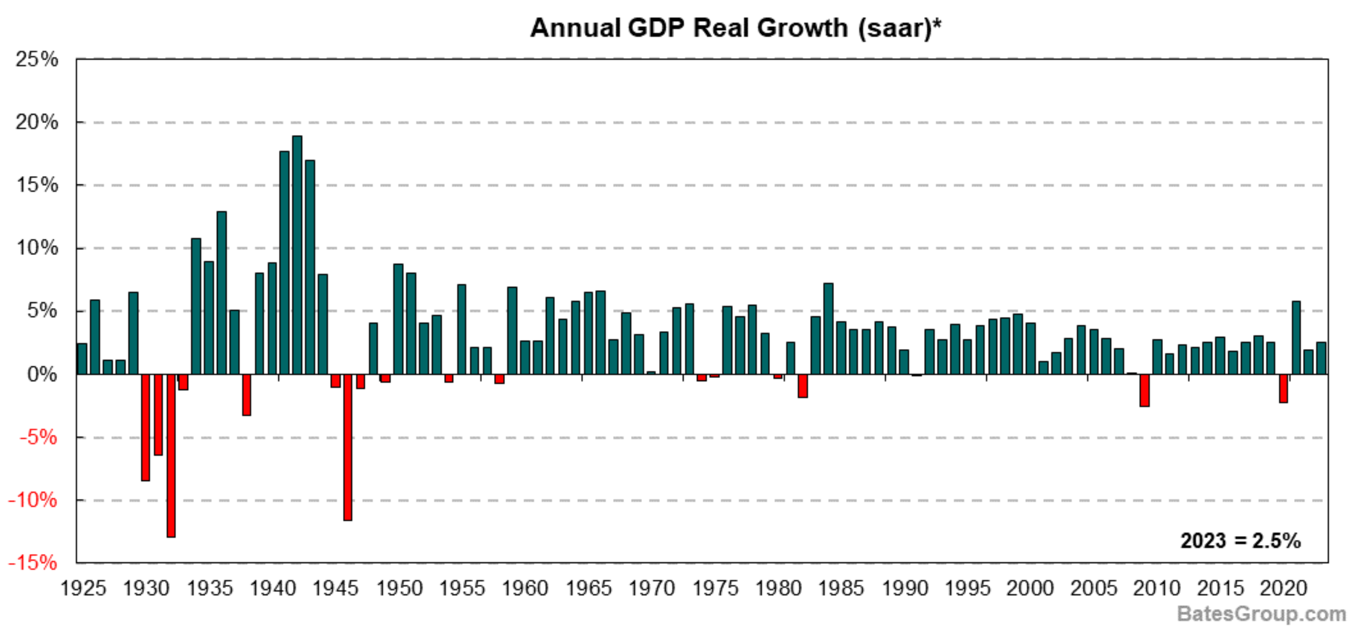
Source: Investment Company Institute

The Economy (GDP = C+I+G+(X-M))

Economic growth was solid across the board in 2023, with the U.S. economy growing at a 3.4% annual rate in the last quarter of 2023. For the year, GDP was up 2.5% compared to 2022.

Consumer spending accounted for a large portion of the growth while private investments, and to a lesser extent, government spending also contributed. In Q4 PCE (personal consumption expenditures) contributed 2.2% to the growth rate while gross private fixed investment added 0.15%. Government spending contributed 0.79% to economic growth.

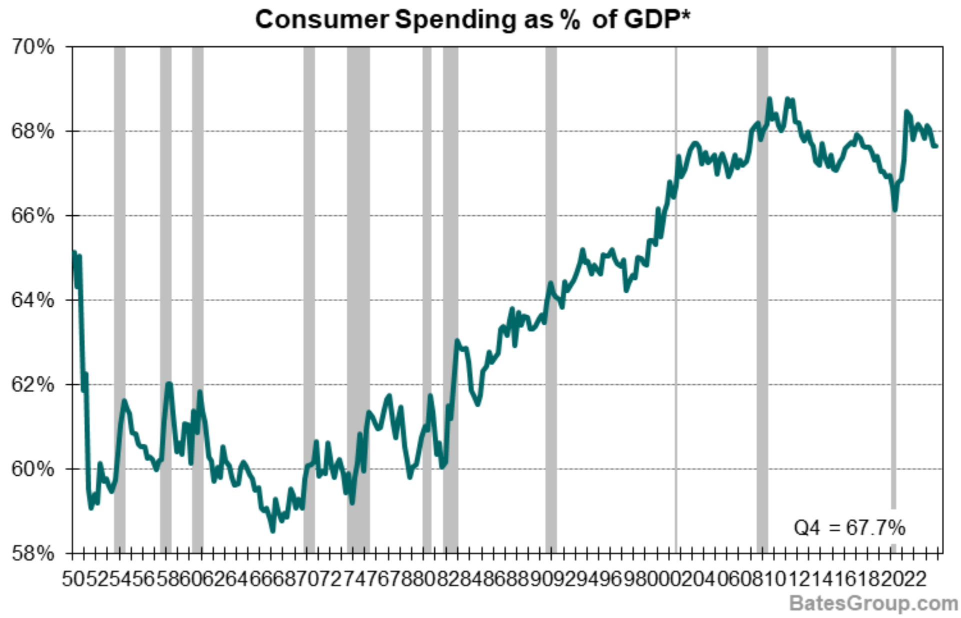




** saar – seasonally adjusted annual rate*
Source: Bureau of Economic Analysis, National Bureau of Economic Research

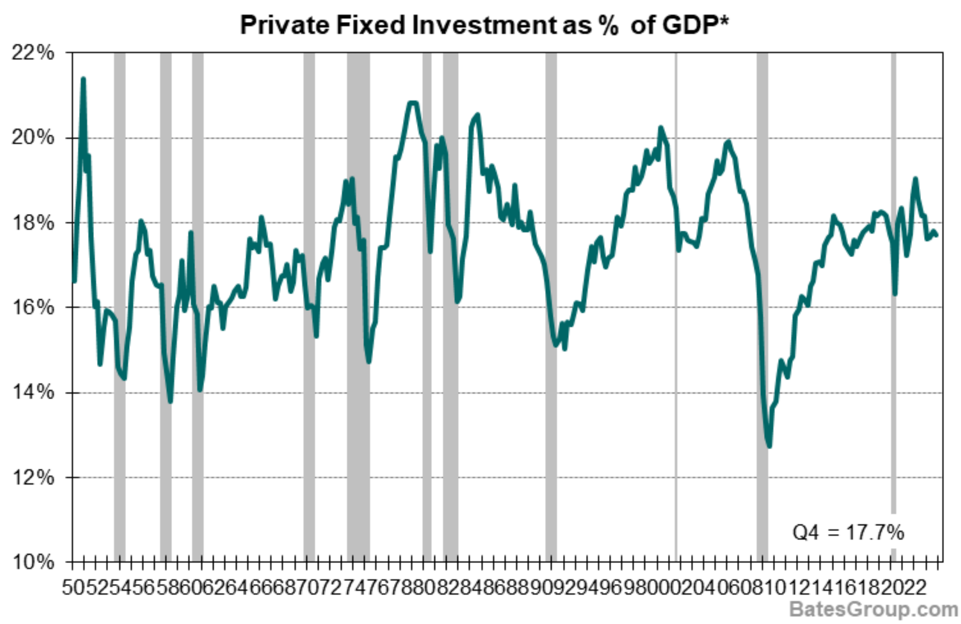
Consumer spending increased at a 3.3% annual rate in the fourth quarter, driven by solid consumption in goods and services. Wage growth also helped drive the spending increase with disposable personal income up 4.0% in Q4 2023.

Consumer spending is still the largest component of economic growth. As a percentage of GDP, personal consumption expenditures (PCE) declined slightly to 67.7% of GDP.



Private fixed investments were soft in the fourth quarter of 2023, up only 0.7% after a 10.0% annual rate in the third quarter.

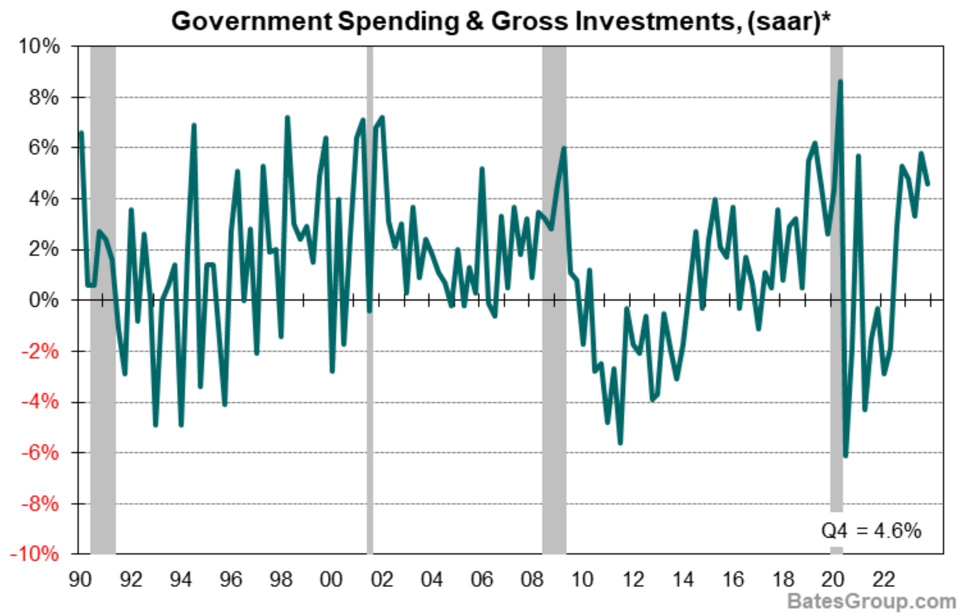
For the full year, gross spending on private fixed investment was down 1.2% over 2022.



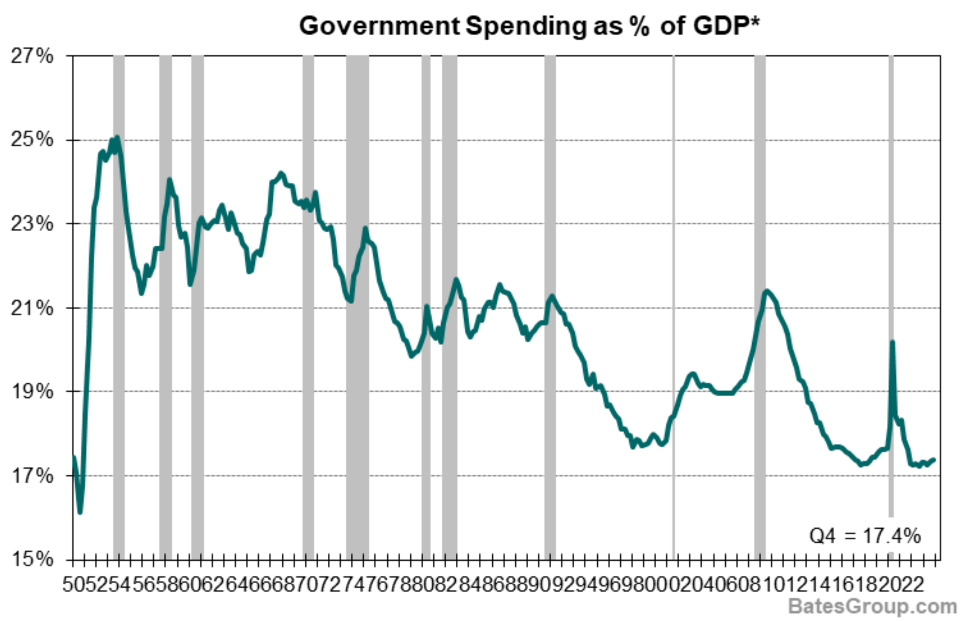
** Shaded areas represent recessions*
Source: Bureau of Economic Analysis

Government spending was up at a 4.6% annual rate in Q4 and increased 4.1% overall in 2023. Federal government spending increased at a 2.4% annual rate in Q4 with nondefense spending up 4.8%. State and local spending increased at a 6.0% annual rate in the last quarter of 2023.

Overall, government spending contributed 0.7% to the 2.5% growth in last year's GDP.

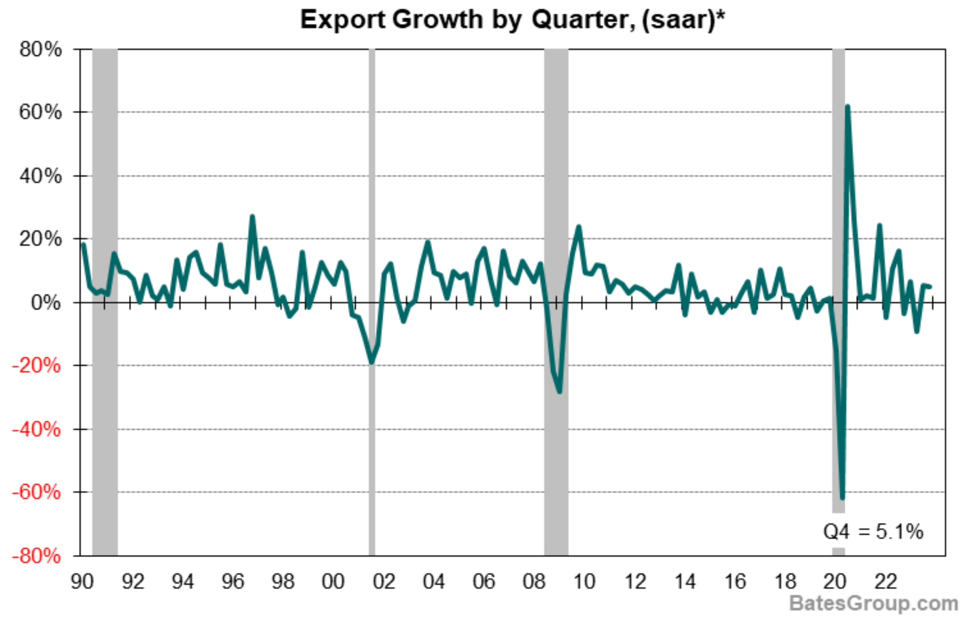


Relative to GDP, government spending remained stable and finished the year at 17.4% of GDP, with defense spending accounting for 3.6% of GDP in 2023.



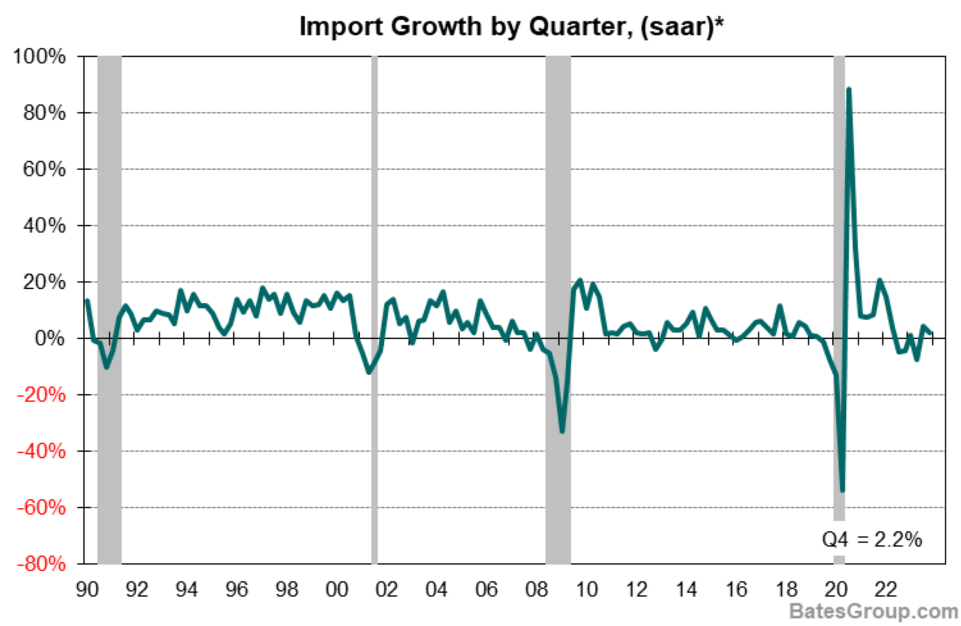
** Shaded areas represent recessions, saar – seasonally adjusted annual rate*
Source: Bureau of Economic Analysis

In the last quarter of 2023 exports grew at a 5.1% annual rate compared to a 5.4% rate in the third quarter. For the year, exports advanced 2.6% with weakness in the second quarter, slowing overall growth during 2023.



Imports were up at a 2.2% annual rate in the fourth quarter with imported services up at a strong 6.2% rate. The solid increase in import services was primarily led by travel services.

For the year, imports were down 1.7%.

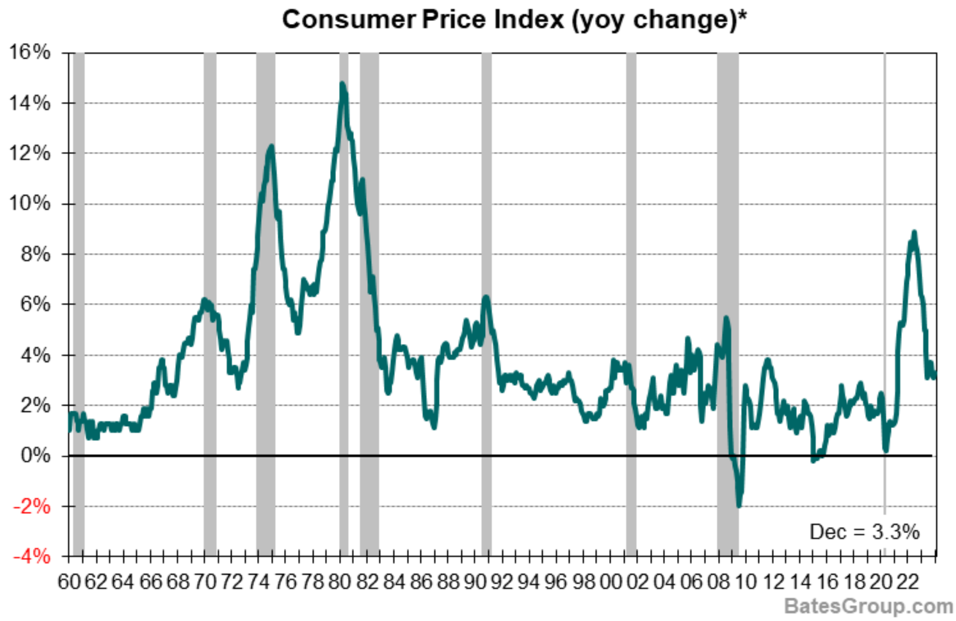


** Shaded areas represent recessions, saar – seasonally adjusted annual rate*
Source: Bureau of Economic Analysis

Inflation

Inflation fell substantially in 2023 after hitting a 40 year high in 2022. In December, the inflation rate was 3.3% compared to a peak of 9.0% in June 2022.

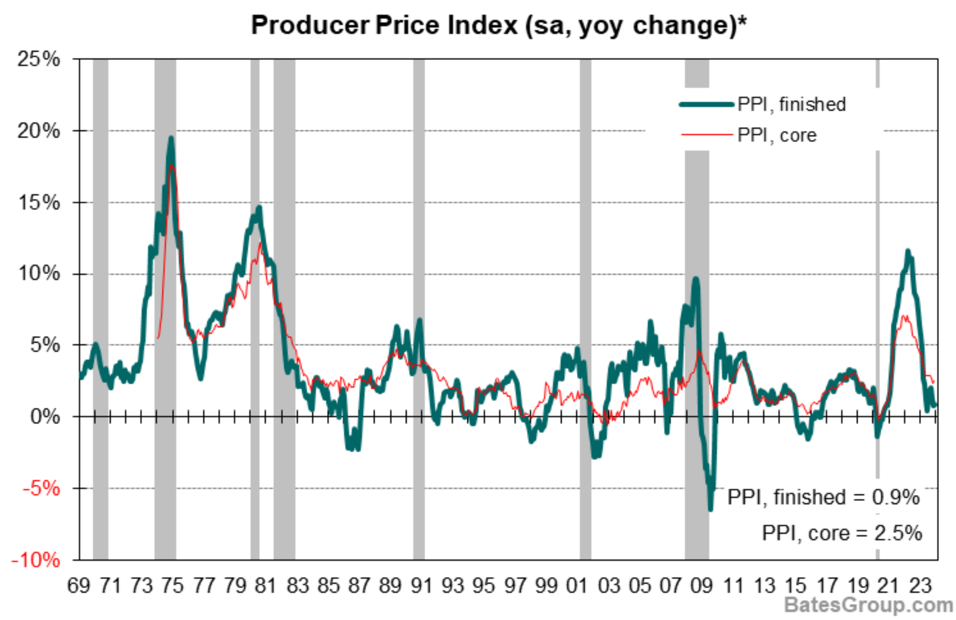
Transportation and shelter prices were up 9.7% and 6.2% respectively on a 12-month basis while food prices increased a modest 2.7% in 2023.



Producer prices for final demand softened in the second half of 2023, declining 0.4% in December, the third consecutive decline. Leading the December decline was a 1.2% drop in final demand for energy.

For the 12 months ended December 2023, producer prices for final demand were up 0.9%.

The 12-month core PPI rate (final demand finished goods less foods and energy) was 2.5% in December.

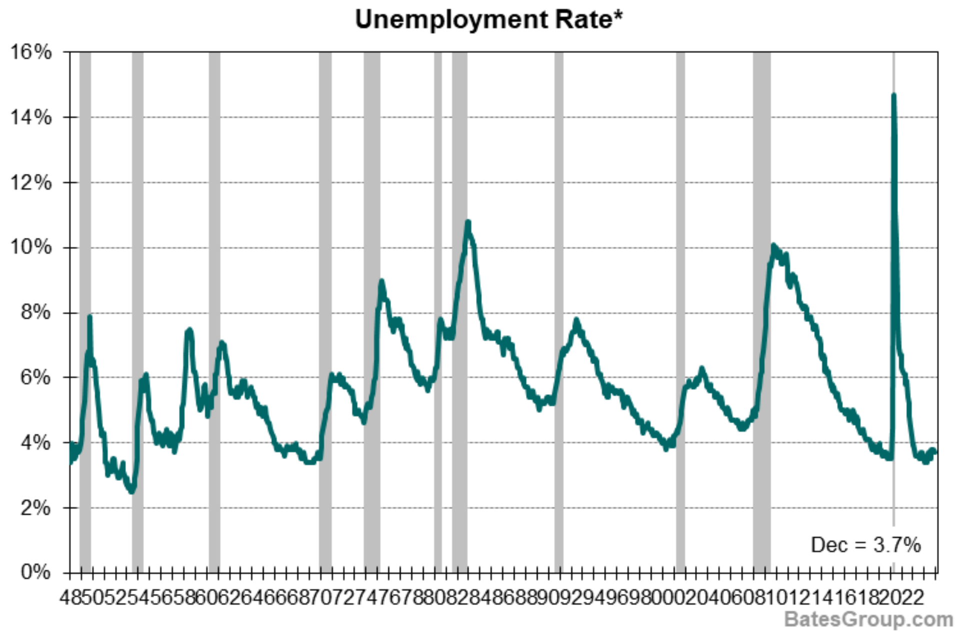


** Shaded areas represent recessions*
Source: Bureau of Labor Statistics

Employment

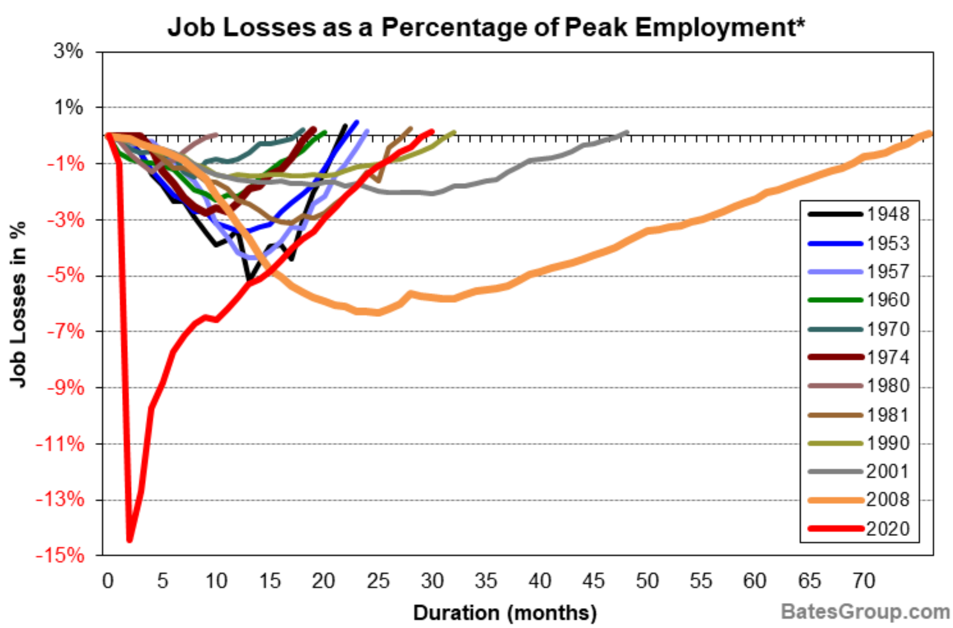
After spiking to 14.7% in April 2020, the top-line unemployment rate declined substantially to finish 2023 at 3.7%.

A fuller, or better measure of unemployment is the U-6 number, which was 7.1% in December. The U-6 number measures people who are either unemployed, given up on finding work, or are only marginally employed. In April at the height of the coronavirus pandemic, the 'real' unemployment number was over 22%. This was the highest unemployment rate that the U.S. had experienced since the Great Depression.



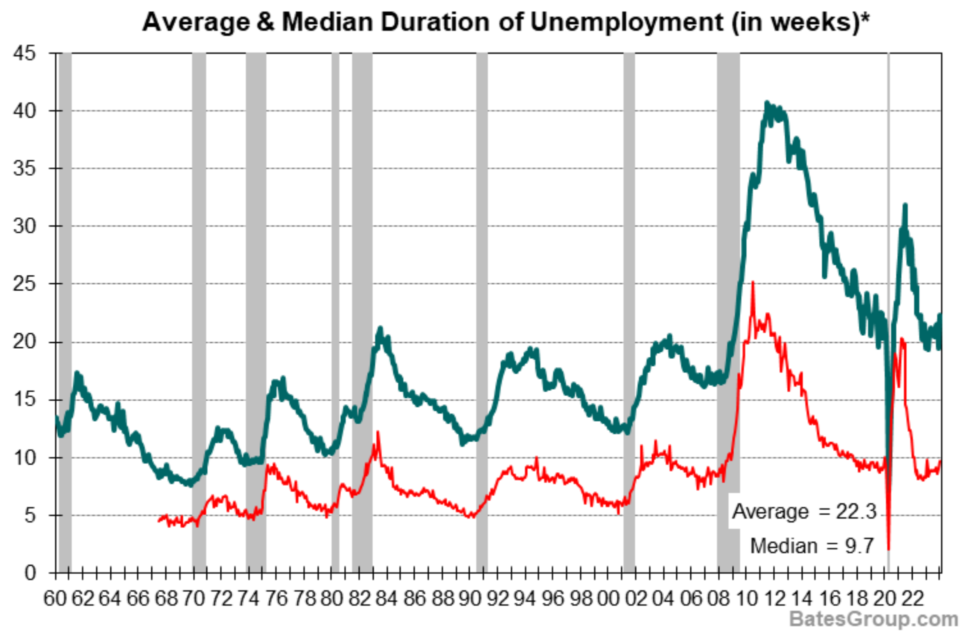
2020 was also notable for the steepest decline in employment since the Great Depression. In just two months in early 2020, nearly 15% of the workforce lost their jobs.

It also marked the worst jobs recession in the post-WW II history. Since then, the job situation has bounced back to pre-pandemic levels.



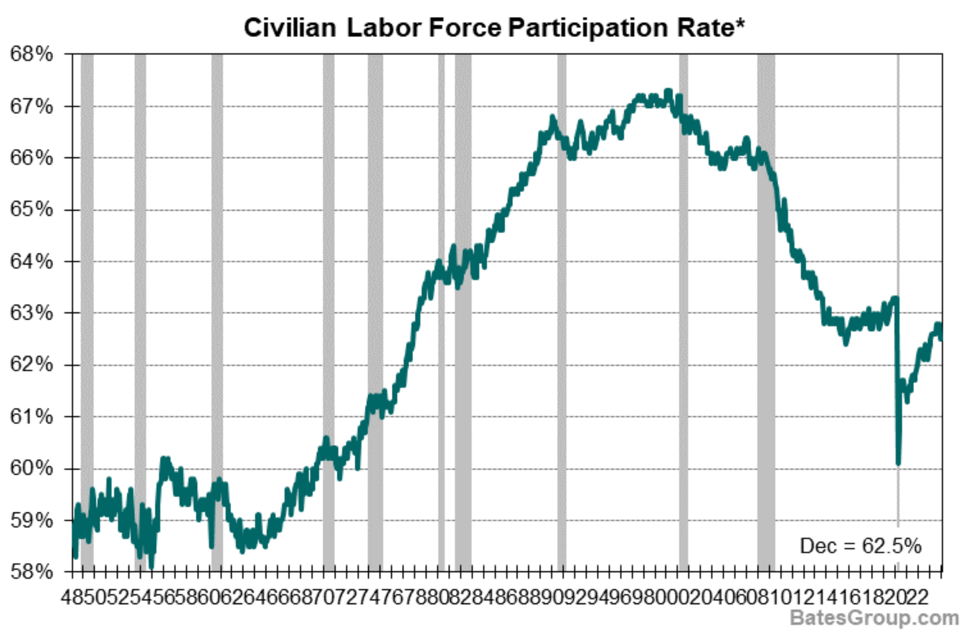
** Shaded areas represent recessions*
Source: Bureau of Labor Statistics

After declining from the peak set in 2010, the average duration of unemployment spiked in 2020. Since that time, the average duration of unemployment has continued to trend lower and is back to pre-pandemic levels. In December 2023 it was at 22.3 weeks.



The civilian labor force participation rate declined from the 1980-2000 period in large part due to secular changes. Beginning in the 2000s, baby boomers began reaching retirement age and started dropping out of the labor force.

However, other changes also account for the decline. Life cycle or generational changes have recently led to less men participating in the labor force compared to earlier generations.

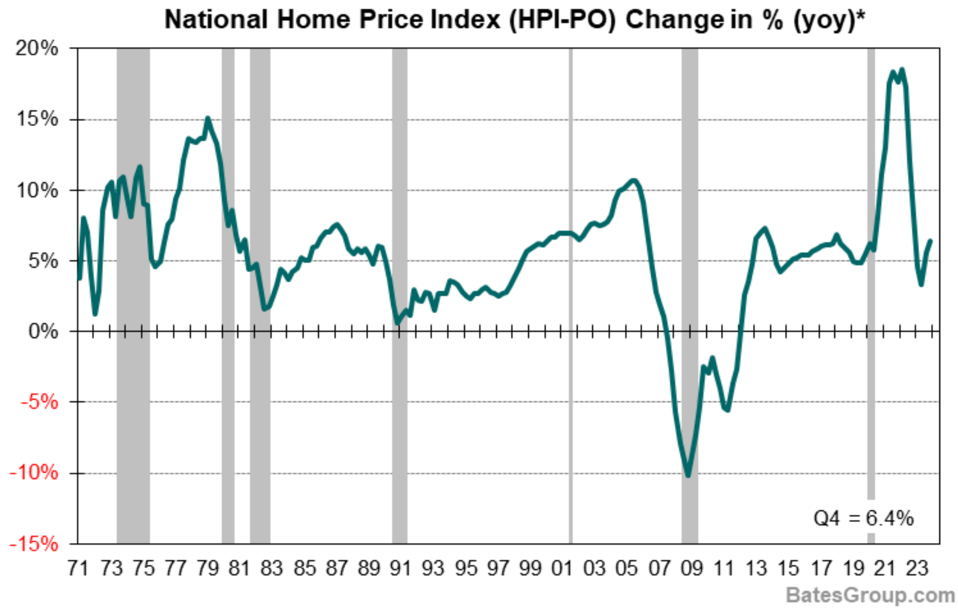


** Shaded areas represent recessions*
Source: Bureau of Labor Statistics

Housing

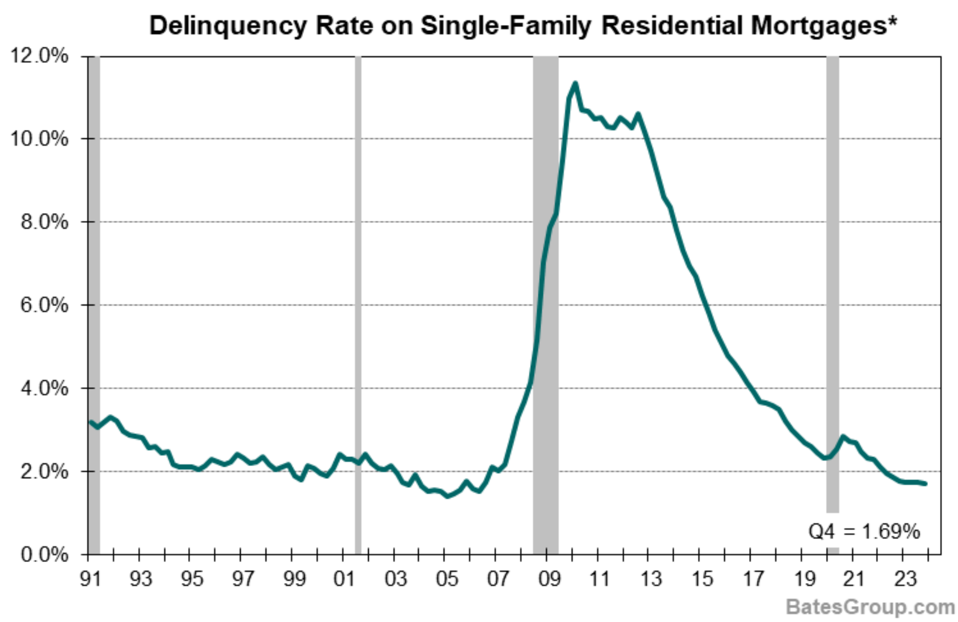
Housing price appreciation (purchases only) remained solid in 2023, rising 6.4% year-over-year (yoy) in the fourth quarter of 2023.

Of the nine census divisions, the New England region experienced the strongest gain, up 12.3% yoy. The weakest division was the West South Central region where prices rose just 3.2% yoy.



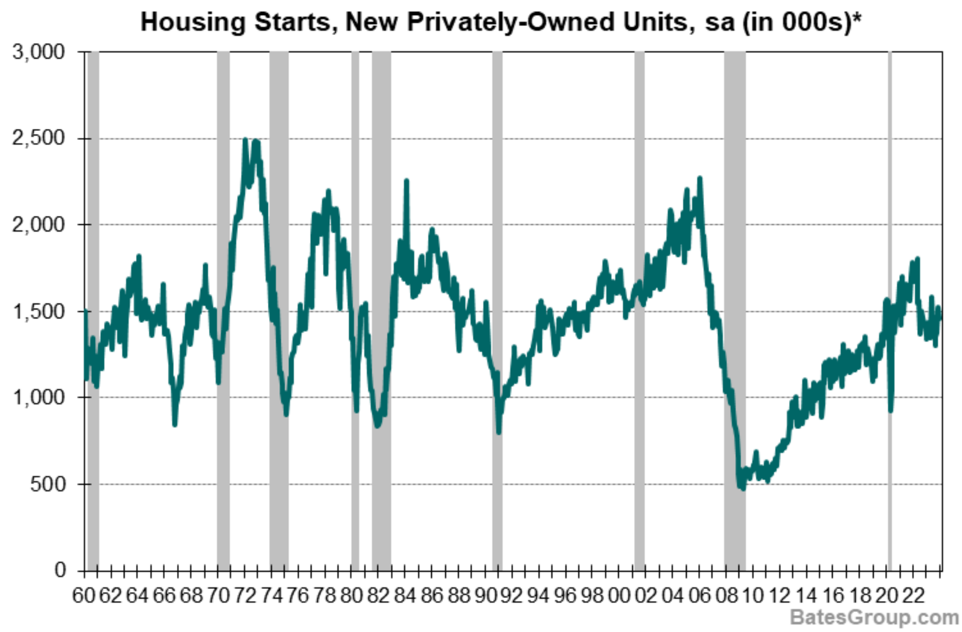
According to the Federal Reserve, delinquency rates on single-family residential mortgages trended down during the year, ending Q4 at 1.69% compared to 1.78% at the end of 2022.

In contrast, Fannie Mae's serious delinquency rate for single-family homes was 0.55% in December 2023 compared to 0.65% a year previously.



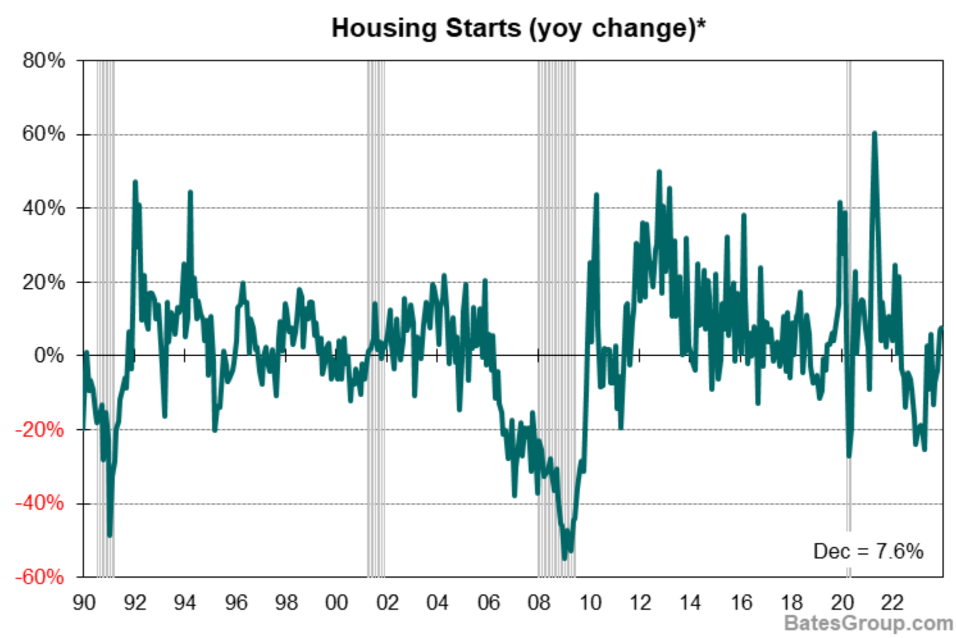
** Shaded areas represent recessions*
Source: FHFA, Federal Reserve, Bloomberg

With interest rates beginning to level out in 2023, the number of new home constructions began to rise modestly to 1.46 million units in December 2023, up from 1.36 million units a year earlier.



On an annual basis, housing starts rose 7.6% in December from a year earlier.

However, the gains were not felt everywhere. Housing starts in the Northeast declined significantly, down at an 46.8% annual rate. In contrast, housing starts in the West were up 48.2%.



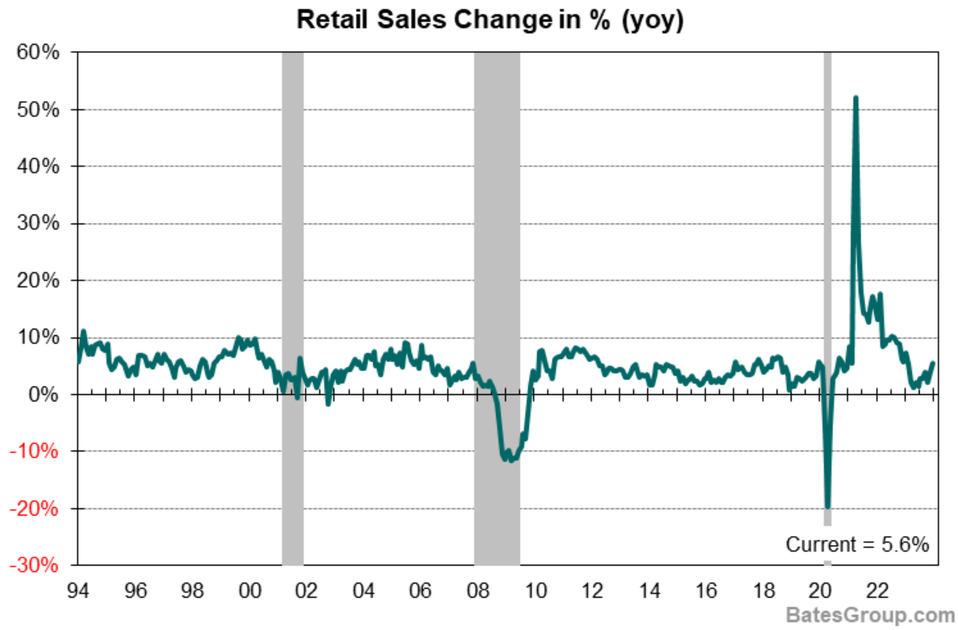
** Shaded areas represent recessions*
Source: Census Bureau, HUD

The Consumer

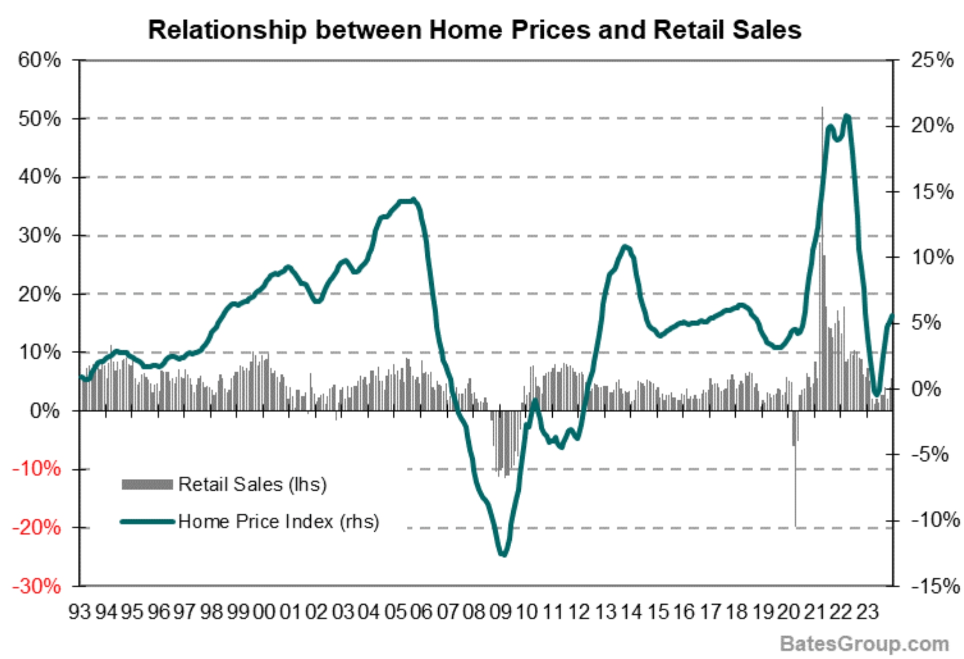
In the last month of 2023, the advance estimate of retail sales increased 0.4% over the previous month, while year-over-year (yoy) retail sales increased an estimated 5.6%.

On a 12-month basis, food services and bars showed the largest gain, up 11.3% while health and personal care stores sales were up 8.5%.

Gas station sales were the weakest, down 11.5%, followed by furniture stores with a 5.4% yoy decline.



The chart to the right shows the relationship between home prices and retail sales.

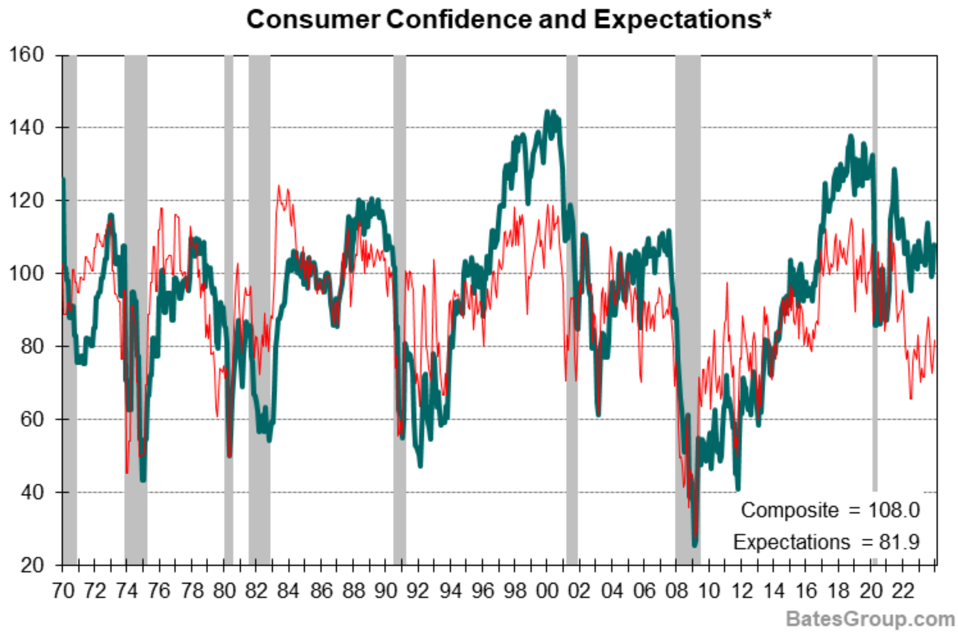


** Shaded areas represent recessions*
Source: U.S. Census Bureau, FHFA

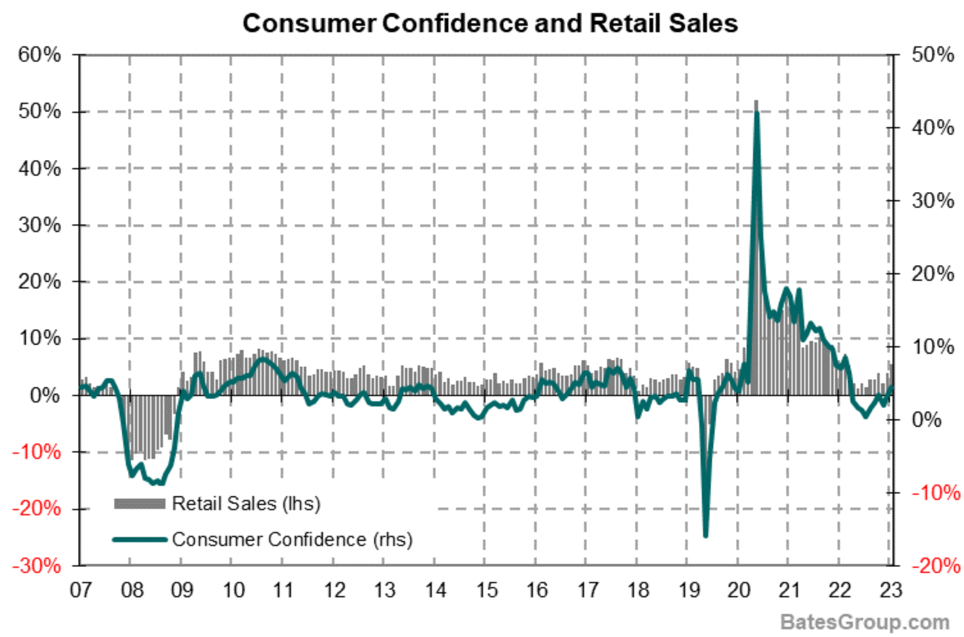
Consumer confidence increased in December to 108, up from 101 in the prior month. According to the Conference Board, this upward move reflected consumer's positive view on the economy.

The consumer expectations index rose to 81.9 in December.

With consumer spending accounting for roughly 70% of economic activity, consumer confidence is a key metric for gauging spending trends.



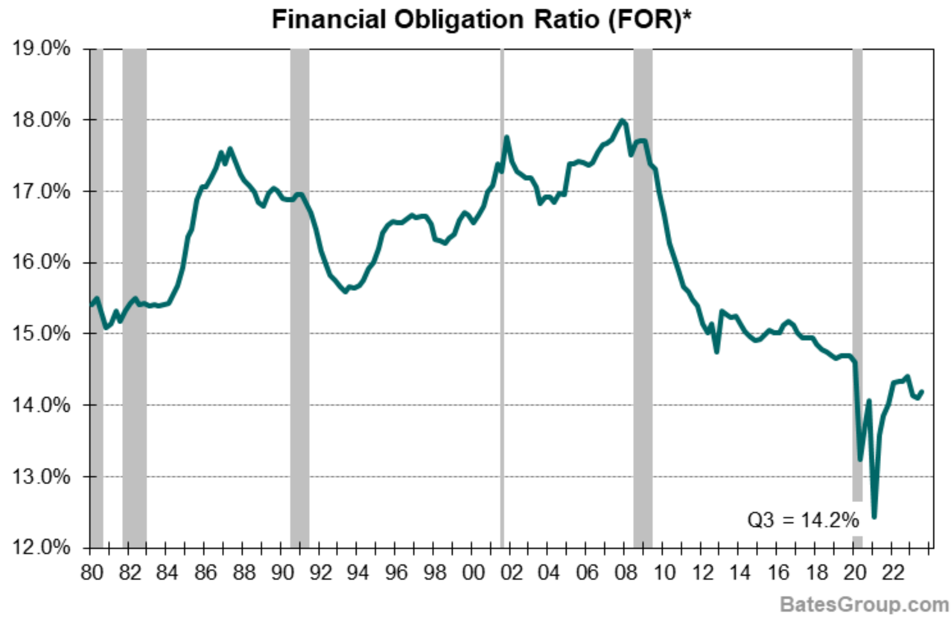
As the chart to the right highlights, consumer confidence tends to be a good barometer of retail spending levels.



** Shaded areas represent recessions*
Source: The Conference Board, U.S. Census Bureau

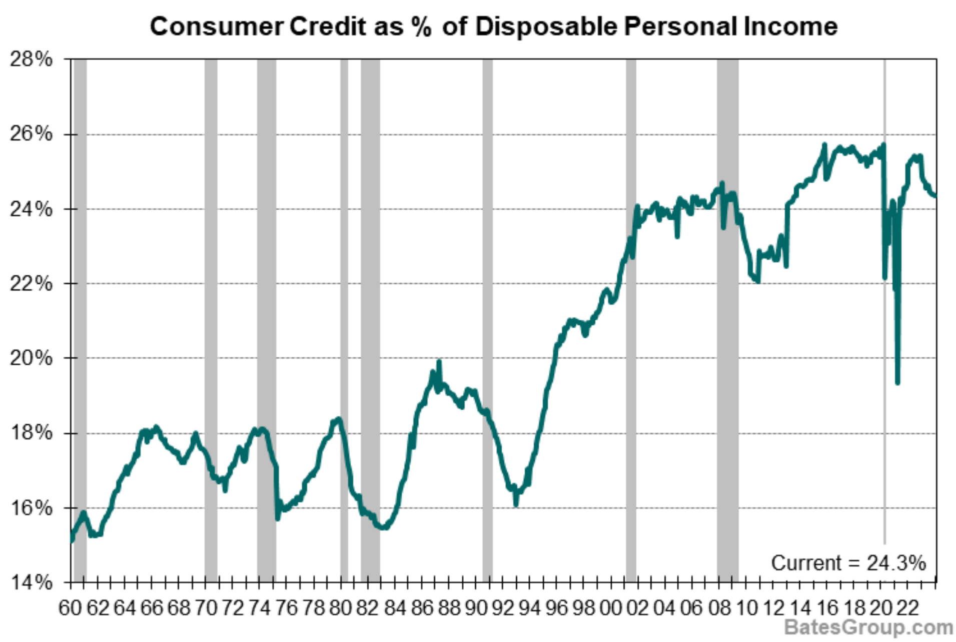
The Federal Reserve's Financial Obligation Ratio (FOR) is an estimate of all debt payments plus car lease payments, rent, homeowner's insurance and property tax payments as a percentage of disposable personal income.

During the pandemic the debt level fell to the lowest level since the Federal Reserve began tabulating the data but has been rising again in 2022.



After significant household deleveraging during the credit crisis in 2008-2010, consumer credit expanded in the 2013-2019 period. That all changed in early 2020 as pandemic-fueled financial fears drove consumer credit levels sharply lower.

Over the past two years consumer credit has been rising again to near pre-pandemic levels.

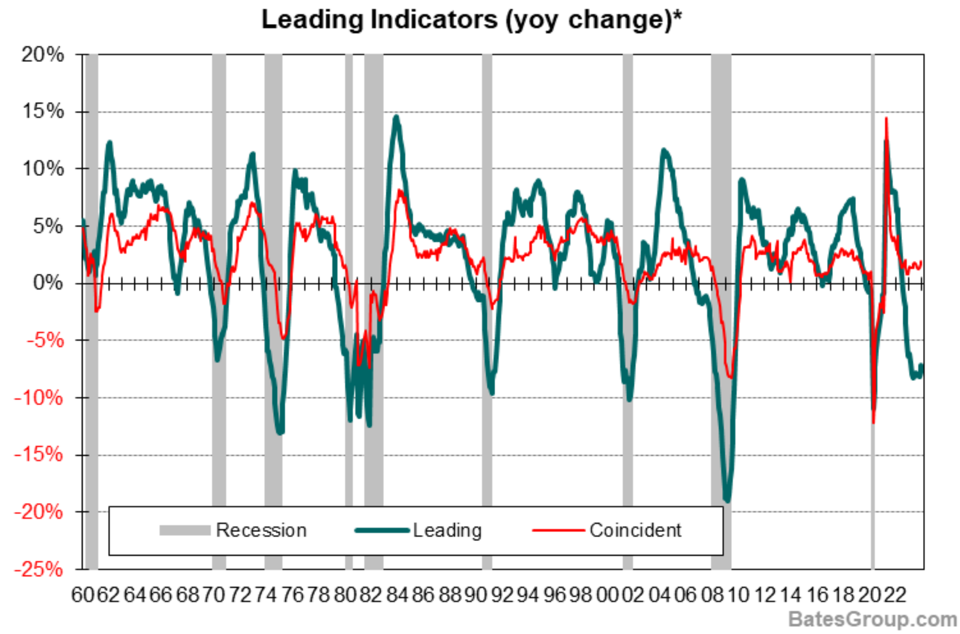


** Shaded areas represent recessions*
Source: Federal Reserve

Industry Indicators

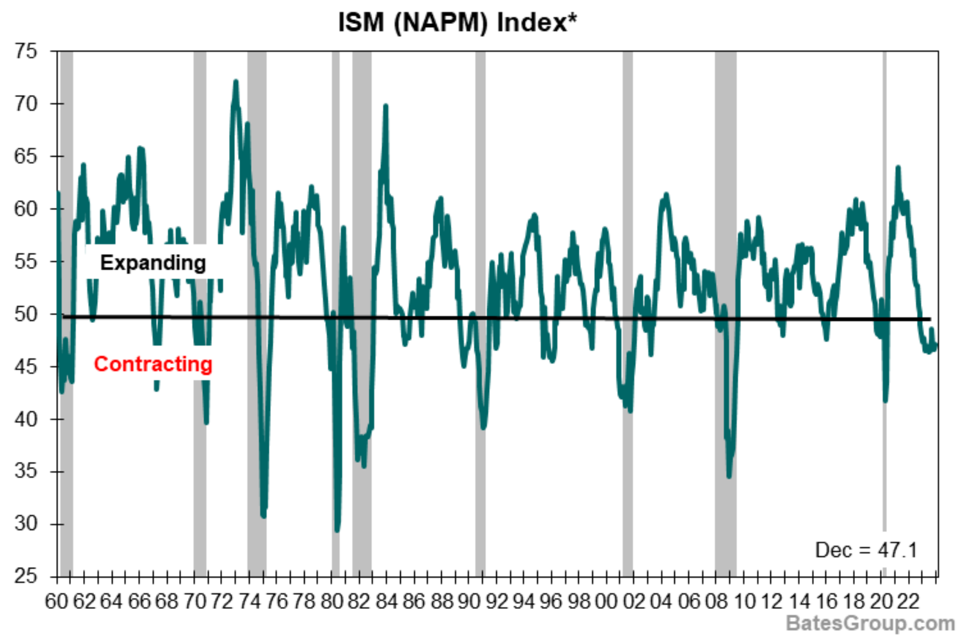
In a sign that the U.S. economy is slowing, the index of leading indicators declined to 103.1 in December. This is down from 110.4 at the beginning of 2023.

According to the Conference Board, the index is "*continuing to signal underlying weakness in the US economy*" however six of the leading indicators made positive contributions to the Index in December.



The Institute for Supply Management Index, a gauge on the health of the manufacturing sector, continued to remain in contraction territory at 47.1 in December.

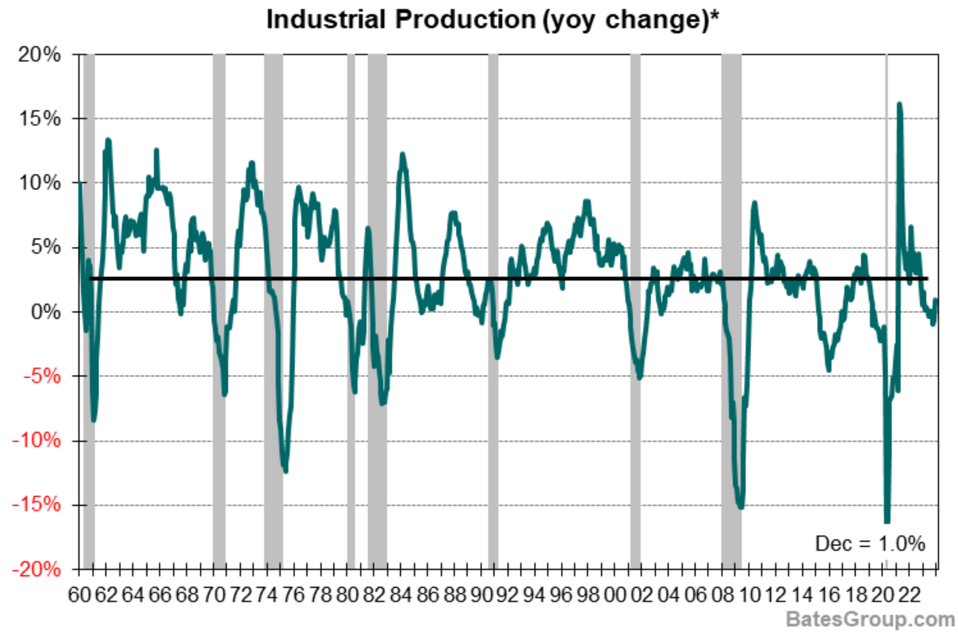
According to ISM, a reading below 50 represents a contraction in manufacturing activity.



** Shaded areas represent recessions*
Source: The Conference Board, Institute for Supply Management

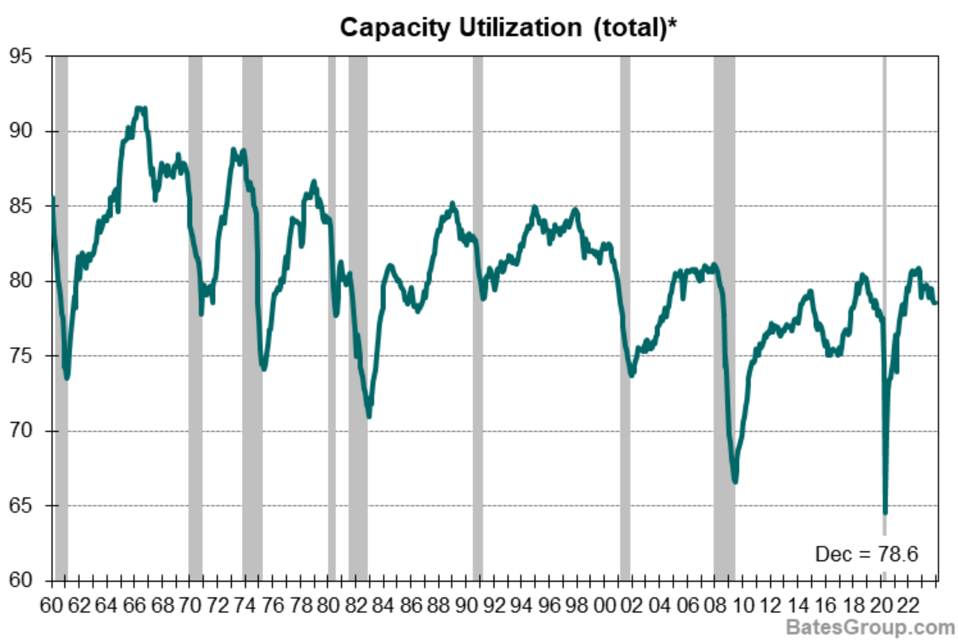
Industrial production continued to remain virtually unchanged in December relative to the rest of 2023. Year-over-year the index was up just 1.0% from December 2022.

Utilities declined 4.9% yoy while manufacturing output was up 1.2%.



In December, the utilization rate was 78.6% which was below the long-term average of 79.7%.

The mining utilization rate was 93.8% while utilities was 70.0%. Manufacturing utilization was 77.1%.

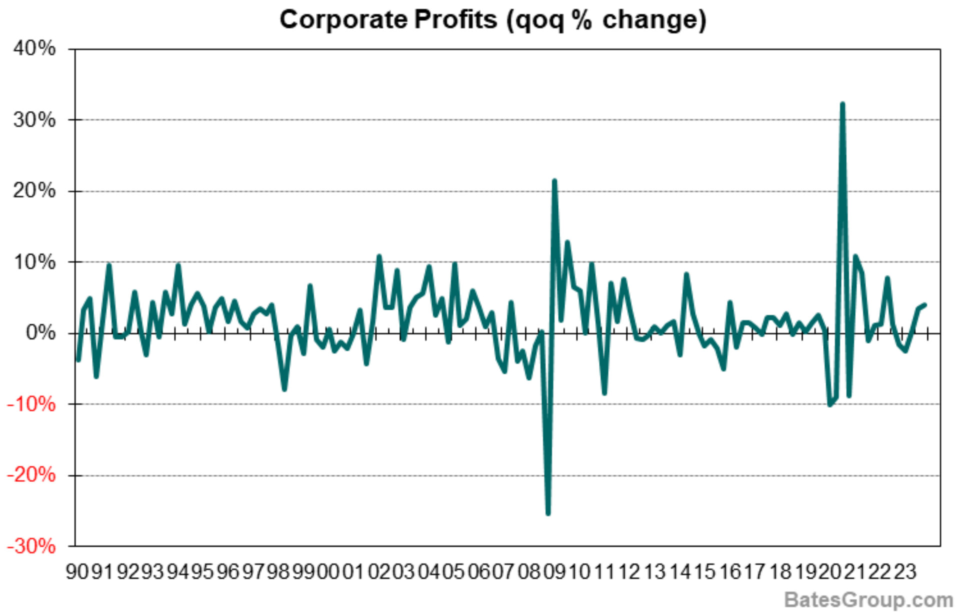


** Shaded areas represent recessions*
Source: Federal Reserve

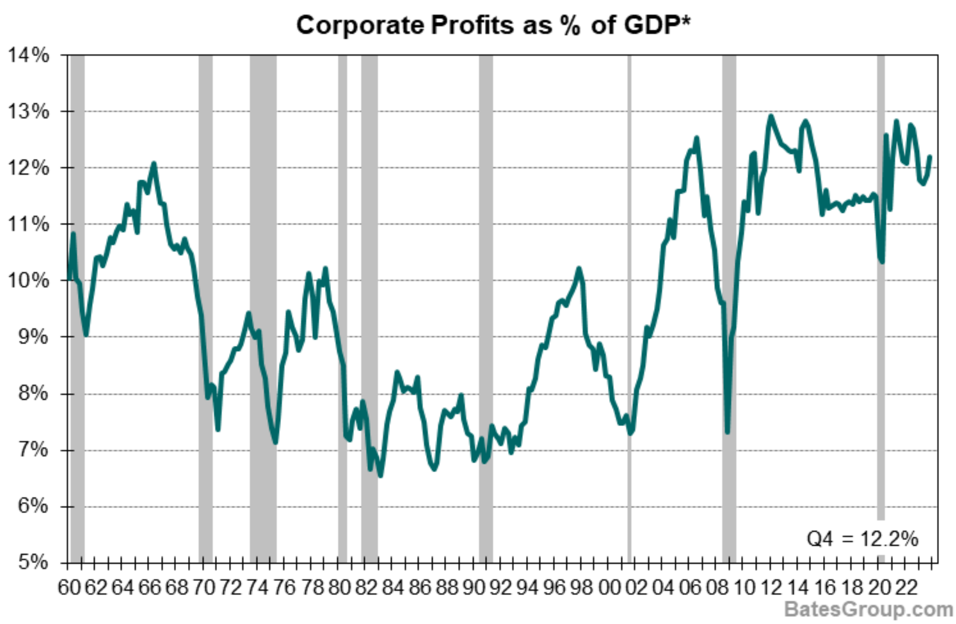
Corporate Profits

In the fourth quarter of 2023, overall corporate profits increased 4.1% to approximately $3,414 billion. Domestically, corporate profits were up 3.8%

Profits for domestic financial corporations increased $5.9 billion in Q4, and profits for domestic nonfinancial companies were up $136.5 billion in the last quarter of the year.



Corporate profit margins as measured by the ratio of corporate profits to GDP increased to 12.2% in the fourth quarter of 2023.

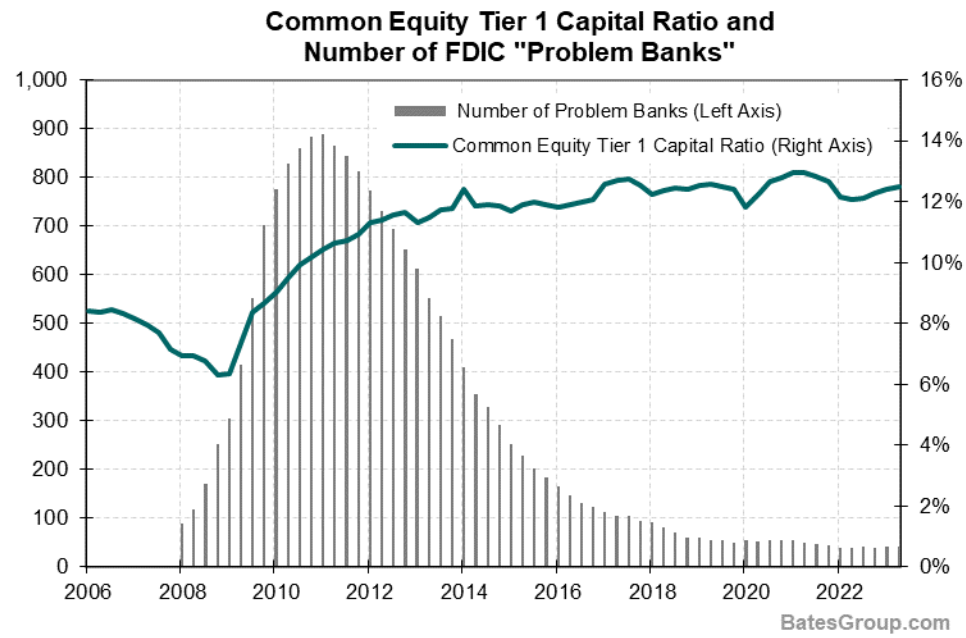


** Shaded areas represent recessions*
Source: Bureau of Economic Analysis

Banking Industry

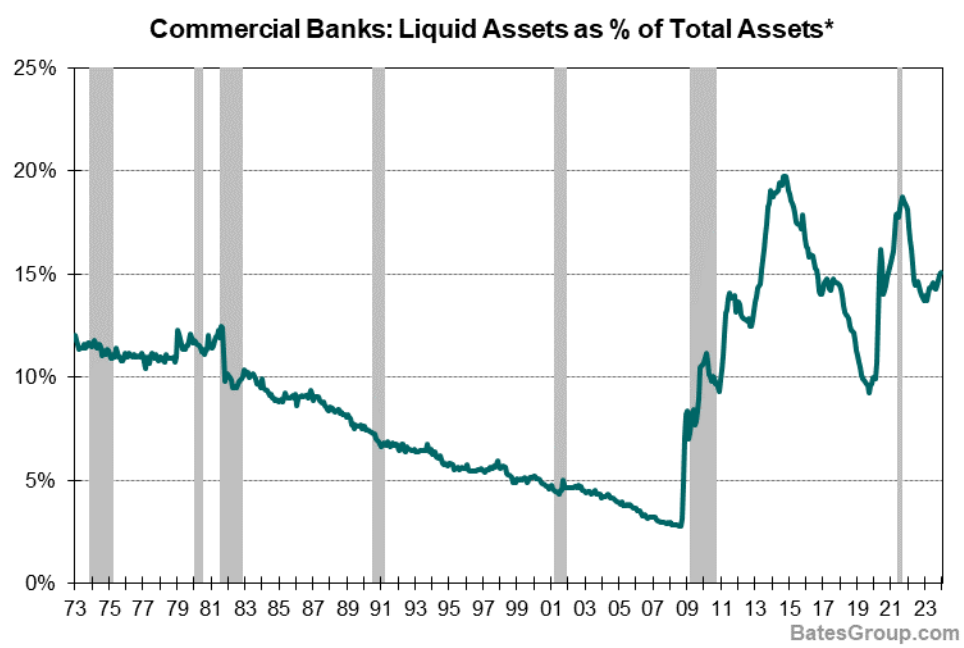
Capital ratios have improved through 2023, and the banking industry's financial strength remains solid with common equity Tier 1 capital ratios above 12%.

The number of problem FDIC institutions ticked up in the fourth quarter of 2023 to 52 from 39 at the end of 2022. However, the number of problem institutions remain at very low levels compared to the financial crisis beginning 2008.



Aggregate liquidity ratios for commercial banks, defined as cash and CE as a percent of total assets, increased in December 2023 to 15.1% from 13.7% a year earlier.

Cash as a percent of total deposits improved to 20.1% at the end of 2023 compared to 17.7% in Decem er 2022.

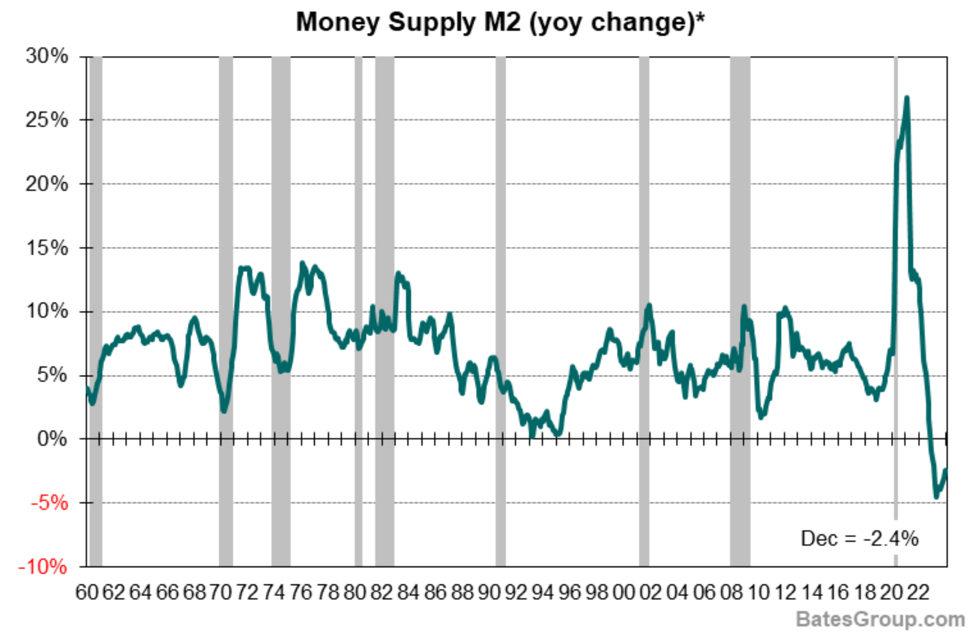


** Shaded areas represent recessions*
Source: Federal Reserve, FDIC

Money Supply

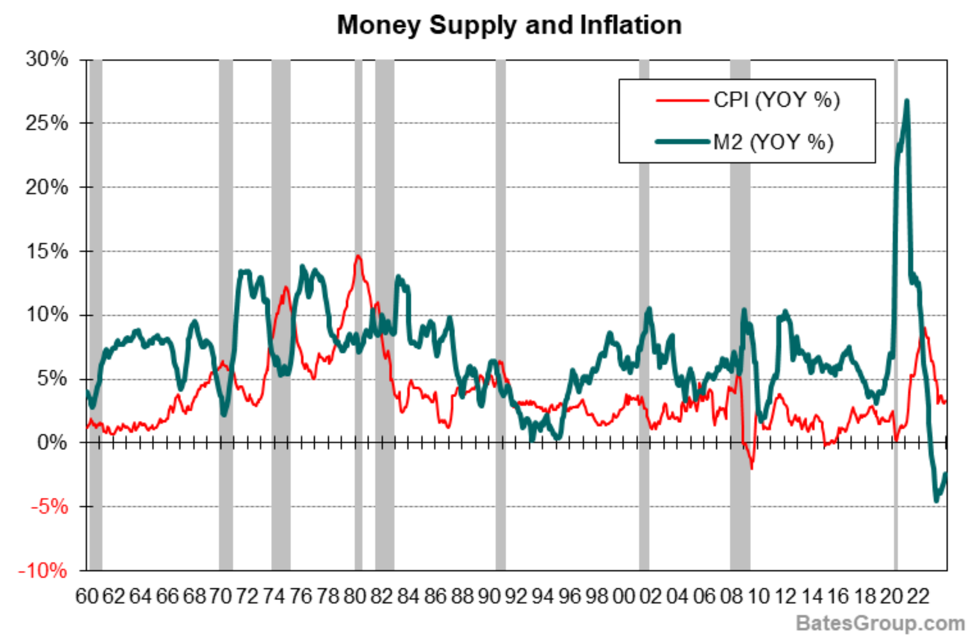
In 2022, M2 money supply experienced one of its steepest drops in history following one of the most rapid increases in history.

The growth in money supply remained negative through 2023 as the Federal Reserve continued to tighten supply in a move to slow growth and reduce inflation.



Contrary to popular belief money supply, although one of the factors, is not the determining factor in inflationary growth.

As the chart to the right shows, there is a low correlation between growth in M2 money supply and growth in inflation. Even adjusting for a time lag (i.e. money supply growth precedes inflation changes by 6 months or a year) the correlation, or relationship, is still weak.



Source: Federal Reserve, U.S. Bureau of Labor Statistics, Bates Research

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