Monthly Market Metrics and Trends: July

Analyzing Volatility, Market Performance, and Equity and Listed Options Volumes

Plus a Look at a Key Equity Markets Theme for the Month

August 2023

Monthly Metrics

- Volatility (VIX): Monthly average 13.94; -0.4% M/M, -43.9% Y/Y
- S&P 500 (Price): Monthly average 4,508.08; +3.7% M/M, +15.2% Y/Y
- Performance (month/year): best = energy/tech +7.0%/+45.8%; worst = real estate/utilities +0.3%/-5.0%
- Equity ADV: Monthly average 10.4 billion shares; -7.3% M/M, -2.7% Y/Y
- Options ADV: Monthly average 42.7 million contracts; -4.4% M/M, +17.4% Y/Y

Monthly Highlight

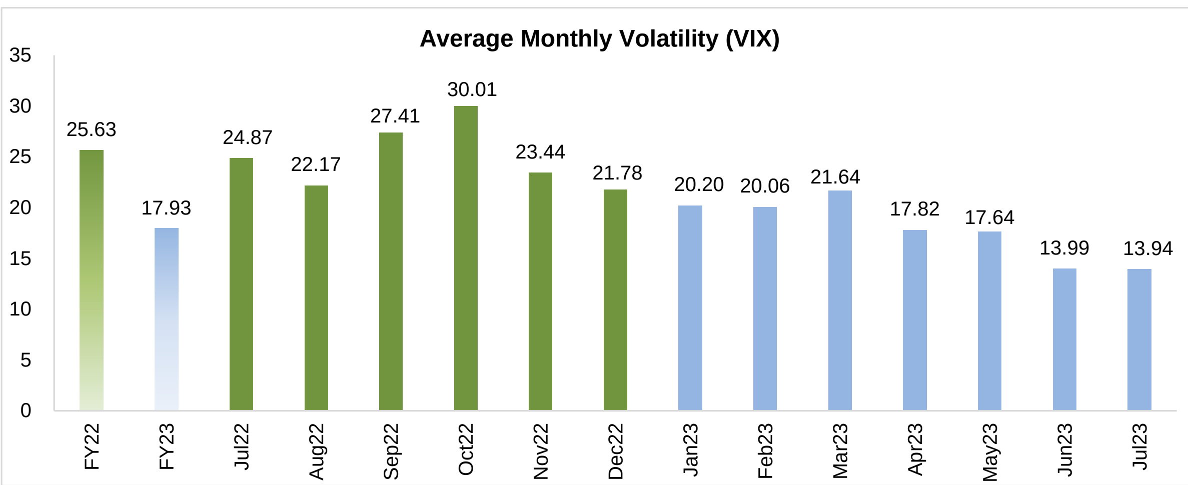
- This month, we look at the tale of two volatilities, the VIX versus the MOVE indices, the sentiment gauges for markets (equities and bonds respectively).
- Historically, movements in the two indices were correlated in direction with a 0.6392 correlation since 2000. This has shifted, with a 0.3484 correlation since 2021, -45.5%. 2023 correlation increased to 0.5238, -18.0%.
- VIX ended July at 13.63, -40.1% to 2021 & -37.1% to 2023. 2023 is +24.3% to the pre COVID average of 14.40, but the last two months came in below that historical norm. Expectations of future volatility are in check.
- MOVE ended July at 112.03, +128.7% to 2021 but -7.9% to 2023. 2023 is significantly above pre COVID average of 58.00, ranging +190% to +261% on a monthly basis to that historical norm. Expectations are for future volatility.

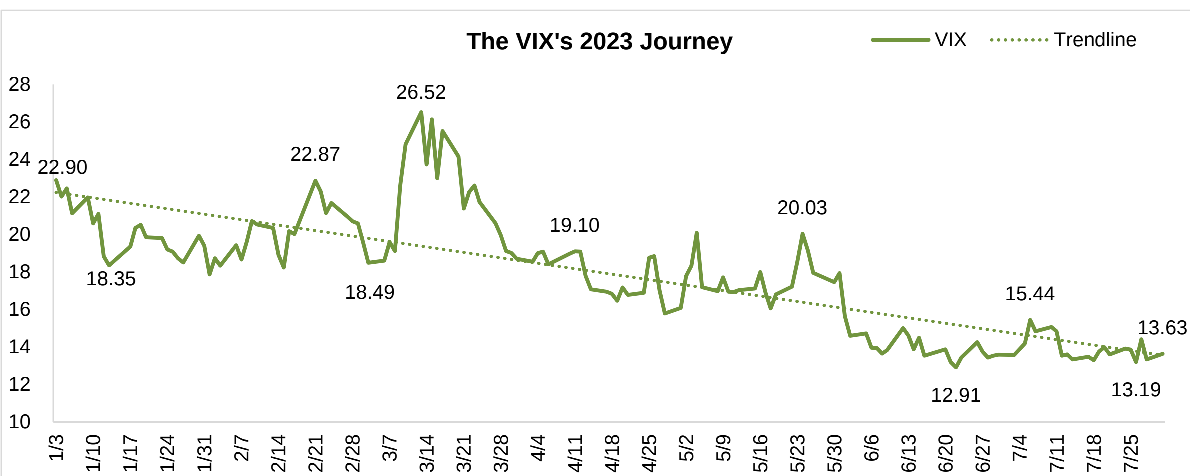
Monthly Market Metrics

In this section, we highlight the monthly market trends for volatility, price, and volumes.

Volatility (VIX)

- Monthly average 13.94
    - -0.4% M/M
    - -43.9% Y/Y
    - -39.1% from the start of the year
- Monthly peak on the 6th at 15.44, troughed on the 26th at 13.19

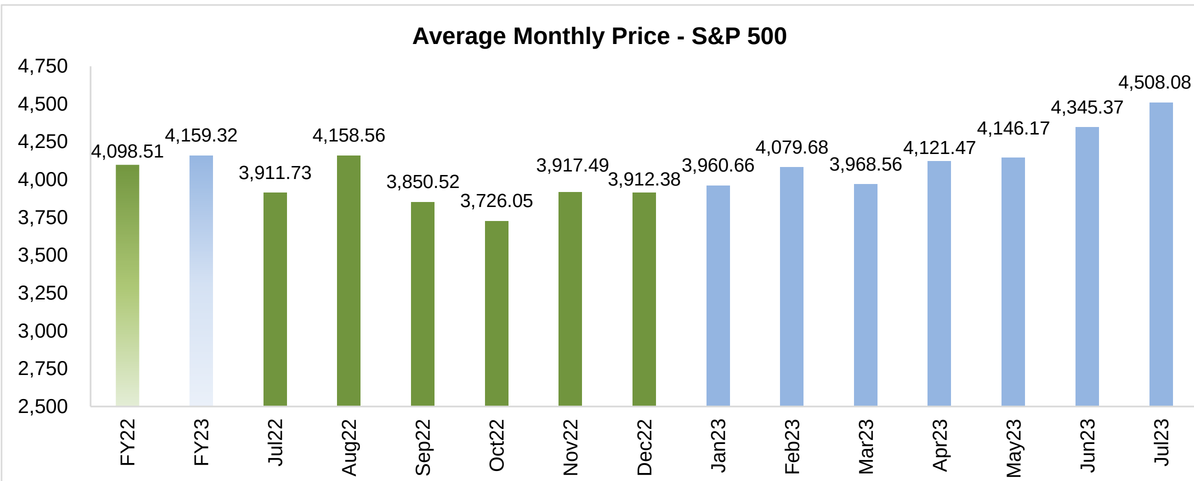


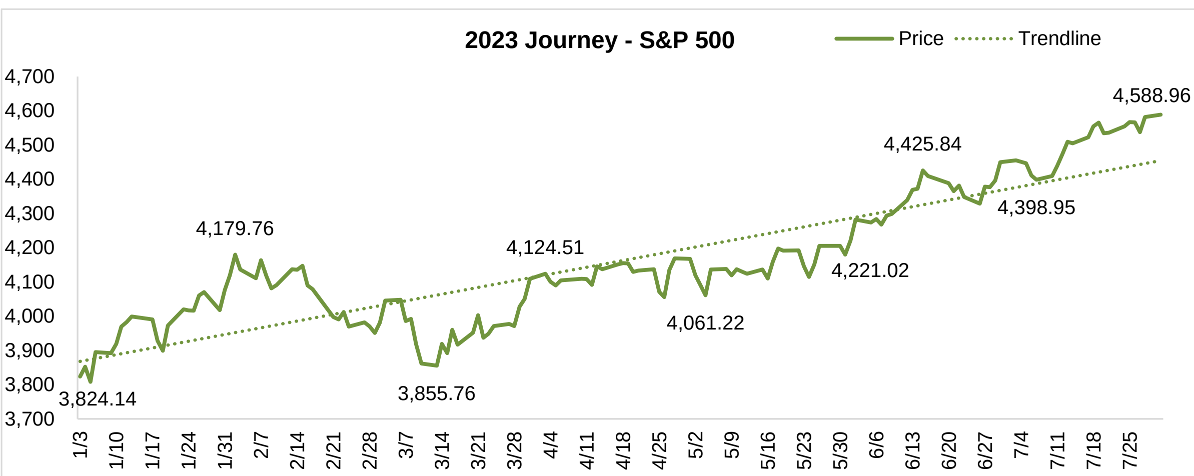


Source: Bloomberg, SIFMA estimates

S&P 500 Index: Price

- Monthly average 4,508.08
  - +3.7% M/M
  - +15.2% Y/Y
  - +17.9% from the start of the year
- Monthly peak on the 31st at 4,508.08, troughed on the 7th at 4,398.95



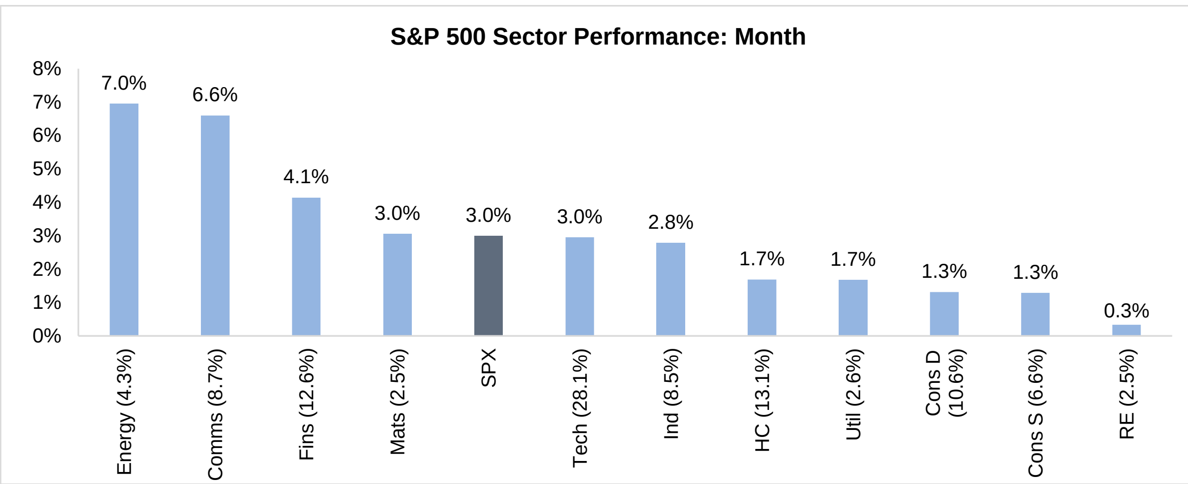


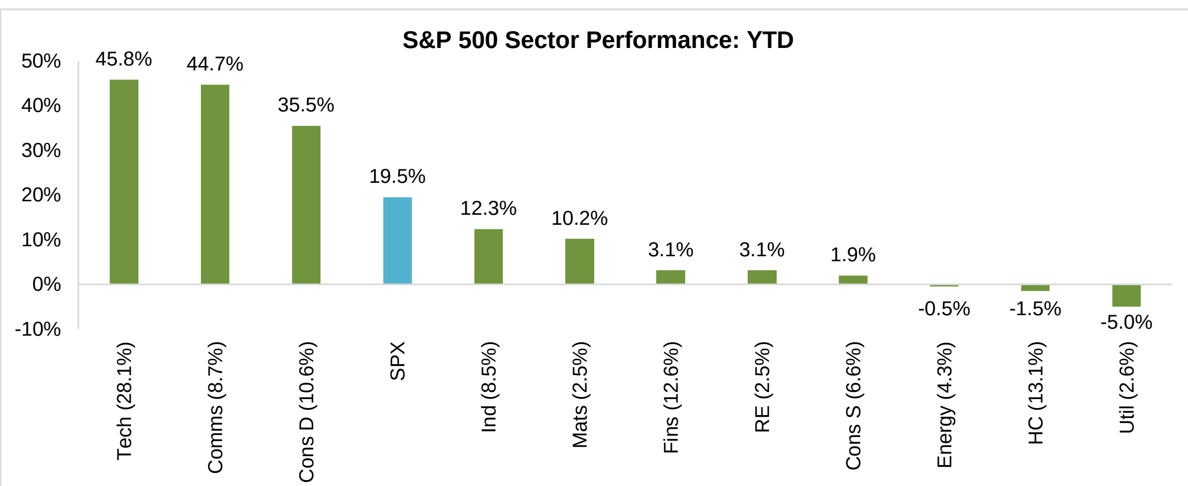
Source: Bloomberg, SIFMA estimates

S&P 500 Index: Sector Breakout

Looking at market performance by sector, we highlight the following:

- Best performing sectors
  - Month = energy at +7.0% and communications at +6.6%
  - YTD = technology at +45.8% and communications at +44.7%
- Worst performing sectors
  - Month = real estate at +0.3% and consumer staples at +1.3%
  - YTD = utilities at -5.0% and healthcare at -1.5%

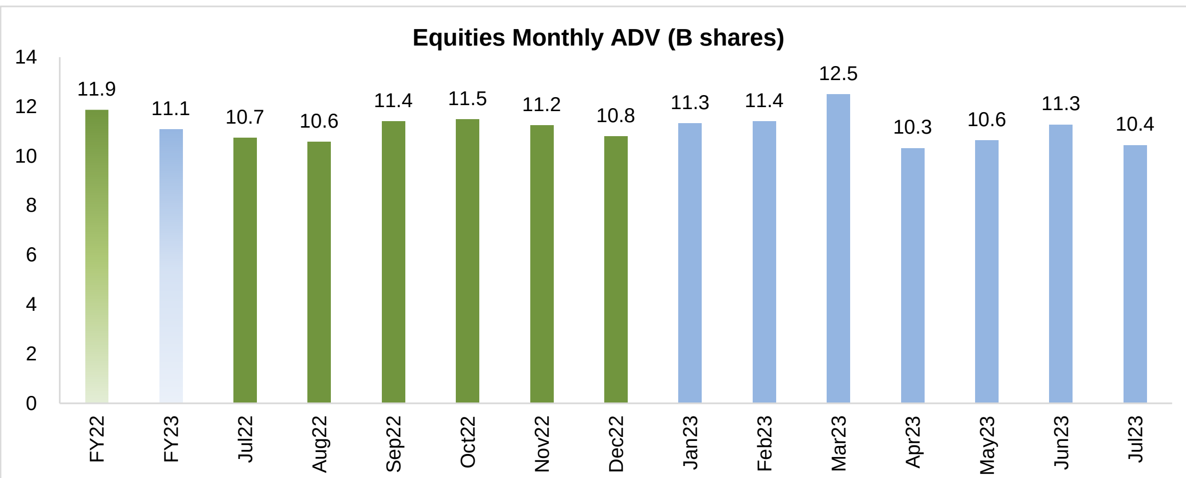


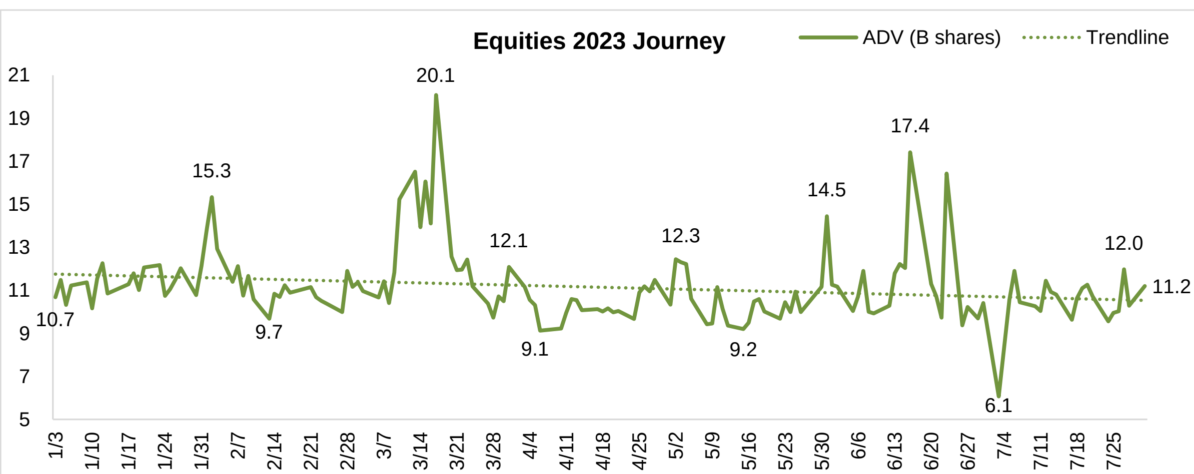


Source: Bloomberg, SIFMA estimates
Note: Parenthesis indicate sector weight in the index. Cons S = consumer staples, HC = healthcare, Mats = materials, RE = real estate, Ind = industrials, Fins = financials, Tech = technology, Cons D = consumer discretionary, Comms = telecommunications, Util = utilities

Equity Volumes (ADV)

- Monthly average 10.4 billion shares
  - -7.3% M/M
  - -2.7% Y/Y
  - -2.3% from the start of the year
- Monthly peak on the 27th at 12.0 billion shares, troughed on the 3rd at 6.1 billion shares (we note that markets closed early on this day ahead of the July 4th holiday)
- Monthly average off exchange trading 45.0%; +1.9 pps M/M, +0.9 pps Y/Y

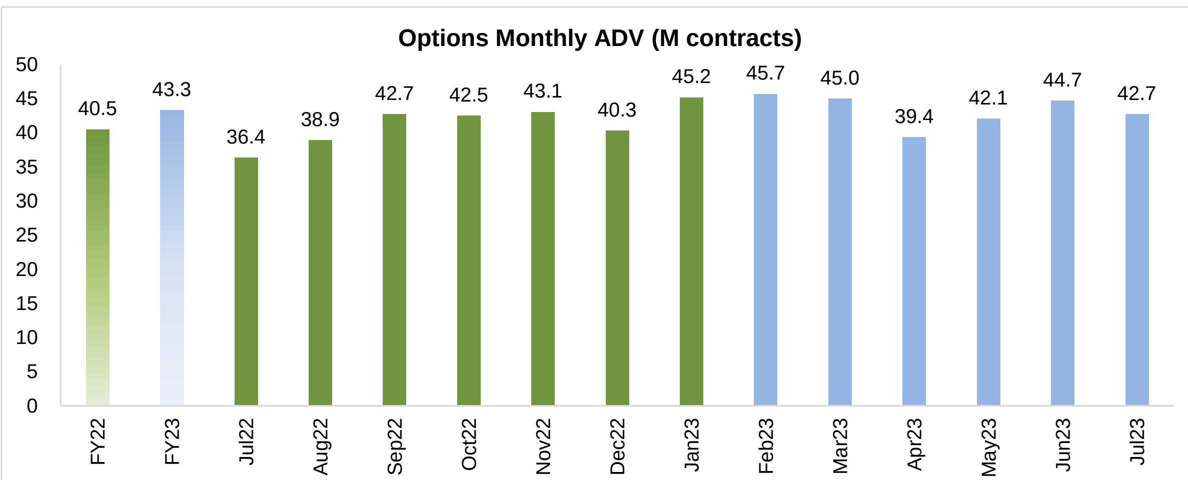


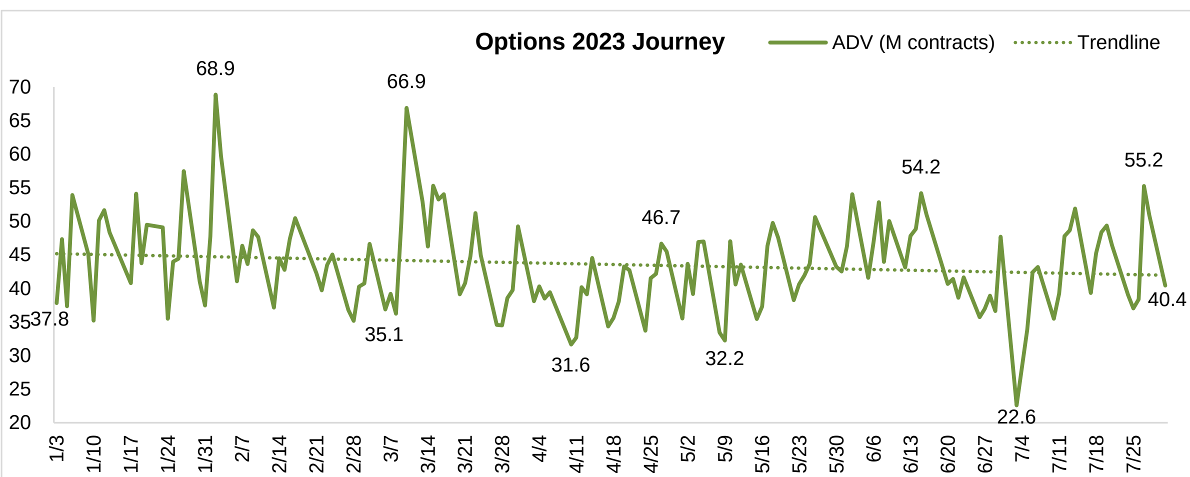


Source: Cboe Global Markets, SIFMA estimates

Multi-Listed Options Volumes (ADV)

- Monthly average 42.7 million contracts
    - -4.4% M/M
    - +17.4% Y/Y
    - +13.0% from the start of the year
- Monthly peak on the 27th at 55.2 million contracts, troughed on the 3rd at 22.6 million contracts (we note that markets closed early on this day ahead of the July 4th holiday)
- Monthly equity options 39.3 million contracts (-3.7% M/M, +16.3% Y/Y), index options 3.5 million contracts (-11.8% M/M, +31.8% Y/Y)





Source: Cboe Global Markets, SIFMA estimates

Monthly Highlight

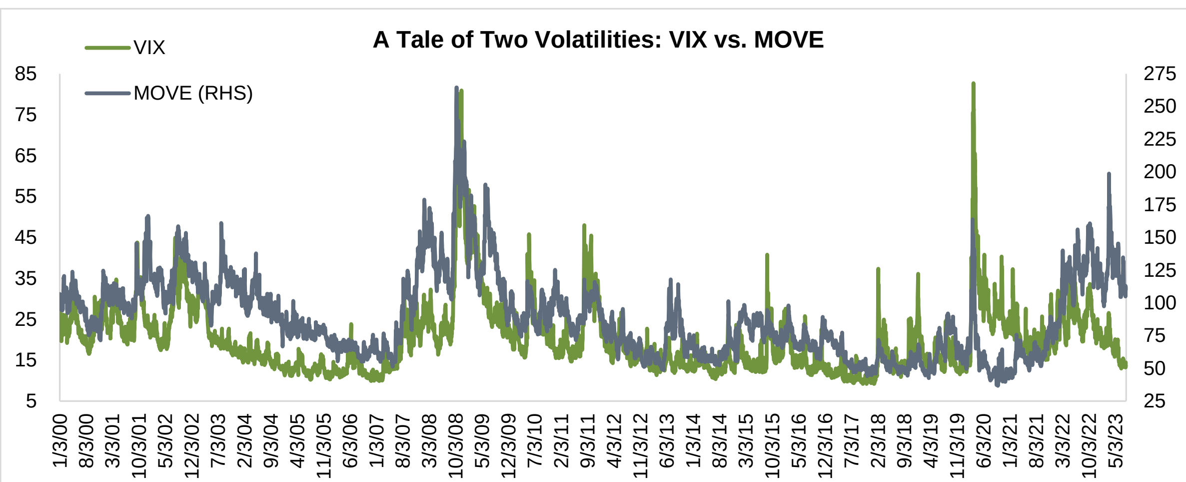
In this section we drill down into an interesting trend that market participants are following.

A Tale of Two Volatilities

In this section, we look at the implied volatilities for equities and bonds, the VIX versus the MOVE indices. These implied volatility indices use options contracts – options on stocks for the VIX, options on U.S. Treasuries for the MOVE – to measure the expected price movements of securities, reflecting market participants' aggregate expectations of future volatility.

They are essentially sentiment gauges. An increasing index implies rising volatility, signaling expectations for heightened market uncertainty or risk. A decreasing index implies declining volatility, signaling expectations for less market uncertainty or risk (also a more stable interest rate environment for the MOVE).

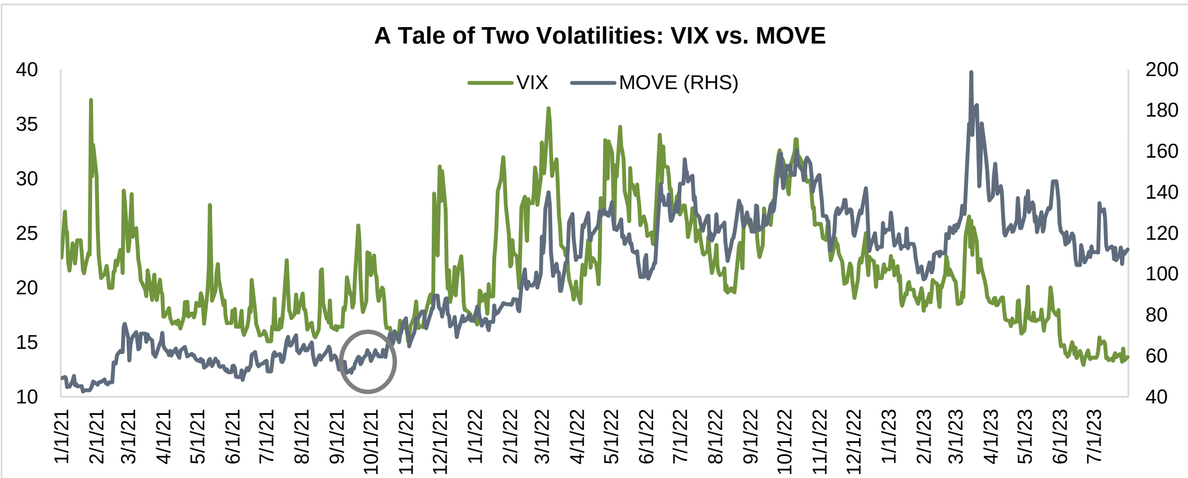
Historically, movements in the two indices were correlated in direction – a 0.6392 correlation since 2000 – albeit varying in peaks/troughs and exact timing of directional shifts.



Source: Bloomberg, SIFMA estimates

This correlation has shifted. Starting in 2021, you can see the correlation loosening – a 0.3484 correlation since 2021, -45.5% to the full time series correlation. We note that in the fall of 2021, bond markets priced in that inflation was not transitory – even though the Fed was still calling it such – and, therefore, interest rate hikes were coming.

Further, we see a directional break in the correlation in 2023. Although, we note that the correlation for just 2023 (through July) increased to 0.5238, still -18.0% to the full time series correlation.



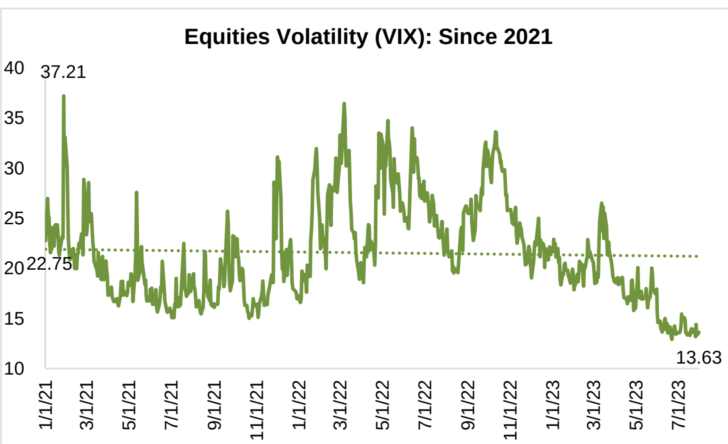
Source: Bloomberg, SIFMA estimates

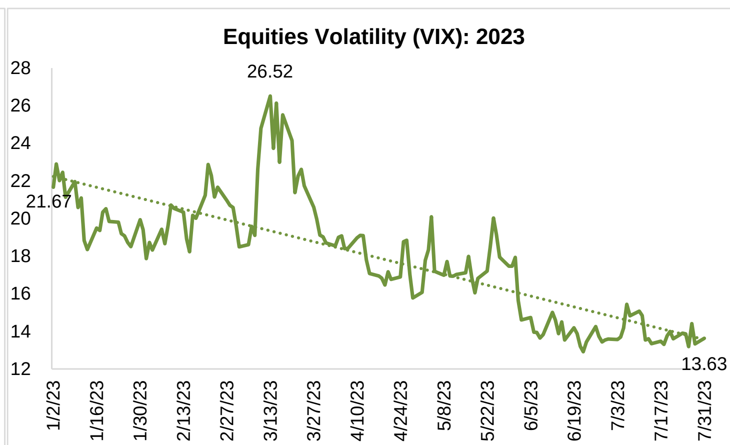
What is driving these differences in patterns across the VIX versus the MOVE? Essentially, these indices show that while equity investors have been complacent around equity market movements, bond investors still expect significant future volatility in interest rates.

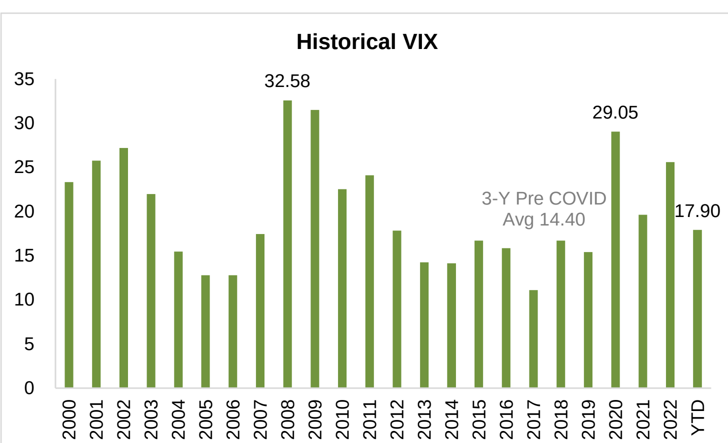
Equities – Volatility on the Decline in 2023

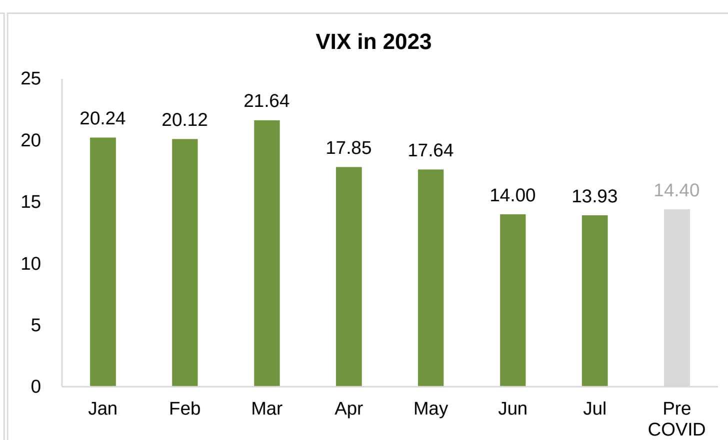
The VIX ended July at 13.63, -40.1% to the start of 2021 and -37.1% to the start of 2023. The VIX's trendline is essentially flat from 2021 through July 2023, as markets weathered a few storms like the meme stock event in early 2021 and the start of the Fed's rate hikes – and the unprecedented four 75 bps hikes in a row – in 2022. Then we saw a noticeable decline occurring this year, excluding the regional bank turmoil in March. Given the regional bank turmoil, 2023 is running above the three-year pre COVID average VIX of 14.40, +24.3%. However, the last two months posted an average monthly VIX below that historical norm.

Equity investors seem to be comfortable with the economic environment and direction of monetary policy as it feeds into stock valuations and market movements. This keeps expectations of future volatility in check.







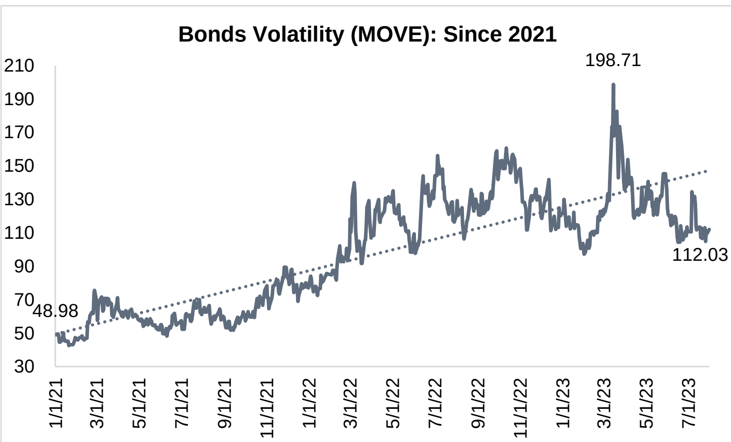


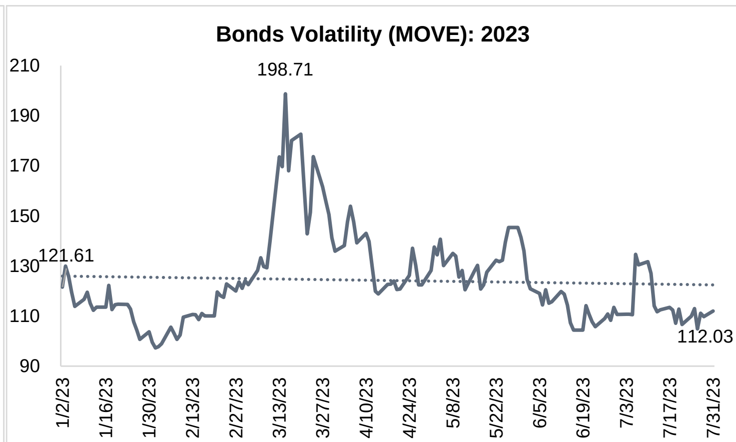
Source: Bloomberg, SIFMA estimates (as of July 2023)

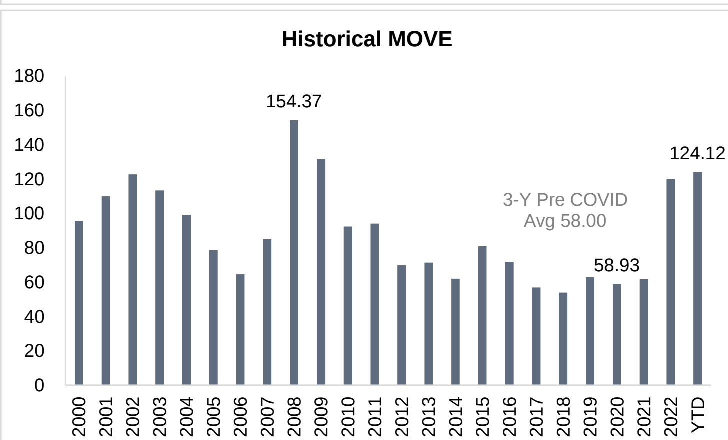
Bonds – Volatility Remains High in 2023

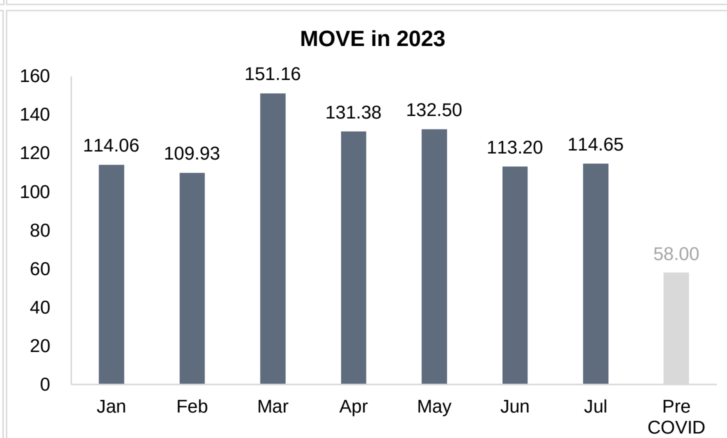
The MOVE ended July at 112.03, +128.7% to the start of 2021 but -7.9% to the start of 2023. The MOVE's trendline is upward sloping from 2021 through July 2023, turning flat or slightly downward sloping this year (excluding the regional bank turmoil in March). 2023 remains significantly above the three-year pre COVID average MOVE of 58.00, +114.0%. On a monthly basis, this elevated level has ranged between +190% to +261% above that historical norm.

Bond investors continue to expect future volatility in interest rates.



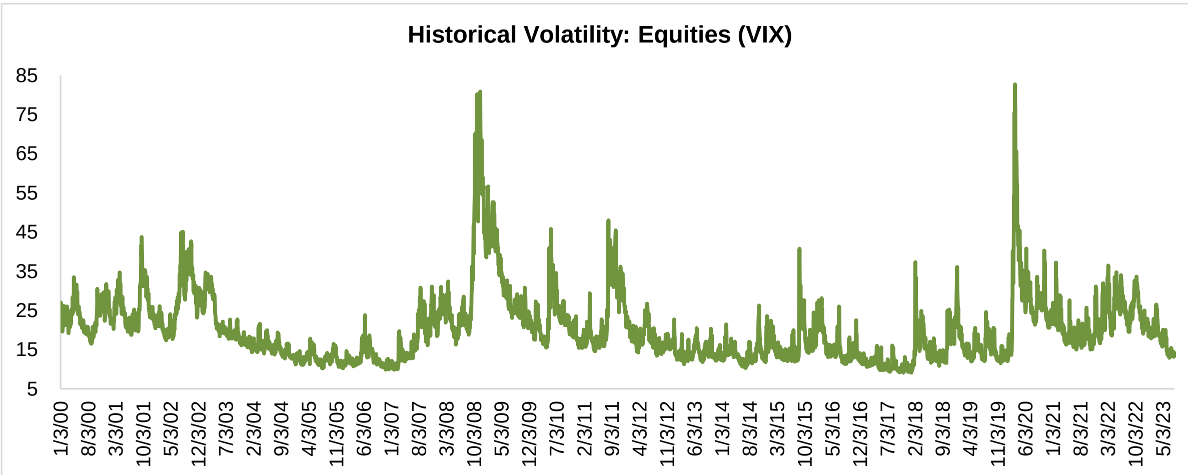


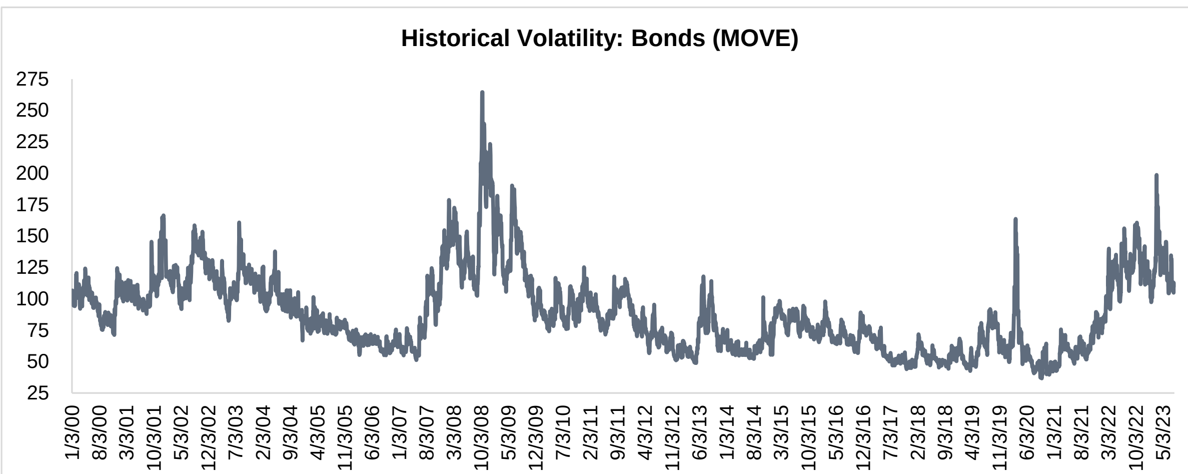




Source: Bloomberg, SIFMA estimates

Historical Volatilities





Source: Bloomberg, SIFMA estimates

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