

Monthly Market Metrics and Trends: March

Analyzing Volatility, Market Performance, and Equity and Listed Options Volumes Plus a Look at a Key Equity Markets Theme for the Month

April 2023

Monthly Metrics

- Volatility (VIX): Monthly average 21.64; +7.9% M/M, -19.9% Y/Y
- S&P 500 (Price): Monthly average 3,968.56; -2.7% M/M, -9.6% Y/Y
- Performance (month/year): best = technology/technology +11.8%/+21.5%; worst = financials/financials -9.4%/-6.0%
- Equity ADV: Monthly average 12.5 billion shares; +9.6% M/M, -10.2% Y/Y
- Options ADV: Monthly average 45.0 million contracts; -1.5% M/M, +12.1% Y/Y

Monthly Highlight

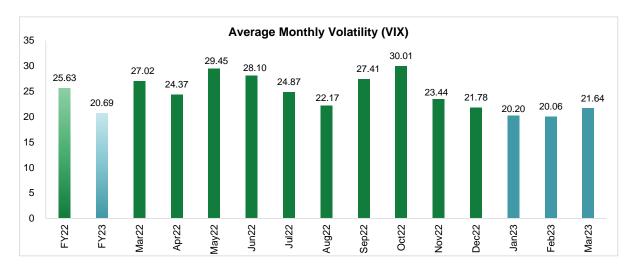
- On March 9, the stock price of the fifteenth largest bank in the U.S. was down 30%, closing the day -60%. \$42B of deposits were withdrawn in 1 day (another \$100B was set to exit the next day). To compare, the prior largest bank failure in 2008 saw \$16B leave the bank in 10 days. This event marked the first social media driven bank run.
- This activity created the equity markets own March madness. Volatility spiked and volumes popped the following week, as markets digested what this banking turmoil meant for the U.S. economy and the Fed's policy moves.
- VIX: Peaked at 26.52, +39.0% to the five-day average prior to the turmoil note, 2022 saw 99 days > this peak
- Equity volumes: Peaked at 20.1 billion shares, +83.1% to the five-day average prior to the turmoil
- MOVE: Measures implied UST volatility; peaked at 198.71, +83.1% to the five-day average prior to the turmoil
- UST volumes: Peaked at \$1,492.6 billion par value, +106.8% to the five-day average prior to the turmoil

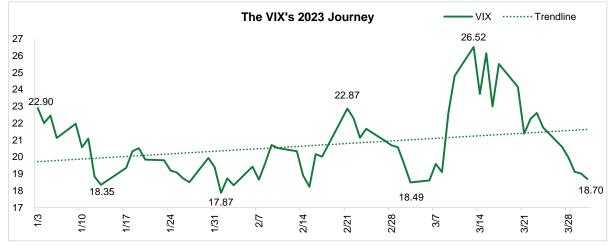
Monthly Market Metrics

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

Volatility (VIX)

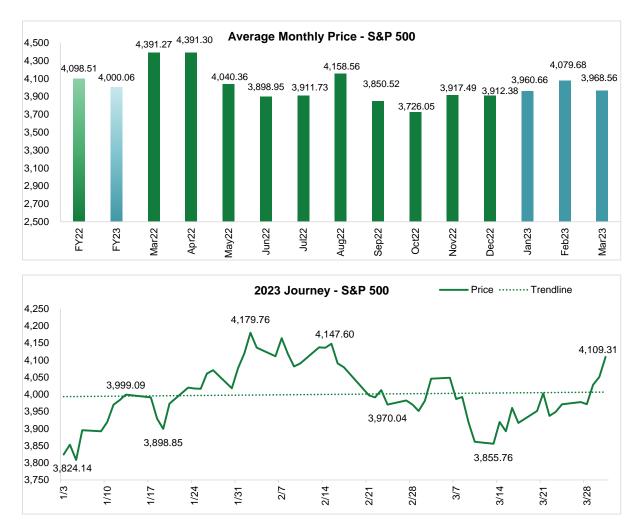
- Monthly average 21.64
 - o +7.9% M/M
 - o -19.9% Y/Y
 - o -5.5% from the start of the year
 - Monthly peak on the 13th at 26.52, troughed on the 3rd at 18.49





S&P 500 Index: Price

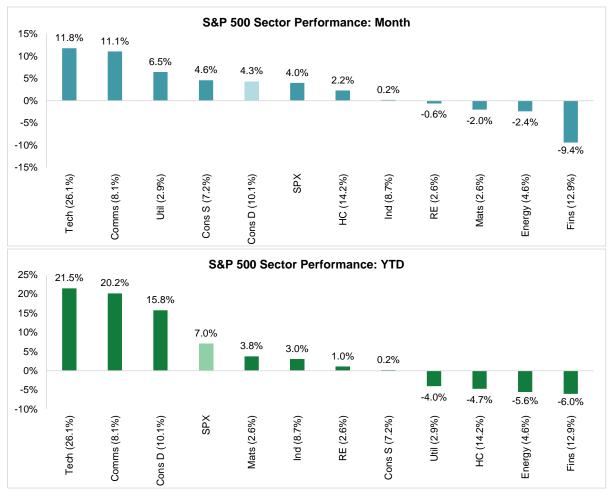
- Monthly average 3,968.56
 - o -2.7% M/M
 - o -9.6% Y/Y
 - +3.8% from the start of the year
- Monthly peak on the 31st at 4,109.31, troughed on the 13th at 3,855.76



S&P 500 Index: Sector Breakout

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

- Best performing sectors
 - Month = technology at +11.8% and communications at +11.1%
 - YTD = technology at +21.5% and communications at +20.2%
- Worst performing sectors
 - Month = financials at -9.4% and energy at -2.4%
 - YTD = financials at -6.0% and energy at -5.6%

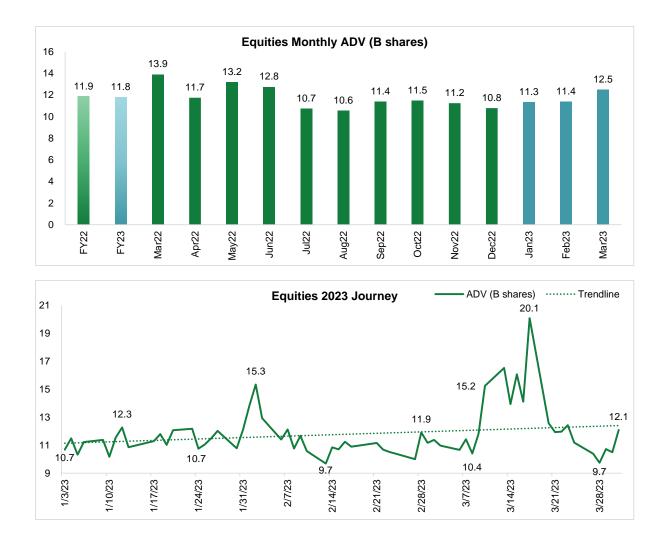


Source: Bloomberg, SIFMA estimates

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)

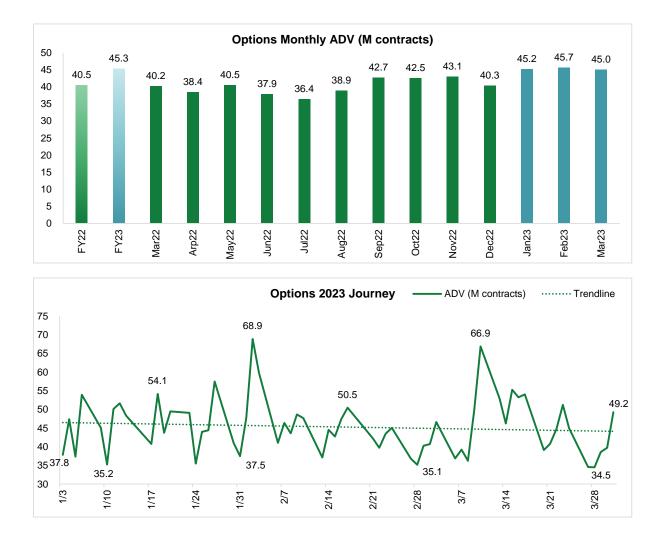
- Monthly average 12.5 billion shares
 - o +9.6% M/M
 - o -10.2% Y/Y
 - +16.9% from the start of the year
- Monthly peak on the 17th at 20.1 billion shares, troughed on the 28th at 9.7 billion shares
- Monthly average off exchange trading 41.7%; -3.1 pps M/M, +0.7 pps Y/Y



Source: Cboe Global Markets, SIFMA estimates

Multi-Listed Options Volumes (ADV)

- Monthly average 45.0 million contracts
 - o -1.5% M/M
 - +12.1% Y/Y
 - +19.0% from the start of the year
- Monthly peak on the 10th at 66.9 million contracts, troughed on the 28th at 34.5 million contracts
- Monthly equity options 41.1 million contracts (-2.5% M/M, +8.7% Y/Y), index options 3.9 million contracts (+10.4% M/M, +67.7% 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.

Regional Bank Turmoil

On Thursday¹, March 9, the stock price of the fifteenth largest bank in the U.S. by total assets was down 30%, eventually ending the day down 60%. That day, its customers – mostly venture capital firms and startups – began pulling their money out of the bank.

By the end of the day \$42 billion had been withdrawn. To put this in perspective, prior to this event, the largest bank failure occurred during the global financial crisis. At this time, it took ten days for \$16 billion to leave that bank. Last month, the \$42 billion exited in a single day, with another \$100 billion slated to be withdrawn the following day. This event marked the first social media driven bank run.

By the next day, the Federal Deposit Insurance Corporation (FDIC) took control of the bank. That Sunday, March 12, the FDIC took over another regional bank, also a main source of liquidity for digital asset participants. This activity created the equity markets own March madness. Some regional bank stock prices were down 20-30% at the height of the turmoil, with even some of the larger regional banks dropping 5-10%.

Volatility spiked and volumes popped the following week, as markets digested what this banking turmoil meant for the U.S. economy and the Fed's policy moves. Prior to these events, markets had expected a 50 bps rate hike in March, after signs that the labor market remained hot. The regional bank turmoil – viewed by many as a sign that monetary policy had worked its way into the economy – led markets to revise down expectations and the FOMC vote to hike only 25 bps.

In light of the excitement in March, we thought it would be interesting to analyze volatility and volume activity in U.S. equities and the U.S. Treasury markets.

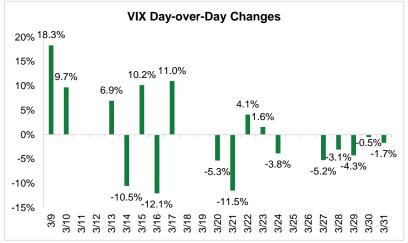
¹ This was a day after a bank which was a main source of liquidity for digital asset participants announced plans to wind down operations and voluntarily liquidate after being hit with losses following the collapse of FTX. Its shares had dropped 35% in after-hours trading.

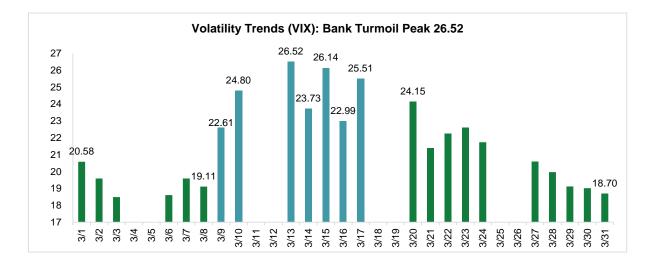
Volatility & Volumes – Equities

While markets continued to function without issues, volatility underwent 10% swings on a daily basis. Volatility has settled back down, ending the month down 9.1% to the start of the month.

We highlight the following volatility trends resulting from the regional bank turmoil:

- Five-day average prior to the turmoil was 19.08
- Peaked on Monday 3/13 at 26.52
 - +39.0% to the five-day average prior to the turmoil
 - +28.9% to the start of the month
 - +22.5% to the monthly average
- Comparison
 - o 2021 saw 16 days greater than the peak
 - o 2022 saw 99 days greater than the peak

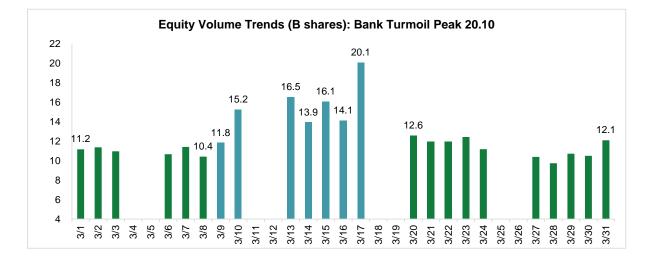


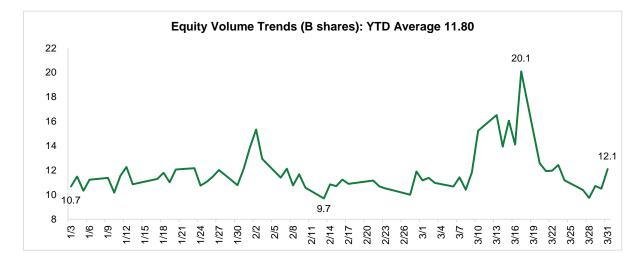




Equity volumes also went for a ride, settling back down by the end of the month (still closing out the month +8.3% to the start). We highlight the following volume trends resulting from the regional bank turmoil:

- Five-day average prior to the turmoil was 11.0 billion shares
- Peaked on Friday 3/17 at 20.1 billion shares
 - +83.1% to the five-day average prior to the turmoil
 - +79.9% to the start of the month
 - +60.8% to the monthly average





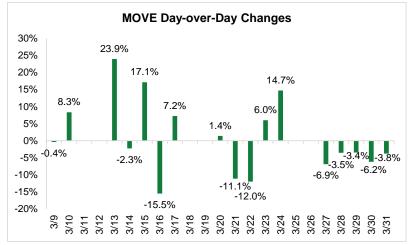
Source: Cboe Global Markets, SIFMA estimates

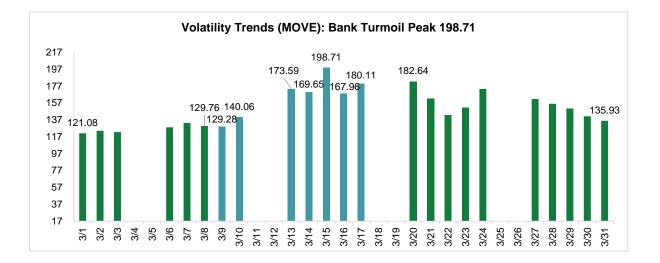
Volatility & Volumes – UST

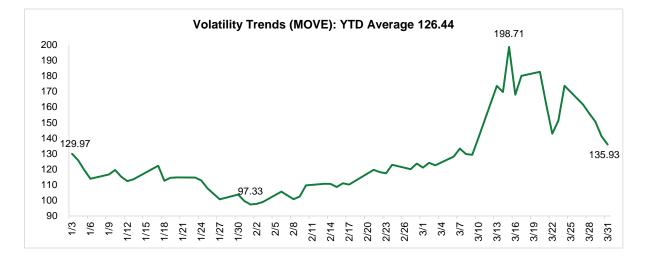
Similarly to the VIX measuring implied volatility in equities, the ICE BofA MOVE Index (MOVE) measures implied volatility in U.S. Treasury markets. The MOVE index also saw large daily swings during the turmoil and remains elevated to the start of the month (+12.3%).

We highlight the following volatility trends resulting from the regional bank turmoil:

- Five-day average prior to the turmoil was 127.58
- Peaked on Wednesday 3/15 at 198.71
 - +83.1% to the five-day average prior to the turmoil
 - +79.9% to the start of the month
 - +60.8% to the monthly average

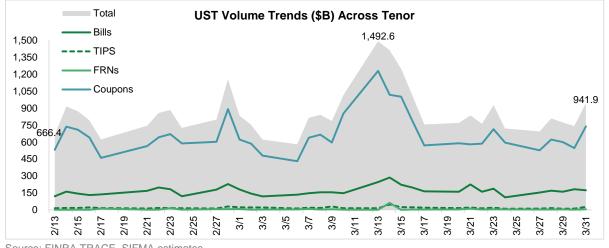




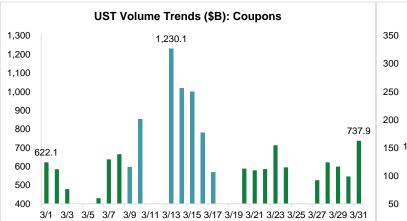


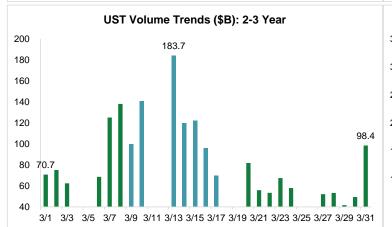
UST volumes experienced spikes as well, and, on aggregate, remain elevated at the end of the month (+13.1%). We highlight the following volume trends resulting from the regional bank turmoil:

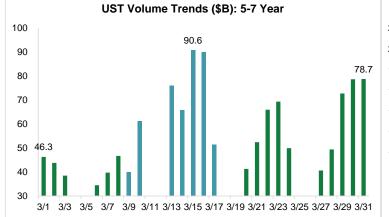
- Total UST volumes
 - Five-day average prior to the turmoil was \$721.92 billion par value
 - Peaked on Monday 3/13 at \$1,492.6 billion par value
 - +106.8% to the five-day average prior to the turmoil
 - +79.3% to the start of the month
 - +70.5% to the monthly average
- Total coupon bonds peak \$1,230.1 billion par value, +119.7% to the five-day average prior to the turmoil
 - <2 year coupon bond peak \$306.5 billion par value, +232.4% to the 5-day average prior to turmoil
 - o 2-3 year coupon bond peak \$183.7 billion par value, +95.7% to the 5-day average prior to the turmoil
 - o 3-5 year coupon bond peak \$339.3 billion par value, +121.2% to the 5-day average prior to turmoil
 - o 5-7 year coupon bond peak \$90.6 billion par value, +122.9% to the 5-day average prior to the turmoil
 - o 7-10 year coupon bond peak \$220.8 billion par value, +92.0% to the 5-day average prior to turmoil
 - o 10-20 year coupon bond peak \$35.1 billion par value, +108.2% to the 5-day average prior to turmoil
 - >20 year coupon bond peak \$98.1 billion par value, +105.0% to the 5-day average prior to turmoil
- Bills peak \$286.1 billion par value, +104.3% to the five-day average prior to the turmoil
- Treasury Inflation Protected Securities (TIPS) peak \$47.0 billion par value, +158.8% to the 5-day average
- Floating Rate Notes (FRNs) peak \$61.1 billion par value, +1,458.7% to the 5-day average prior to the turmoil

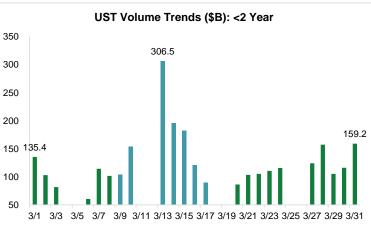


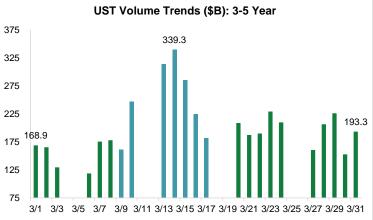
Source: FINRA TRACE, SIFMA estimates

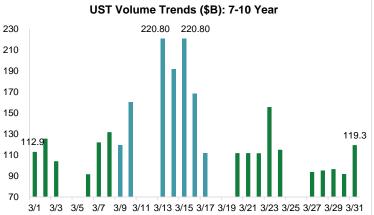




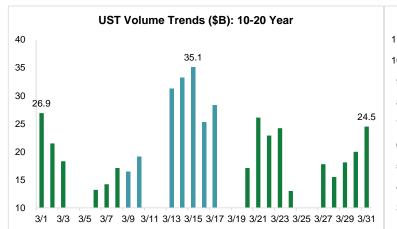


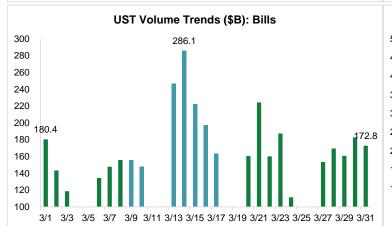


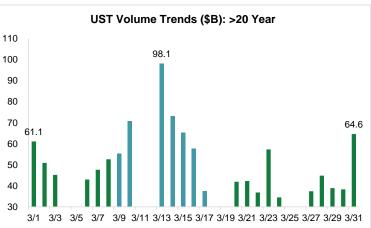


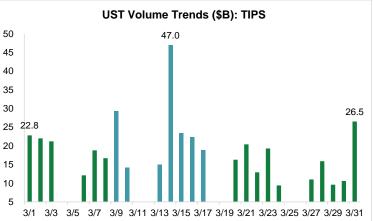


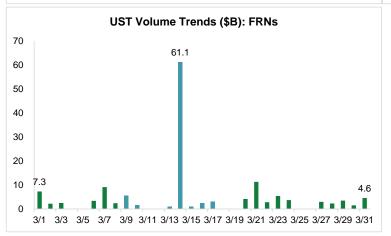
Source: FINRA TRACE, SIFMA estimates











Source: FINRA TRACE, SIFMA estimates

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