



SIFMA Insights

January Market Metrics and Trends

A Look at Monthly Volatility and Equity and Options Volumes

February 2021

Monthly Metrics

- Volatility (VIX): January average 24.91 (-14.8% to 2020), peak 37.21 on January 27
- S&P 500 (Price): January average 3,793.75 (+17.9% to 2020), peak 3,855.36 on January 27
- Equity ADV (billion shares): January average 15.6 (+42.6% to 2020), peak 24.5 on January 27
- Options ADV (million contracts): January average 43.5 (+49.8% to 2020), peak 59.3 on January 27

Monthly Trend Highlights

- January VIX the highest since 2016; was on a weekly downward trend until the last week of the month when the WallStreetBets short squeeze trades began
- Analyzing the inverse relationship in price movements in GME/AMC and the S&P 500; on January 27, the S&P 500 daily price change was -2.6, versus GME +134.8 and AMC +301.2%



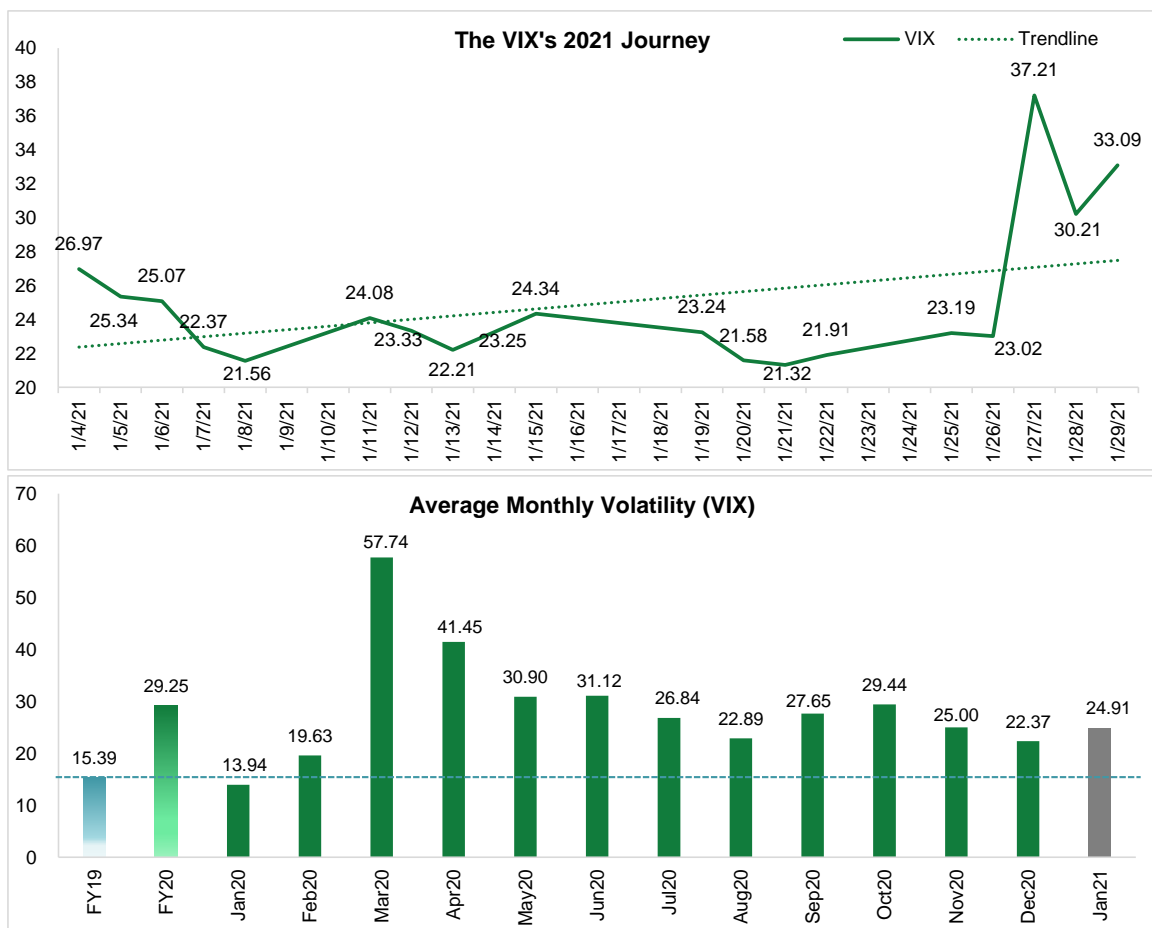
Spotlight: January Market Metrics

To say 2021 came out of the gates strong would be an understatement. On average in January, markets (in terms of S&P 500 price) were up 17.9% to the 2020 average, on top of a 10.5% Y/Y rise in 2020. Volumes continued to climb in January: multi-listed options +49.8% to the 2020 average (+52.5% Y/Y in 2020); and equities +42.6% to the 2020 average in January (+55.4% Y/Y in 2020). These higher than historical volume levels come as volatility began to settle at the start of the year, with the January average -14.8% to the 2020 average (the VIX increased +90.1% Y/Y in 2020 on average).

In this report, we highlight the following early 2021 market trends for volatility, price and volumes. (Please see SIFMA [Insights: A Look Back at 2020 Market Structure Themes](#) for a deep dive on last year's market metrics.)

Volatility (VIX)

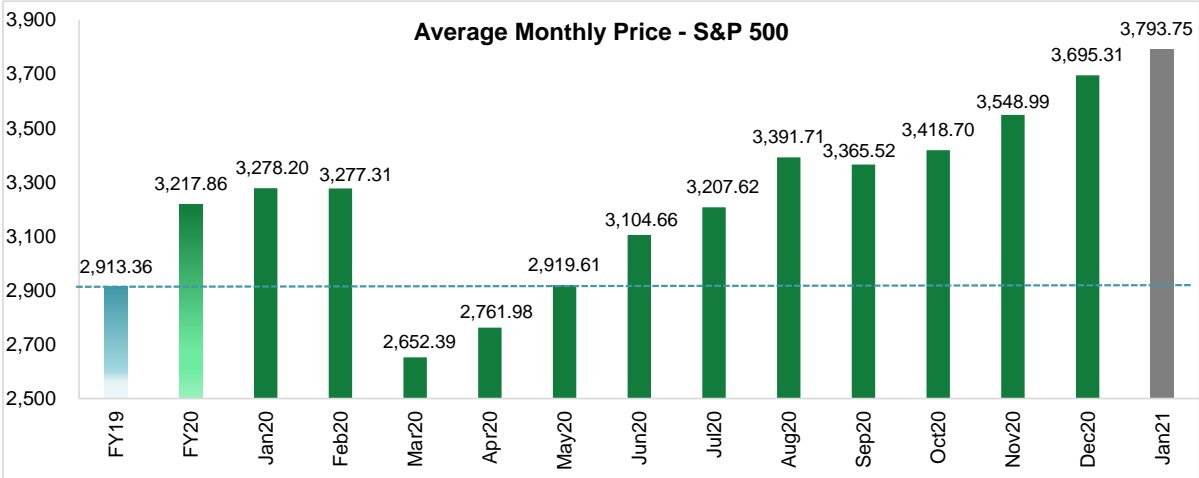
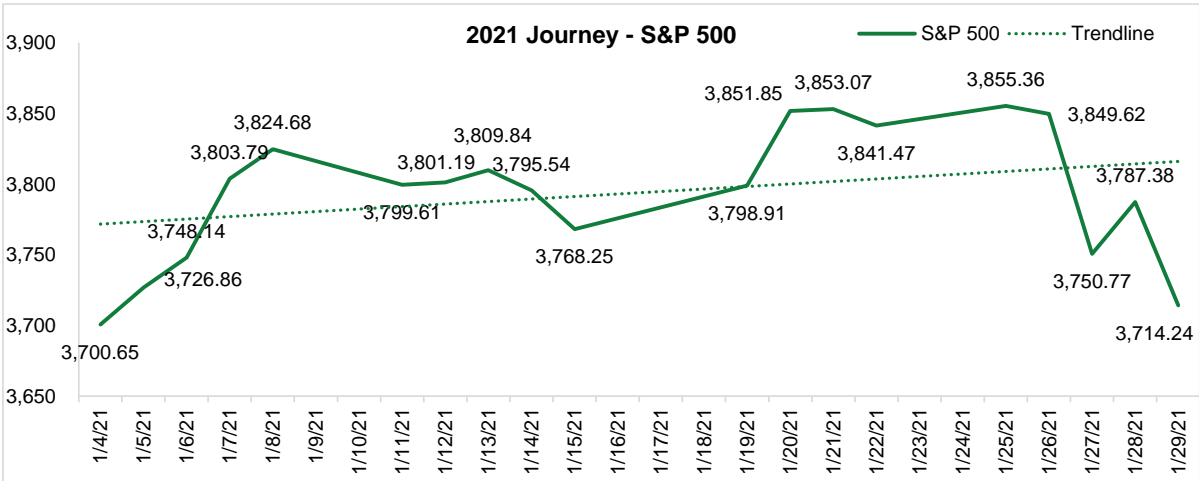
- January average 24.91, vs. 2020 average 29.25 and 2019 average 15.39 (-14.8% to 2020, +61.9% to 2019)
- Peaked on January 27 at 37.21, +38.0 to the start of the year and +27.2% to 2020 average
- Low level of 21.32; started off the year in the mid-20s, spiking up to the 30s during the retail trading surge



Source: Bloomberg, SIFMA estimates (as of Jan. 29)

Index Price (S&P 500)

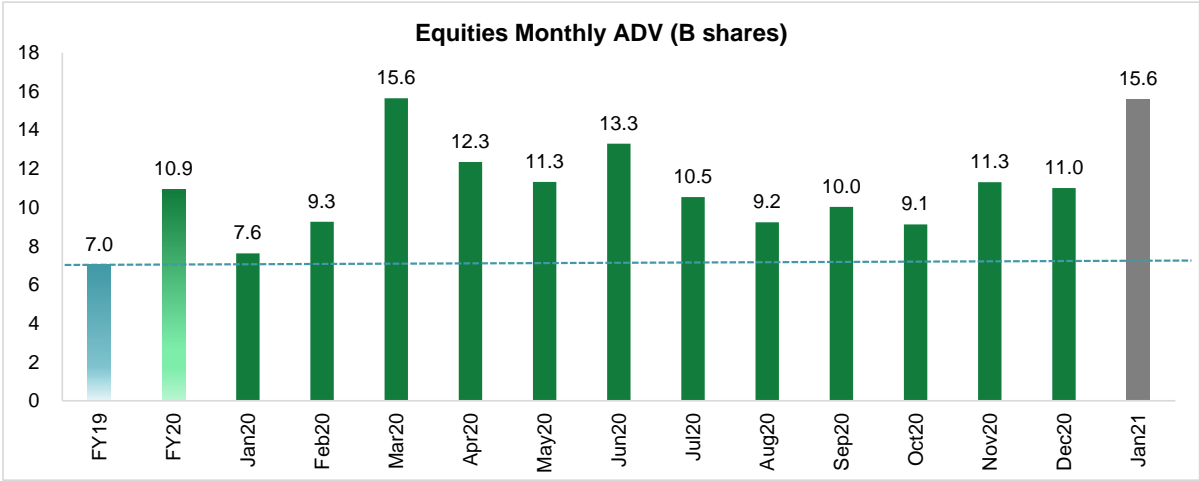
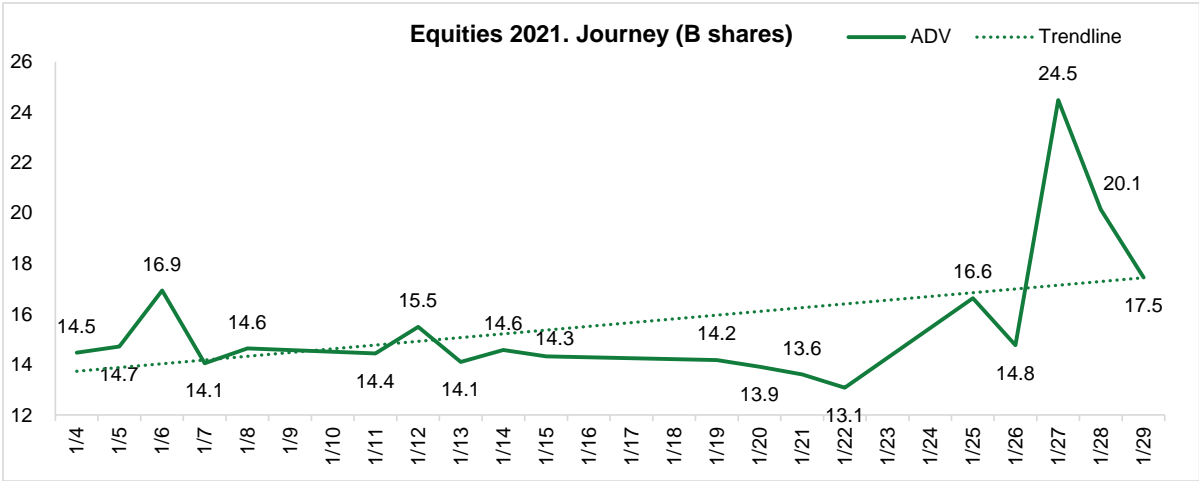
- January average 3,793.75, versus 2020 average 3,217.86 and 2019 average 2,913.36 (+17.9% to 2020, +30.2% to 2019)
- Peaked on January 25 at 3,855.36, +4.2% to the start of the year and +19.8% to 2020 average
- Low price level of 3,700.65 at the start of the year; upward trending on average for the year but did decline during the retail trading surge



Source: Bloomberg, SIFMA estimates (as of Jan. 29)

Equity Volumes (ADV)

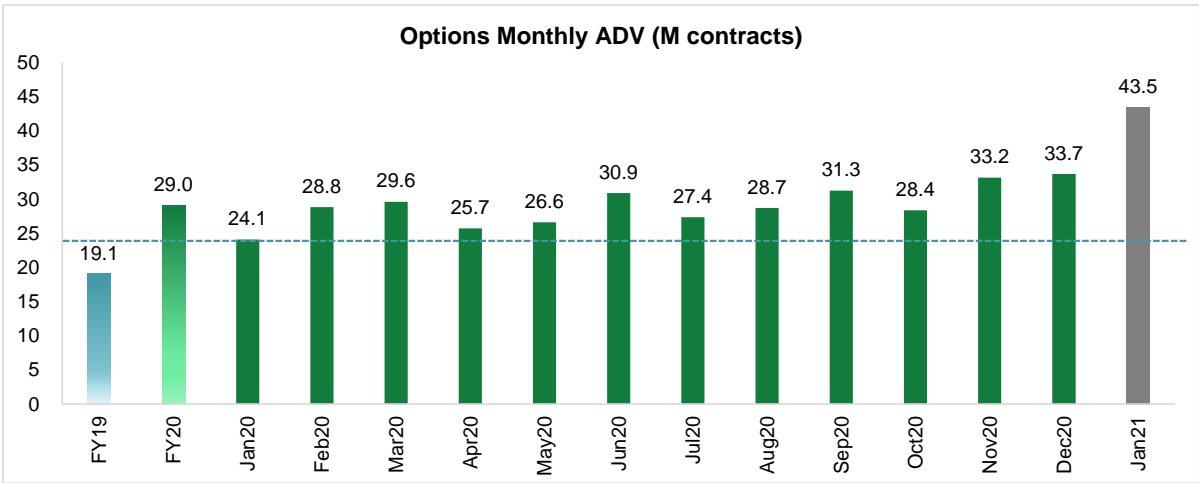
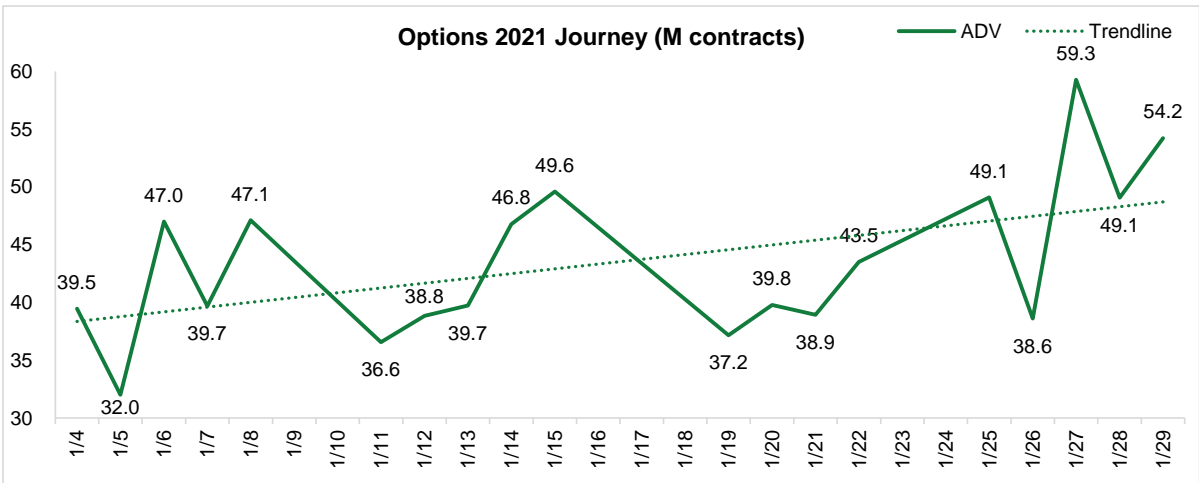
- January average 15.6 billion shares, versus 2020 average 10.9 billion shares and 2019 average 7.0 billion shares (42.6% to 2020, +121.6% to 2019)
- Peaked on January 27 at 24.5 billion shares, +69.2% to the start of the year and +124.1% to 2020 average
- Low level of 13.1 billion shares is still quite elevated to the 2020 average (+19.7%)
- Average off exchange trading 47.5%, versus 41.5% 2020 average and 37.3% 2019 average (+6.0 pps to 2020, +10.2 pps to 2019)



Source: Cboe Global Markets, SIFMA estimates (as of Jan. 29)

Options Volumes (ADV)

- January average 43.5 million contracts, versus 2020 average 29.0 million contracts and 2019 average 19.1 million contracts (+49.8% to 2020, +128.3% to 2019)
- Peaked on January 27 at 59.3 million contracts, +50.2% to the start of the year and +104.0% to 2020 average
- Low level of 32.0 million contracts remains elevated to the 2020 average (+10.2%)
- The options action remains on the equity side (January average 41.5 million contracts, +52.4% to 2020 average); however index options volumes have picked up somewhat (January average 2.0 million contracts, +10.3% to 2020)



Source: Cboe Global Markets, SIFMA estimates (as of Jan. 29)

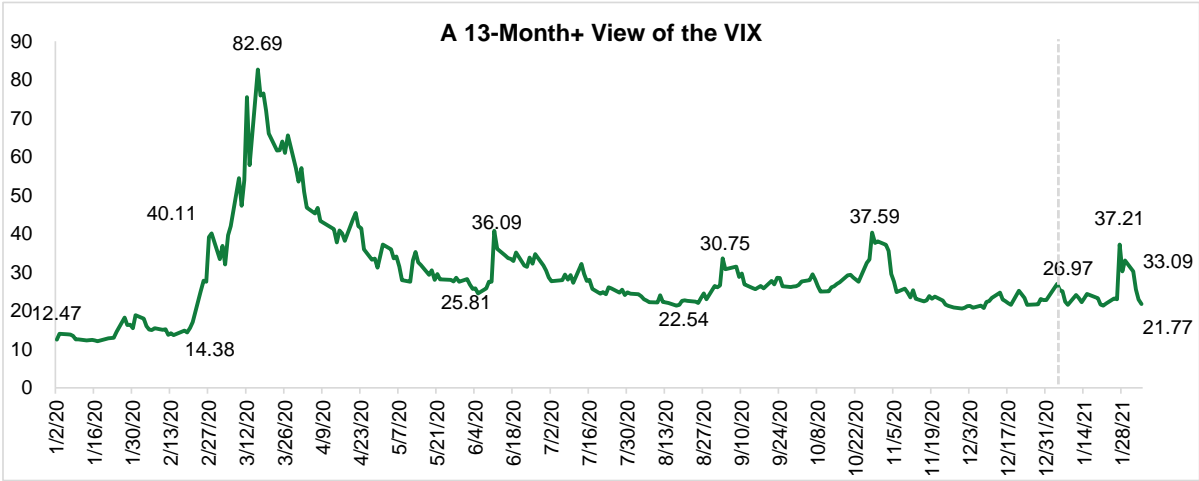
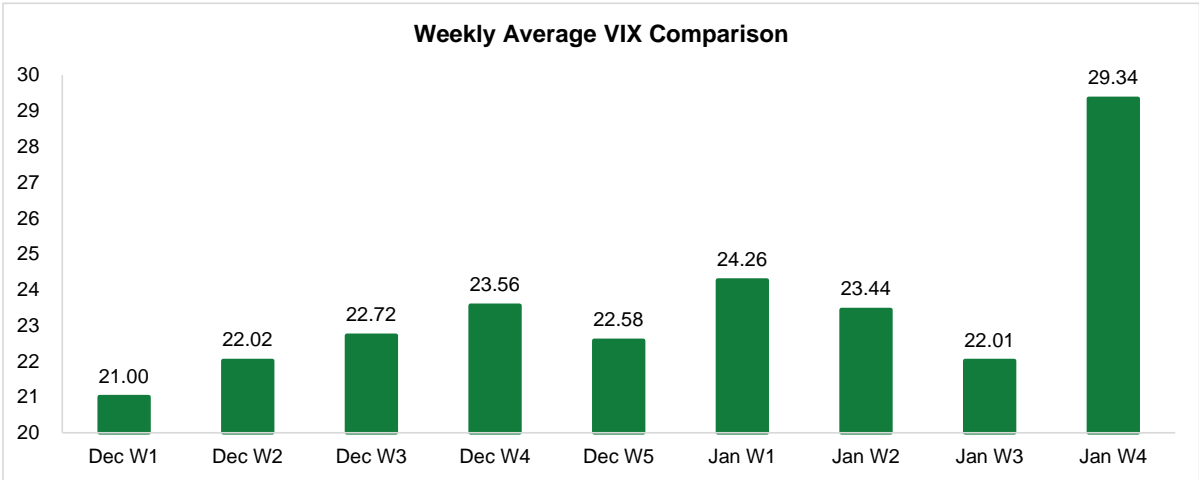
Monthly Trend Highlights

In this section we draw down on trends that moved markets in the month.

January Volatility Patterns

2020 volatility began the year elevated to the last week of December, 26.97 on January 4 versus 22.58 in week 5 of December 2020, +19.5%. The VIX trend then headed into a downward sloping pattern, until we reached the final week of the month. In this week, members of the group WallStreetBets (WSB), a forum for participants to discuss stock and options trading strategies, on the message board site Reddit joined together to squeeze short sellers in a handful of stocks. This in turn moved the VIX sharply higher.

The average VIX for week 4 of January was 29.34, +8.8% to the start of the year and +31.2% to the December 2020 average. This weekly average was in line with the average for all of 2020, a year that included months of elevated VIX levels at the height of the global pandemic. However, it was well below the 2020 peak of 82.69. Additionally, after peaking at 37.21, the VIX began to come back down – at the writing of this report it was in the 21 range.

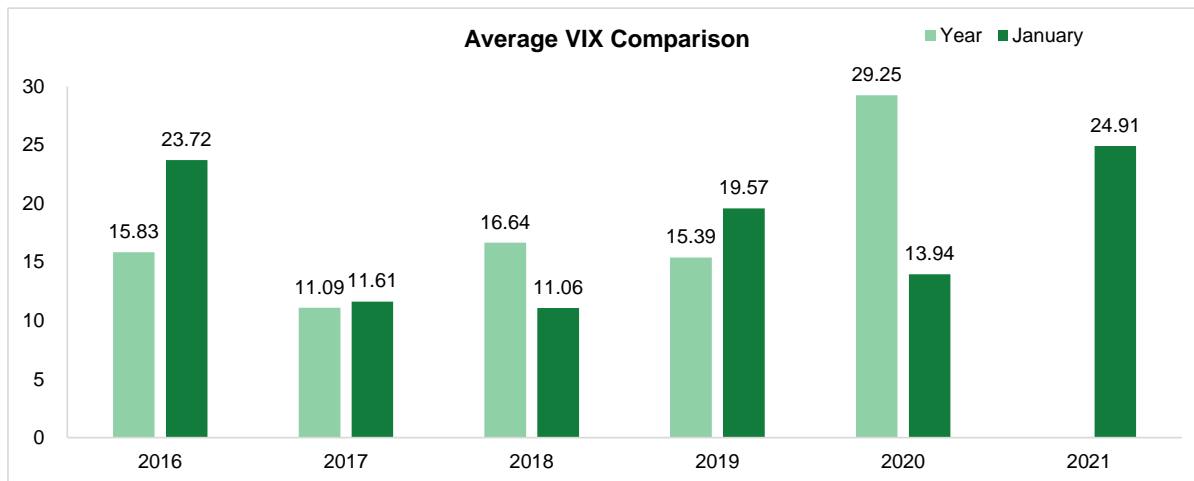


Source: Bloomberg, SIFMA estimates (as of Jan. 29)

How unusual is this January volatility pattern? At an average of 24.91, 2021 posted the highest January VIX since 2016, increasing from the December average (+11.3%). In the prior five years, January VIX was elevated to the prior December average around two and a half times (we say a half because January 2020 was only a 1% increase). January ranked as the lowest volatility month in a year two times in our analysis, but also the highest two times (for the fifth year in our analysis January ranked #4). There is a similar pattern when comparing the January average to the average VIX for the year: two times January was well below the annual average, two times well above and one time more in line with the annual VIX. Therefore, we conclude that it is not unusual to see a tick up in volatility to start the year.

In comparing January 2021 to five prior years, we highlight the following:

- 2020 January average 13.94; slighted elevated heading into the year, +1.3% to prior year December
 - January -52.3% to the annual average
 - Lowest average monthly VIX for the year
- 2019 January average 19.57; decreased into the year, -21.6% to prior year December
 - January +27.2% to the annual average
 - Highest average monthly VIX for the year, as markets recovered from the December 2018 correction
- 2018 January average 11.06; increased into the year, +7.8% to prior year December
 - January -33.5% to the annual average
 - Lowest average monthly VIX for the year
- 2017 January average 11.61; decreased into the year, -6.9% to prior year December
 - January +4.7% to the annual average
 - Fourth highest monthly VIX for the year
- 2016 January average 11.61; increased into the year, +31.6% to prior year December
 - January +49.9% to the annual average
 - Highest average monthly VIX for the year, as markets were still recovering from December 2015 market moves driven by collapsing crude oil prices, China devaluing its currency and more



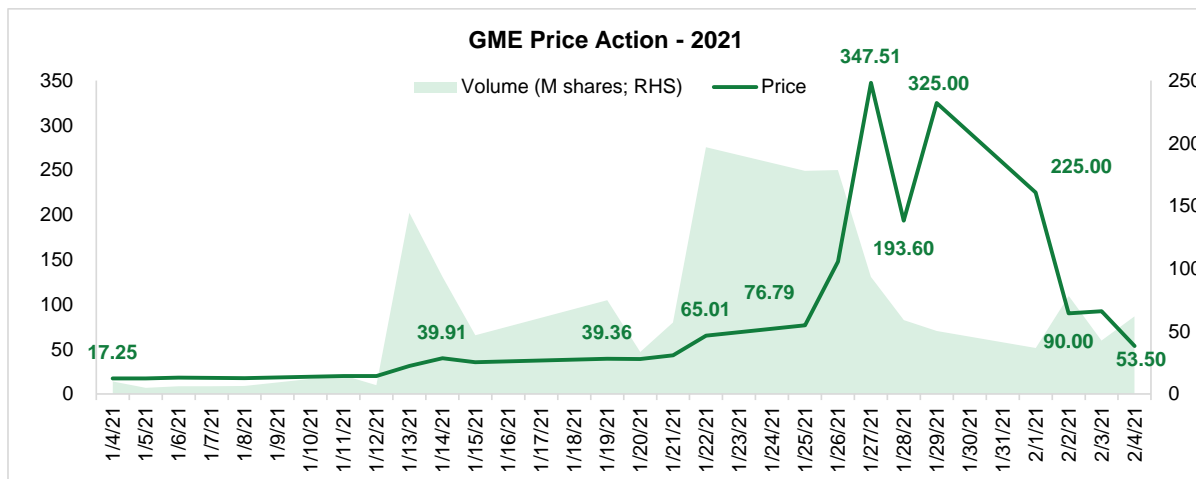
Source: Bloomberg, SIFMA estimates (as of Jan. 29)

What was unusual was the why behind the market volatility. It was not a response to a monetary policy announcement, poor earnings results (earnings season actually saw the opposite, for the most part) or any negative macro-economic news. It was driven in that last week by the WSB short squeeze trades. For the most part, the short positions targeted by WSB were in the stocks of companies with disrupted business models, whether from technology or COVID-19 (or both). We analyze two examples, looking at individual stock price action and comparing these price moves to price trends for the S&P 500.

GameStop: GME

(video game and consumer electronics retailer)

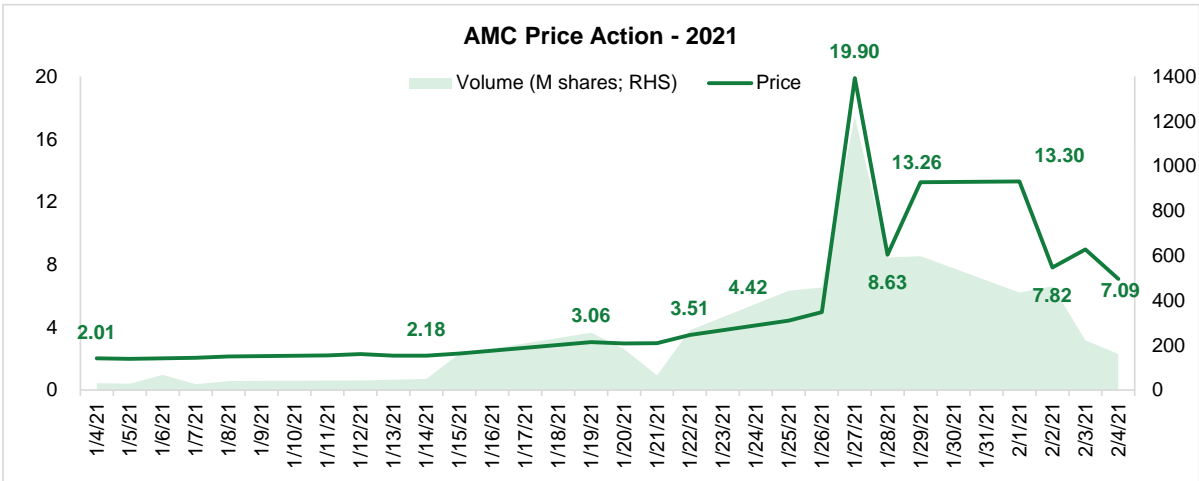
- 2021 average price (through February 4) \$85.82, +1,101.7% to the 2020 average \$7.14
- Average price from January 22 to February 4 of \$161.68, +2,164.0% to 2020
- Closing price peak \$347.51 on January 27; versus 2020 peak \$20.99, +1,555.6%
- Intraday peak \$483.00 on January 28; versus 2020 peak \$22.35, +2,061.1%
- 2021 average volume 64.4 million shares; versus 6.7 million shares in 2020, +863.3%
- Average volume from January 22 to February 4 of 97.5 million shares, +1,358.8% to 2020
- There is a 97.18 standard deviation in stock price to date in 2021 (versus 4.32 in 2020)



Source: Bloomberg, SIFMA estimates

AMC Entertainment: AMC
(movie theater chain)

- 2021 average price (through February 4) \$5.31, +15.9% to the 2020 average \$4.59
- Average price from January 22 to February 4 of \$9.19, +100.3% to 2020
- Closing price peak \$19.90 on January 27; versus 2020 peak \$7.71, +158.0%
- Intraday peak \$20.36 on January 27; versus 2020 peak \$7.78, +161.7%
- 2021 average volume 256.2 million shares; versus 10.8 million shares in 2020, +2,279.8%
- Average volumes from January 22 to February 4 of 485.8 million shares, +4,413.2% to 2020
- There is a 4.74 standard deviation in stock price to date in 2021 (versus 1.45 in 2020)

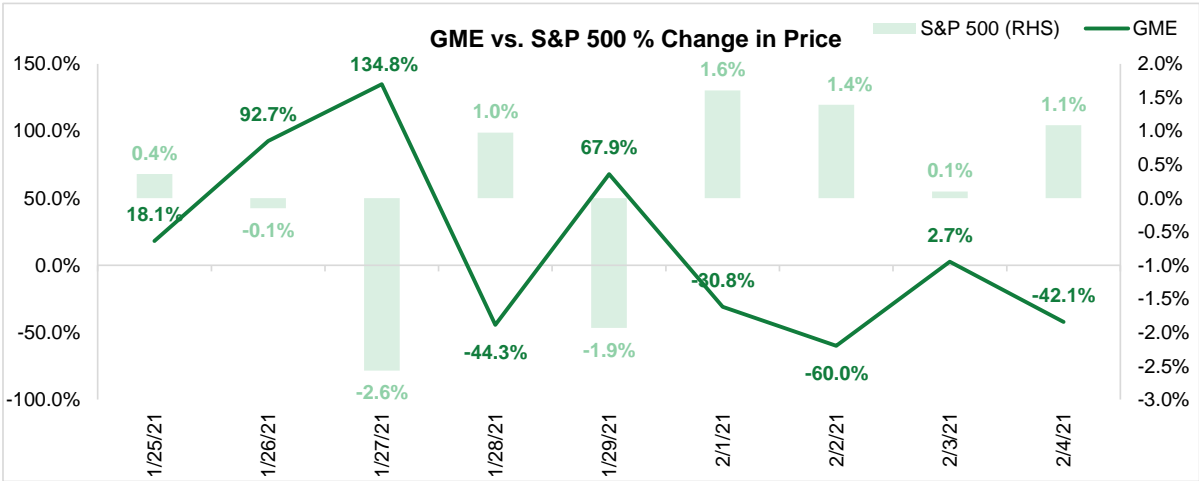
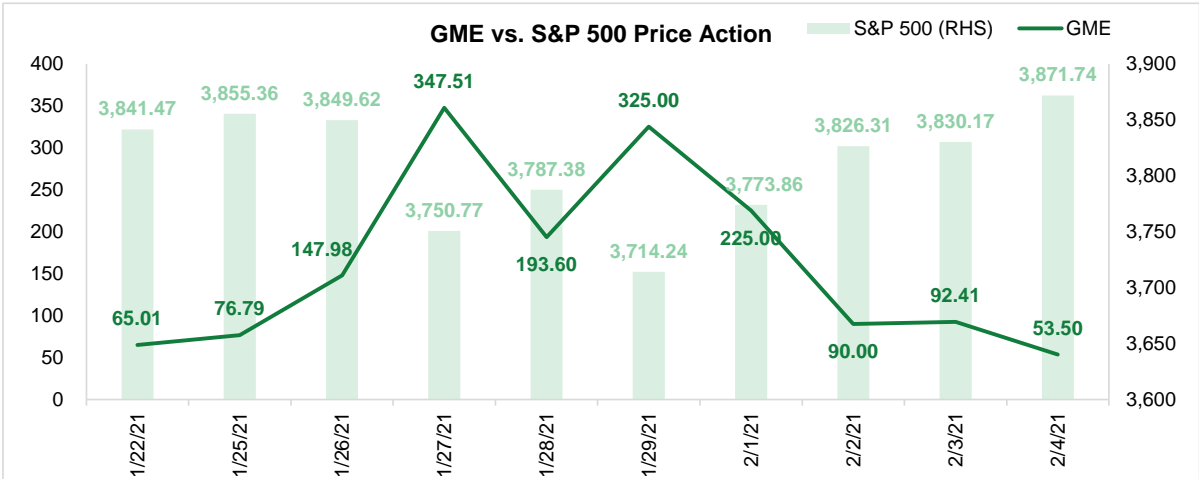


Source: Bloomberg, SIFMA estimates

Inverse Relationship to the S&P 500

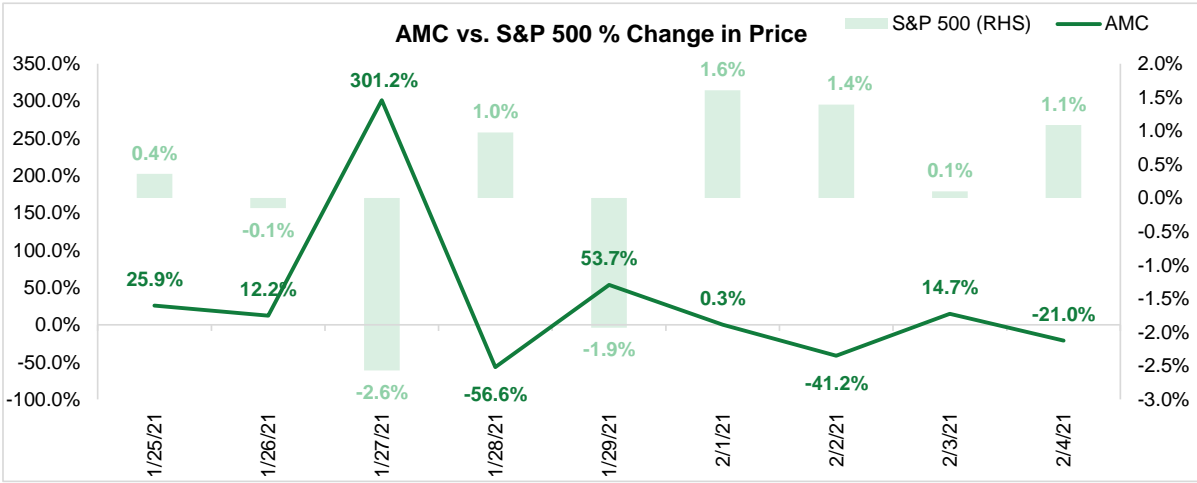
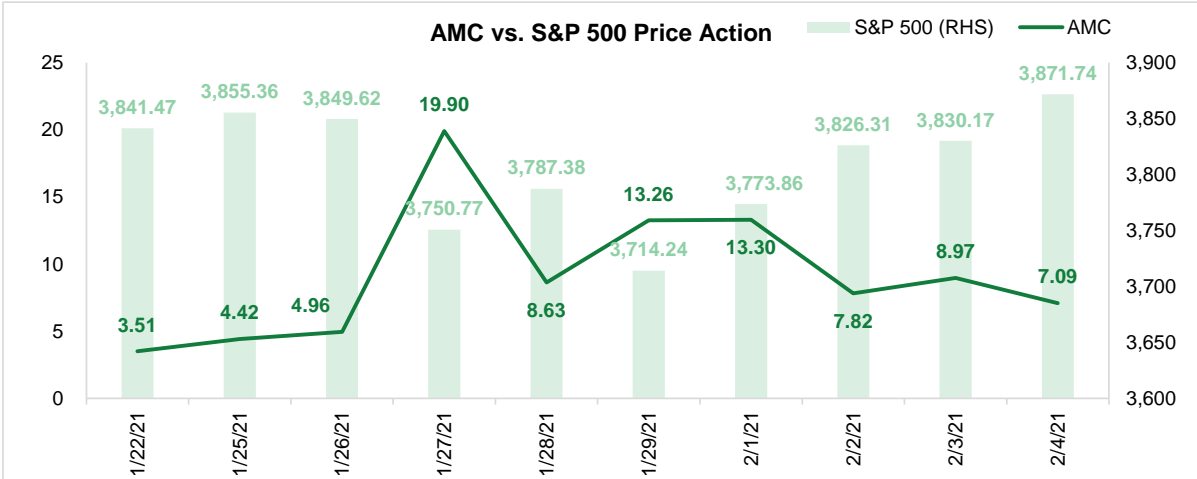
While the WSB trade only targeted a few heavily shorted stocks, it did have a ripple effect on markets in general. To cover their shorts, traders needed cash and were therefore forced to sell off some of their long positions in other stocks. It can be thought of as an illiquidity pocket in the midst of a sea of liquidity, which our markets are today. As such, there is an inverse relationship between the price movements in GME/AMC and the S&P 500 index. This pattern continued throughout the WSB short squeeze trade.

When GME made its move to peak price on January 27, the stock price increased 134.8%. That same day, the S&P 500 decreased 2.6%:



Source: Bloomberg, SIFMA estimates

When AMC made its move to peak price on January 27, the stock price increased 301.2%. That same day, the S&P 500 decreased 2.6%:



Source: Bloomberg, SIFMA estimates

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