



SIFMA Insights

Market Structure Download – Post Election Update

Where We're at with Volumes and Volatility

November 2020

Key Takeaways

- Volatility Update – VIX YTD 30.31, +97.0% to FY19, but -50.5% to the March peak
- Volumes Update – Equity ADV YTD 10.9 billion shares, +54.9% to FY19; options ADV YTD 28.3 million contracts, +48.7% to FY19
- Market Performance Update – Prices have recovered with S&P 500 +59.7% to the March trough, DJIA +58.1%, Nasdaq +71.8% and Russel 2000 +75.2%



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Executive Summary

With the passing of the U.S. presidential election, we wanted to update market metric trends we have followed throughout the year for volatility, equities and options. While we have seen a settling of volatility, albeit still elevated to historical levels, volumes continue to hover around 50% higher than normal levels. Much of this is attributed to the boom in retail investing. The portion of retail investing of total equities volumes is now estimated at 25%, versus around 10% historically. In multi-listed options volumes, around 50% of the growth in volumes this year is attributed to retail investors. While the jury is still out on volume sustainability among retail investors, market participants acknowledge a growing sophistication of this investor type. There is a growing use of risk management tools among this group, which contributes to options volumes growth in particular.

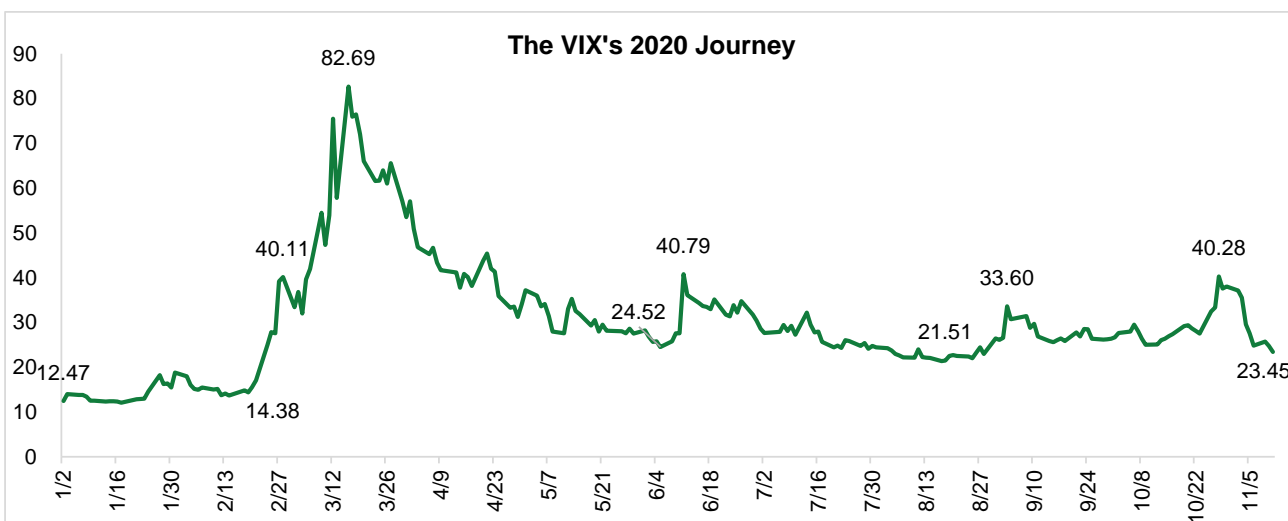
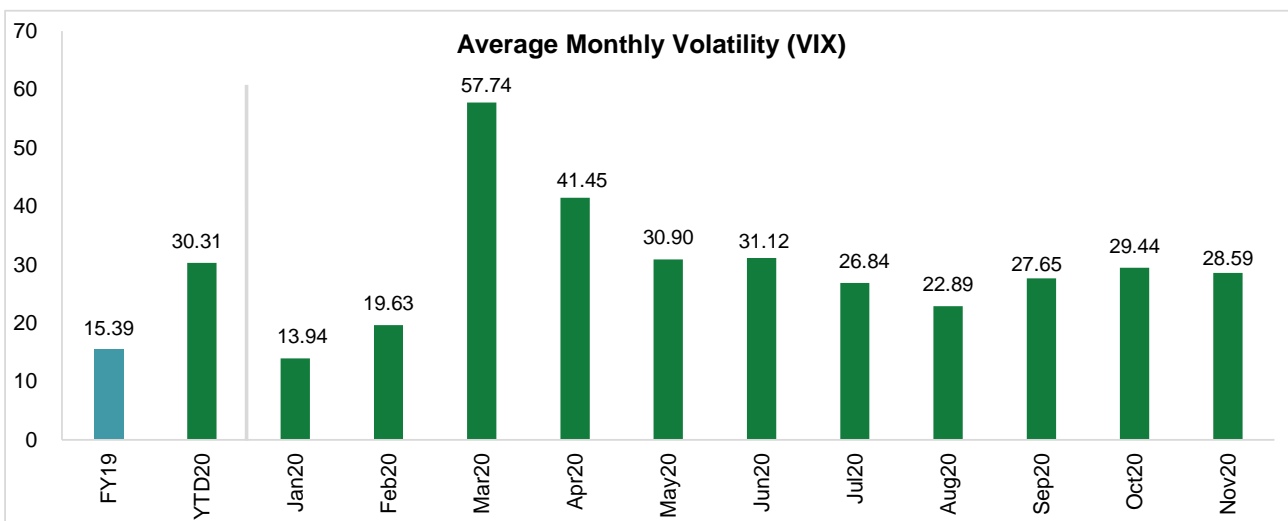
Inside this note, we analyze (as of November 11):

- **Volatility Update** – VIX YTD 30.31, +97.0% to FY19 average; November 28.59, +85.8% to the FY19 average but -50.5% to the March peak
- **Volumes Update**
 - Equity ADV – YTD 10.9 billion shares, +54.9% to FY19 average; November 11.2 billion shares, +59.8% to the FY19 average but -28.2% to the March peak
 - Options ADV – YTD 28.3 million contracts, +48.7% to FY19 average; November 32.5 million contracts, +70.4% to the FY19 average and marking a new monthly average peak (to date)
- **Market Performance Update**
 - S&P 500 – Currently 3,572.66; +59.7% to the March 23 trough of 2,237.40
 - Dow Jones – Currently 29,397.63; +58.1% to the March 23 trough of 18,591.93
 - Nasdaq – Currently 11,786.43; +71.8% to the March 23 trough of 6,860.67
 - Russell 2000 – Currently 1,736.94; +75.2% to the March 18 trough of 991.16

Volatility Update

Volatility, as measured by the VIX¹, has settled, albeit remaining elevated to historical levels:

- Currently 23.45; -22.6% to the YTD average of 30.31 and -71.6% to the peak of 82.69
 - Yet +52.4% to the FY19 average of 15.39
- November 28.59; -2.9% to the October average of 29.44 and -50.5% to the March peak of 57.74
 - Yet +85.8% to the FY19 average of 15.39



Source: Bloomberg, SIFMA estimates (as of Nov. 11)

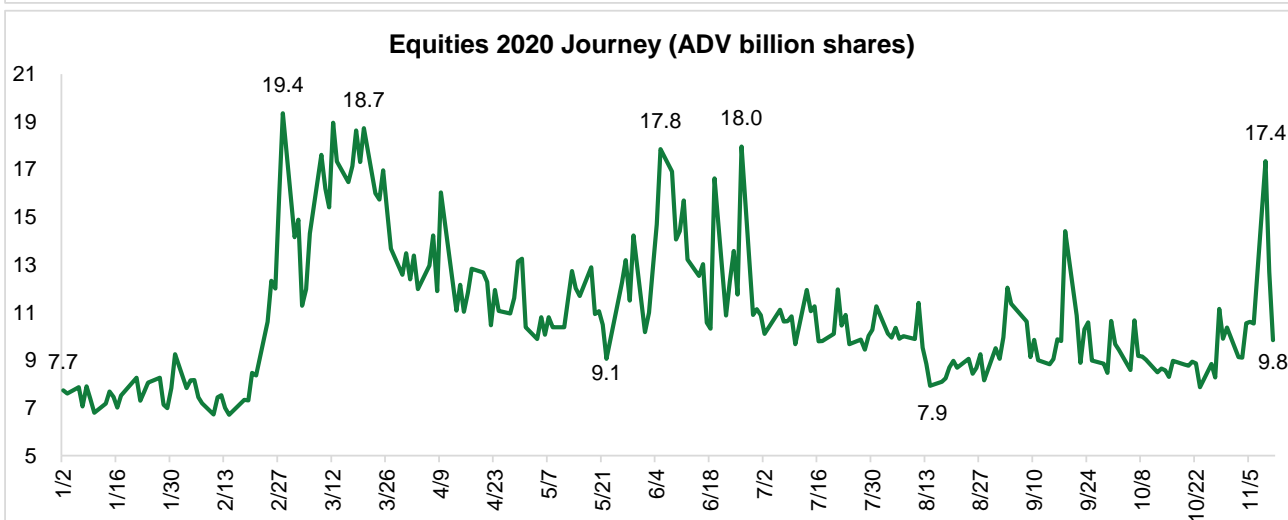
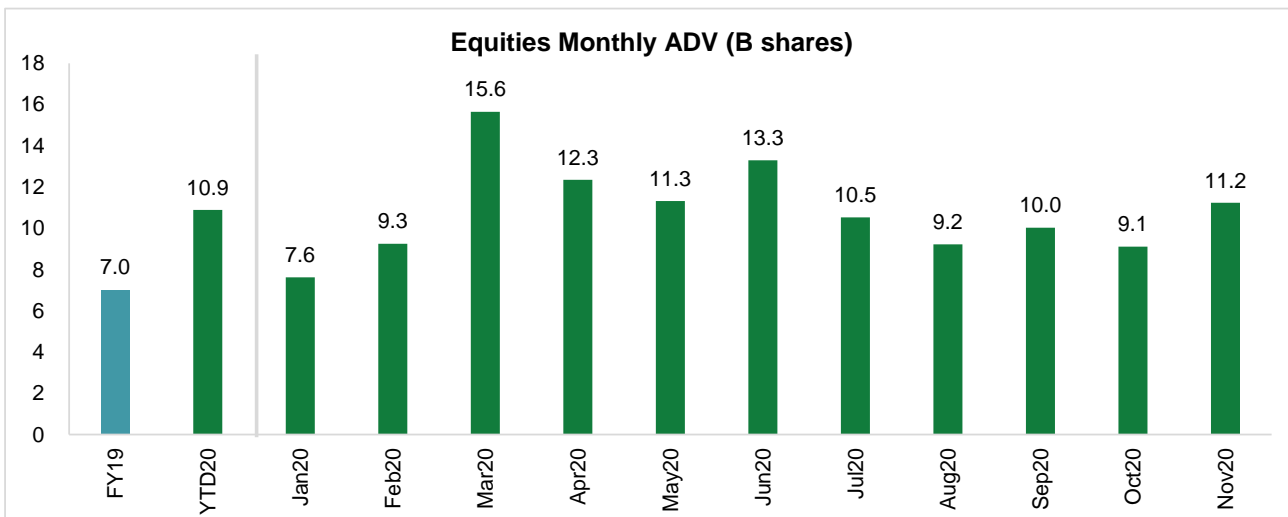
¹ CBOE Volatility Index: A real-time market index that represents the market's expectation of 30-day forward looking volatility, as derived from the price inputs of S&P 500 index options. It measures market risk and investor sentiment (fear, stress) and is often called the fear index

Volumes Update

Volumes also remain elevated to historical levels, in both equities and in particular options:

Equities

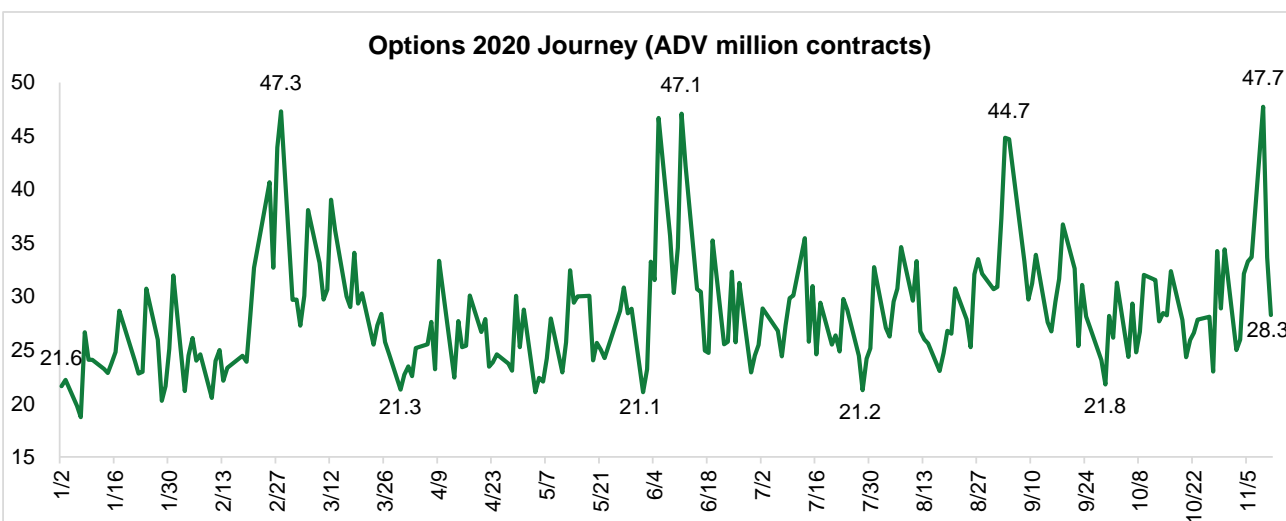
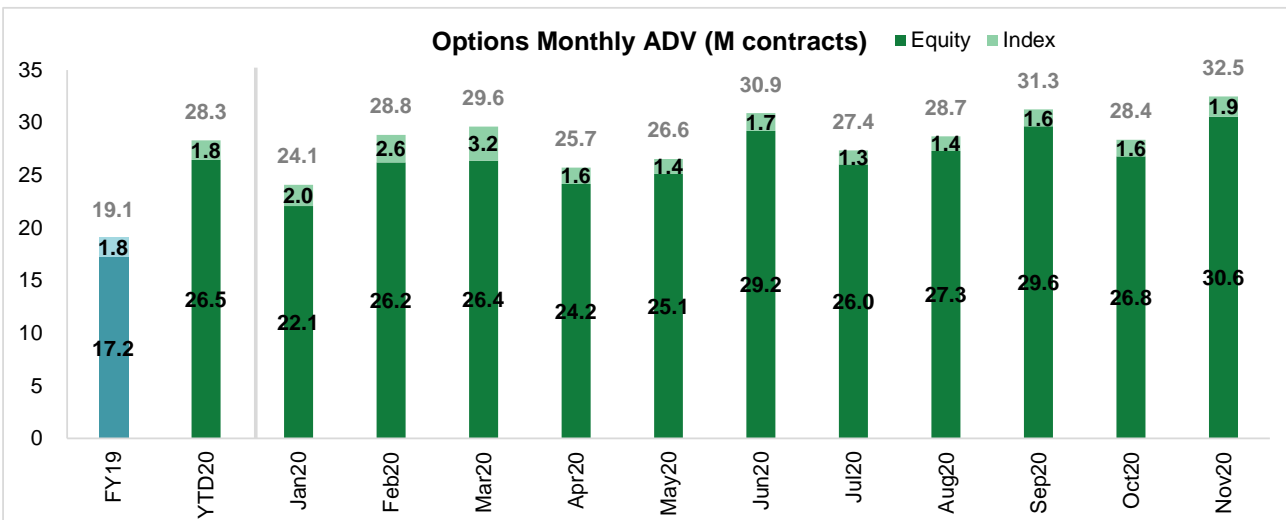
- Most recent day 9.8 billion shares; -9.6% to the YTD average of 10.9 billion shares and -49.2% to the peak of 19.4 billion shares
 - Yet +40.0% to the FY19 average of 7.0 billion shares
- November 11.2 billion shares; 23.2% to the October average of 9.1 billion shares and -28.2% to the March peak of 15.6 billion shares
 - Yet +59.8% to the FY19 average of 7.0 billion shares



Source: Cboe Global Markets, SIFMA estimates (as of Nov. 11)

Options

- Most recent day 28.28 million contracts; slightly down to the YTD average of 28.33 million contracts and -40.8% to the peak of 47.7 million contracts
 - Yet +48.4% to the FY19 average of 19.1 million contracts
- November 32.5 million contracts, a monthly average peak to date as options volumes remain highly elevated; +14.5% to the October average of 28.4 million contracts
 - +70.4% to the FY19 average of 19.1 million contracts



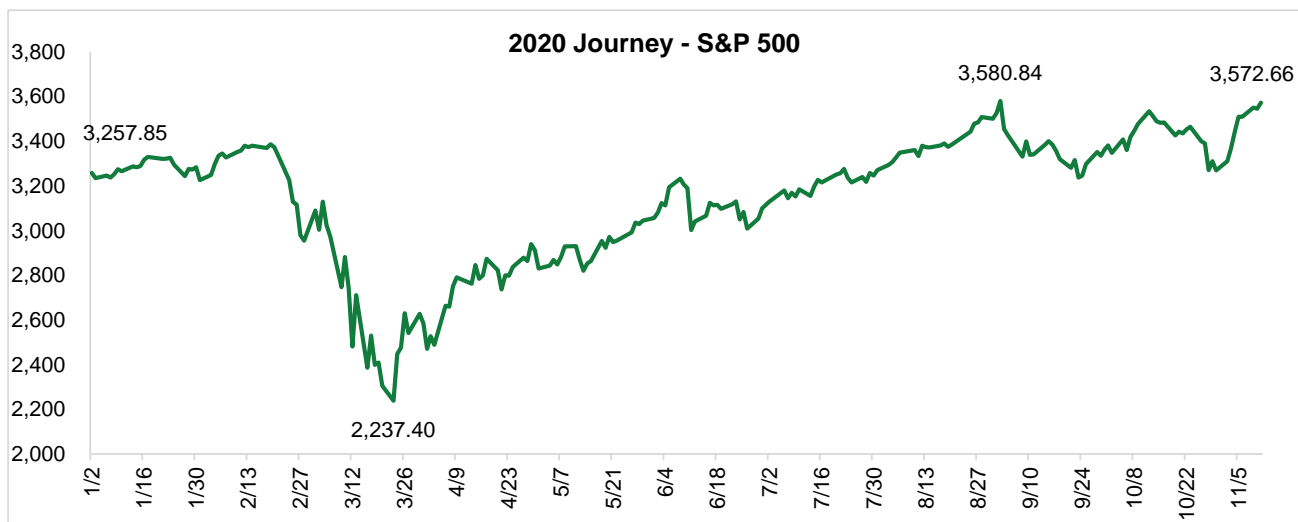
Source: Cboe Global Markets, SIFMA estimates (as of Nov. 11)

Market Performance Update

Market prices have recovered from their March lows, with all indexes at least in line with if not above start of year price levels. The degree of recovery varies among indexes, with the technology heavy Nasdaq outperforming while the small cap focused Russel 2000 essentially flat to January.

S&P 500

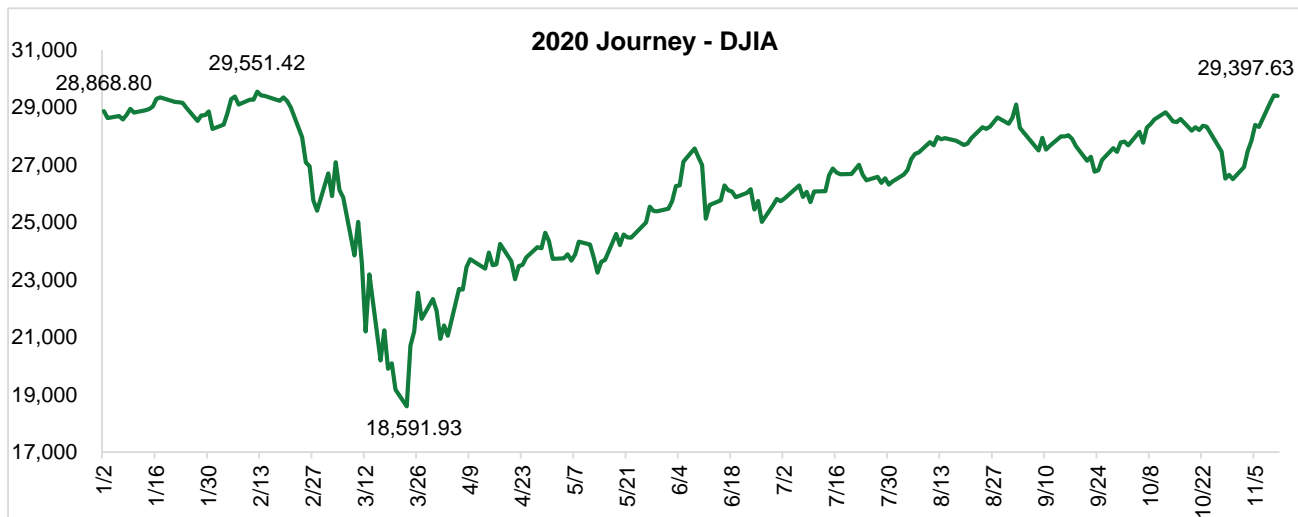
- Currently 3,572.66; +59.7% to the March 23 trough of 2,237.40
- Prices have recovered, now -0.2% to September 2 high of 3,580.84



Source: Bloomberg, SIFMA estimates (as of Nov. 11)

Dow Jones Industrial Average (DJIA)

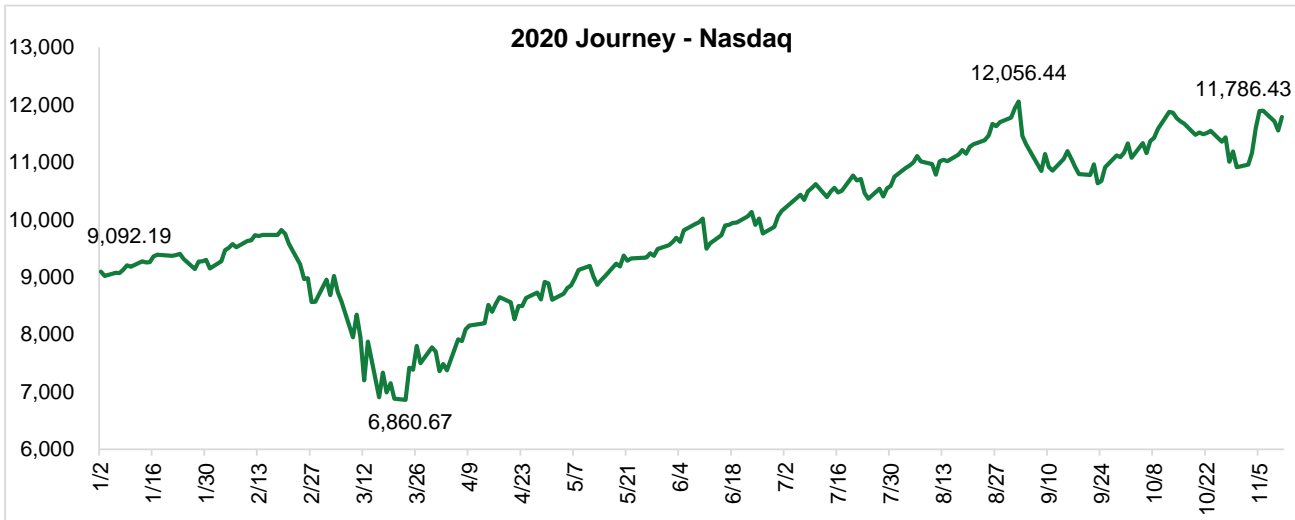
- Currently 29,397.63; +58.1% to the March 23 trough of 18,591.93
- Prices have recovered, now -0.5% to February 12 high of 29,551.42



Source: Bloomberg, SIFMA estimates (as of Nov. 11)

Nasdaq Composite

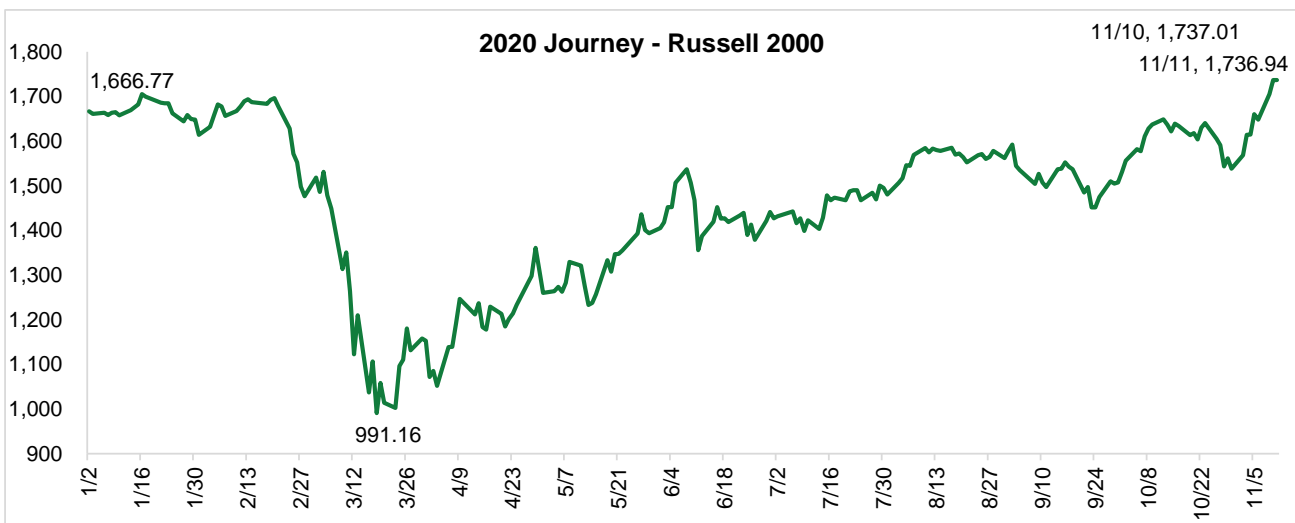
- Currently 11,786.43; +71.8% to the March 23 trough of 6,860.67
- Prices have more than recovered from the start of the year but are -2.2% to the Sept. 2 peak of 12,056.44



Source: Bloomberg, SIFMA estimates (as of Nov. 11)

Russell 2000

- Currently 1,736.94; +75.2% to the March 18 trough of 991.16
- Prices have recovered, now essentially flat to the November 10 high of 1,737.01



Source: Bloomberg, SIFMA estimates (as of Nov. 11)

Appendix: Market Index Definitions

- **Dow Jones Industrial Average (DJIA):** A price weighted index that tracks 30 large, publicly-owned companies trading on U.S. exchanges. It is a widely-watched benchmark index for U.S. blue-chip stocks.
- **S&P 500:** A market capitalization weighted index of the 500 largest U.S. publicly traded companies. The index is regarded as the best gauge of large-cap U.S. equities.
- **Nasdaq Composite (Nasdaq):** A market capitalization weighted index made up of over 2,500 common equities listed on the Nasdaq stock exchange. Its composition is nearly 50% technology (this percentage has come down over the years), followed by consumer services, health care and financials.
- **Russell 2000:** A market capitalization weighted index made up of the bottom two-thirds of the Russell 3000 index, a larger index of 3,000 publicly traded companies that represents nearly 98% of the investable U.S. stock market. The index is regarded as a gauge of small cap, U.S. centric companies.
- **CBOE Volatility Index (VIX):** A real-time market index that represents the market's expectation of 30-day forward looking volatility, as derived from the price inputs of S&P 500 index options. It measures market risk and investor sentiment (fear, stress) and is often called the fear index

Appendix: Terms to Know

FINRA	Financial Industry Regulatory Authority
SEC	Securities and Exchange Commission
ADV	Average Daily Trading Volume
ATS	Alternative Trading System
Best Ex	Best Execution
CAT	Consolidated Audit Trail
Dark Pool	Private trading venues, not accessible by the public
EMS	Equity Market Structure
MM	Market Maker
NMS	National Market System
OPR	Order Protection Rule
OPRA	Options Price Reporting Authority
PFOF	Payment For Order Flow
Reg NMS	Regulation National Market System
SIP	Security Information Processor
SRO	Self Regulatory Organization
Tick Size	Minimum price movement of a security
Bid	An offer made to buy a security
Ask, Offer	The price a seller is willing to accept for a security
Spread	The difference between the bid and ask price prices for a security, an indicator of supply (ask) and demand (bid)
NBBO	National Best Bid and Offer
Locked Market	A market is locked if the bid price equals the ask price
Crossed Market	A bid is entered higher than the offer or an offer is entered lower than the bid
Opening Cross	To determine the opening price of a stock, accumulating all buy and sell interest a few minutes before the market open
Closing Cross	To determine the closing price of a stock, accumulating all buy and sell interest a few minutes before the market close
Order Types	
AON	All or none; an order to buy or sell a stock that must be executed in its entirety, or not executed at all
Block	Trades with at least 10,000 shares in the order
Day	Order is good only for that trading day, else cancelled
FOK	Fill or kill; must be filled immediately and in its entirety or not at all
Limit	An order to buy or sell a security at a specific price or better
Market	An order to buy or sell a security immediately; guarantees execution but not the execution price
Stop	(or stop-loss) An order to buy or sell a stock once the price of the stock reaches the specified price, known as the stop price
Call	The right to buy the underlying security, on or before expiration
Put	The right to sell the underlying security, on or before expiration
Holder	The buyer of the contract
Writer	The seller of the contract
American	Option may be exercised on any trading day on or before expiration
European	Option may only be exercised on expiration
Exercise	To put into effect the right specified in a contract
Underlying	The instrument on which the options contract is based; the asset/security being bought or sold upon exercise notification
Expiration	The set date at which the options contract ends, or ceases to exist, or the last day it can be traded
Stock Price	The price at which the underlying stock is trading, fluctuates continuously
Strike Price	The set price at which the options contract is exercised, or acted upon
Premium	The price the option contract trades at, or the purchase price, which fluctuates constantly
Time Decay	The time value portion of an option's premium decreases as time passes; the longer the option's life, the greater the probability the option will move in the money
Intrinsic Value	The in-the-money portion of an option's premium
Time Value	(Extrinsic value) The option premium (price) of the option minus intrinsic value; assigned by external factors (passage of time, volatility, interest rates, dividends, etc.)
In-the-Money	For a call option, when the stock price is greater than the strike price; reversed for put options
At-the Money	Stock price is identical to the strike price; the option has no intrinsic value
Out-of-the-Money	For a call option, when the stock price is less than the strike price; reversed for put options

Appendix: SIFMA Insights Research Reports

SIFMA Insights Market Structure Primers: www.sifma.org/primers

- Global Capital Markets & Financial Institutions
- Electronic Trading
- US Capital Formation & Listings Exchanges
- US Equity
- US Multi-Listed Options
- US ETF
- US Fixed Income
- SOFR: The Transition from LIBOR
- The Evolution of the Fintech Narrative

SIFMA Insights: www.sifma.org/insights

- Market Performance Around US Presidential Elections
- Market Volatility Around US Presidential Elections
- Market Structure Download
- A Deeper Look at US Listed Options Volumes
- The Cboe Trading Floor Reopened – Revisiting Volume Data
- NYSE Goes All Electronic – What Does It Mean?
- The NYSE Trading Floor Reopened – Revisiting Market Share Data
- COVID-19 Related Market Turmoil Recap: Part I (Equities, ETFs, Listed Options & Capital Formation)
- 2020, the Year of the SPAC
- The 2020 Market Madness
- The VIX's Wild Ride
- The 10th Anniversary of the Flash Crash
- DTCC's Important Role in US Capital Markets

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