VALOR ASSET MANAGEMENT of GREAT VALLEY ADVISOR GROUP

Prepare to Surface!

By: Lee R. Johnson, Jr., CFA | Chief Investment Officer | December 14, 2018

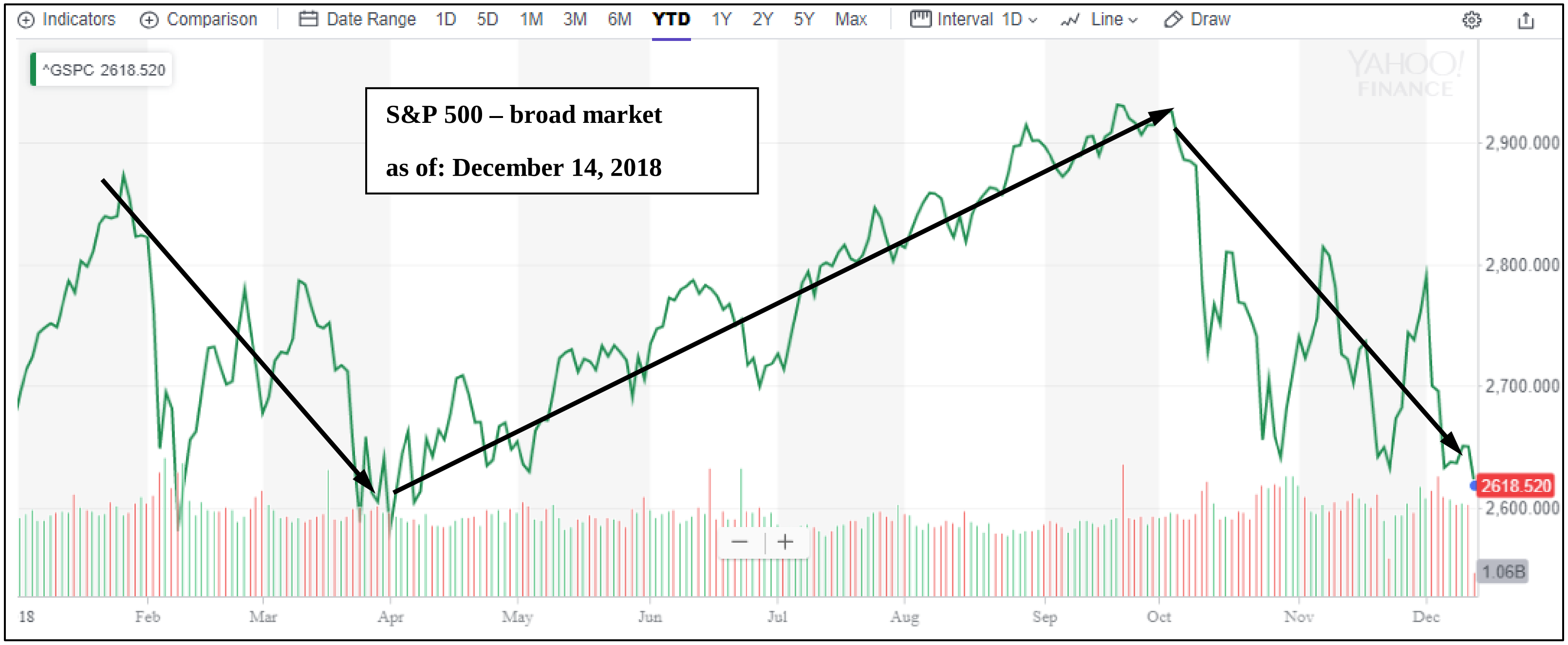
Volatility has certainly been a hot topic in 2018 so I thought I would provide some insight as we approach year-end. When I think of volatility, it reminds me of my days in the Navy when I served on a submarine. As you can imagine, a submarine is not very stable on the surface because it is designed to operate under the water. When we would prepare to surface, we would always identify the "sea state" which is a number that identifies the condition of the seas. As you would expect, a higher number means rougher seas. This gave us a very easy and accurate indicator of the conditions we were about to encounter so we could plan for the surface transit ahead. In terms of the market, we can relate this same concept to volatility. But instead of using sea state, let's consider the "VIX" or the CBOE Volatility Index as the market's version of sea state. The VIX is a single number (just like sea state) which measures the volatility of the broad market. It is essentially the condition of the "market seas" at any given time and it's derived from the prices of option contracts on the S&P 500 Index. Since options reflect future expectations, the VIX not only provides a measure of current conditions but it also has a predictive element to it - just like sea state. The higher the VIX, the greater the volatility and the greater anticipated swings in the market going forward. Another measure we typically use to gauge volatility is the "VVIX" or the volatility of the VIX. This is simply the rate of change of the VIX, or in sea state terms, how fast the ocean waves are moving across the surface. Put another way, the VIX is like the speed of a car and the VVIX is like the acceleration. Both of these measures serve as useful indicators of current and future trends in the broad market.

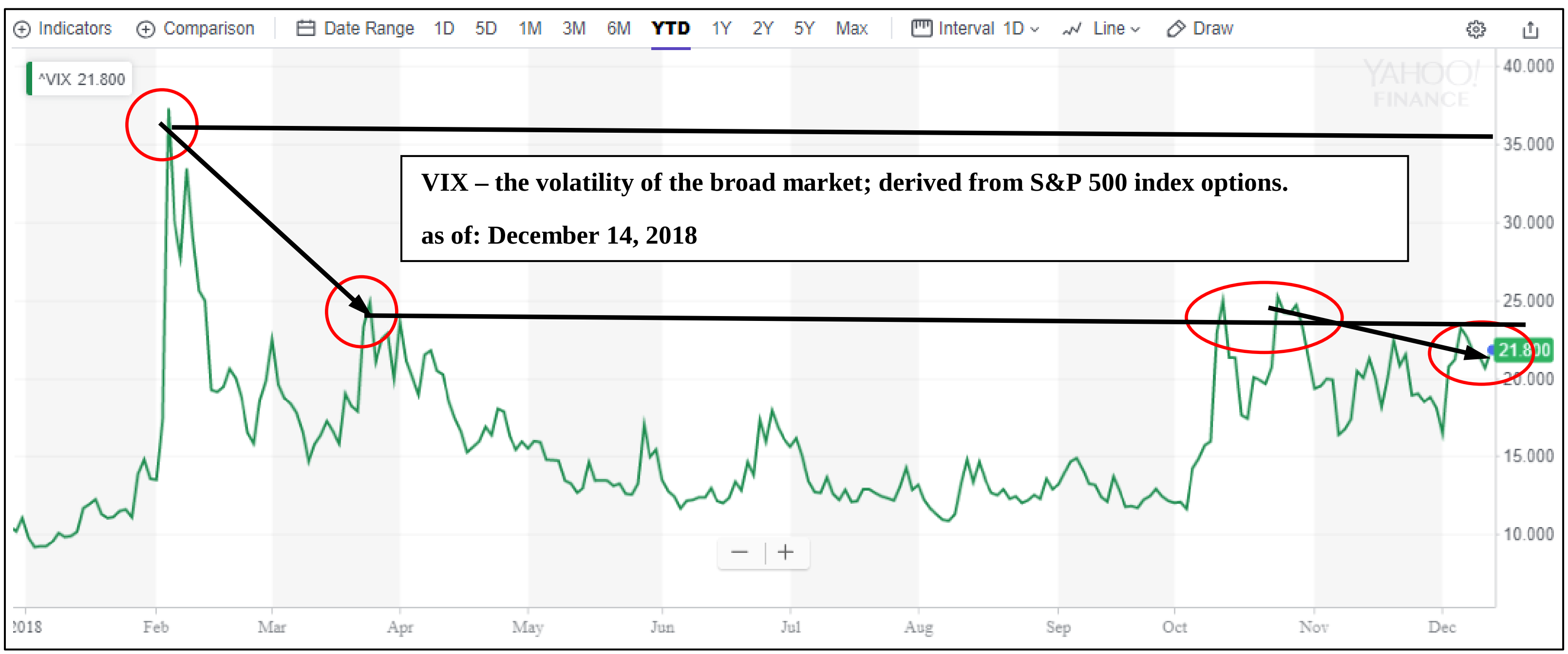
Looking at the charts on the following pages, we can draw some interesting conclusions:

- On the first set of charts comparing the S&P 500 Index and the VIX, volatility spiked at the beginning of 2018 which can easily be seen by the large swings in the market between January and April. The VIX also shows peaks during this time but *each peak trends lower*. The market followed up with a rally starting in April. The same trend occurred after the volatility in October but the interesting thing to note is *the VIX made lower highs in October than we saw in January and April*. Relating this back to our sea state analogy, this could be a sign that outside all the noise we've seen lately (and earlier this year), this could be telling us the market seas are calm and we could potentially see a favorable start to 2019, just like what happened in April.

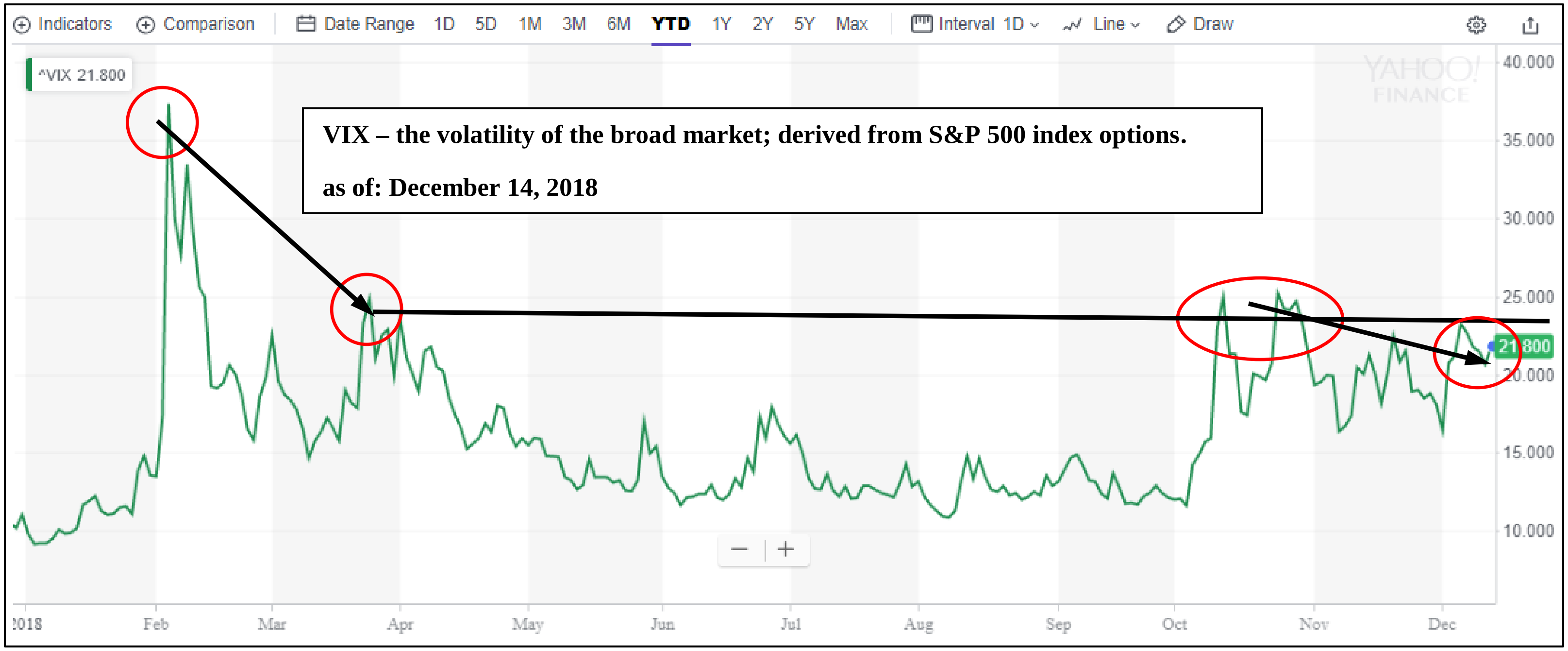
- The second set of charts compares the VIX to the VVIX. Looking at the two periods of increased volatility in 2018 (January to April and October to November), the VVIX has gone down each time. This means that even though there were heightened levels of volatility in the broad market, the *rate of change* at which volatility was changing actually went down. This supports the lower peaks in the VIX we have seen this year. It's also interesting to see the VVIX is at its lowest level all year, despite the repeated noise we've seen all year. Both of these observations also provide a nice backdrop for a favorable environment heading into 2019 and as we would say on the submarine – "All Contacts Clear, Prepare to Surface"!

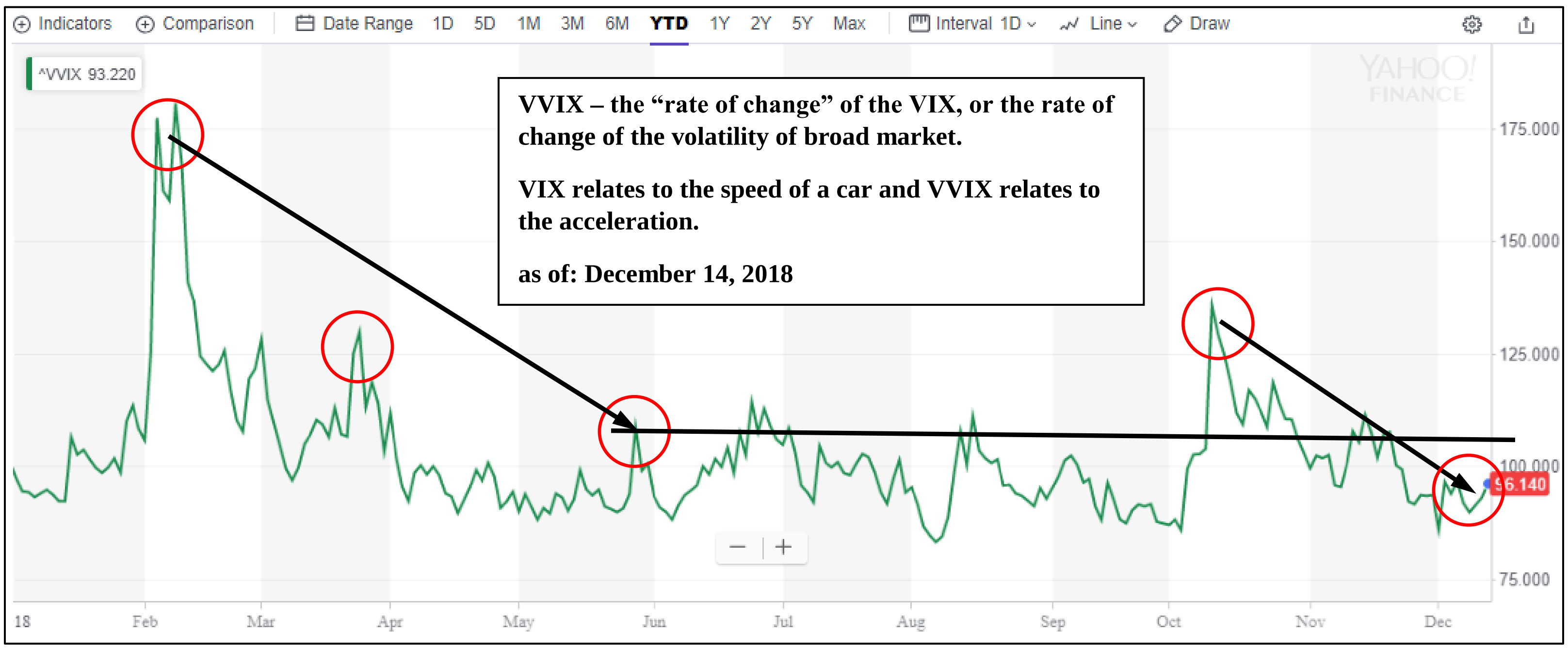
S&P 500 and VIX – 2018
(source: Yahoo Finance)





VIX & VVIX – 2018
(source: Yahoo Finance)





Important Disclosures

1. The economic forecasts set forth in this material may not develop as predicted. No Strategy assures success or protects against loss. Investing involves risk including loss of principal.

2. The **CBOE Volatility Index® (VIX®)** is meant to be forward looking, showing the market's expectation of 30-day volatility in either direction. It is considered by many to be a barometer of investor sentiment and market volatility, commonly referred to as “Investor Fear Gauge”. Put another way, the VIX® is like the speed of a car.

3. The **VVIX** is a volatility of volatility measure that represents the expected volatility (i.e. the rate of change) of the 30-day forward price of the CBOE Volatility Index (the VIX®). It is essentially the “VIX® of the VIX®”. Put another way, where the VIX® is like the speed of a car, the VVIX is like its acceleration.

4. The **VIX® and VVIX** are unmanaged and cannot be invested into directly. Unmanaged index returns do not reflect fees, expenses, or sales charges. Index performance is not indicative of the performance of any investment. Past performance is no guarantee of future results.