

Date: February 6, 2018
To: PCA Clients
From: Pension Consulting Alliance, LLC (PCA)
RE: Volatility Spikes...Now What?

Since the end of January, risk markets have been going through a major reassessment of the future. Over the last five days ending 2/5/2018, the S&P 500 fell by over (7%), while non-U.S. equities (MSCI ACWI ex-US) declined by more than (4%). Treasury bonds have also declined but by smaller amounts. Over that same period, projected one-month volatility of the S&P 500 (the VIX index) nearly tripled from around 14 to slightly over 37. Such a move translates into a dramatic increase in uncertainty reflected in the global financial markets. *During such periods, it is critical that investors maintain their disciplined investment approaches, rebalance to policy, and remain committed to their long-term strategies. Such an approach has served long-term investors well.*

Within two days, we saw the markets reflect two forms of behavior:

Summary of Recent Market Behavior

| Price changes | Yesterday | Friday | Prior 3 Days | Last 5 Days | YTD | Comments |
|-------------------|-----------------|---------------------------|--------------------------------|-------------|--------|--|
| SP500 | -4.1% | -2.1% | -1.1% | -7.2% | -0.9% | Equities retreating fast, but not a "correction" yet |
| MSCI AWCI exUS | -1.8% | -1.5% | -1.0% | -4.2% | 2.0% | \$ weakening, pricing anomalies, diversification |
| 10-Yr Treasury | 1.2% | -0.5% | -0.8% | -0.1% | -5.2% | |
| 30-Yr Treasury | 1.6% | -2.0% | -0.9% | -1.3% | -2.6% | |
| VIX | 115.6% | 28.5% | -2.7% | 169.7% | 238.0% | Volatility spikes, crisis insurance pays off |
| BXM Index | -3.9% | -1.2% | -0.1% | -5.2% | -4.1% | YTD behind, but paying off over last 5 days |
| PUT Index | -1.7% | -1.2% | -0.2% | -3.1% | -2.0% | YTD behind, but paying off over last 5 days |
| Key Driver | <i>Risk-off</i> | <i>Inflation Concerns</i> | <i>Benign, but directional</i> | | | |

On Friday, the markets retreated reflecting newly-developed inflation concerns. A strong national wage report led to the thinking that the Federal Reserve is suddenly behind-the-eight-ball and will have to react by raising short-term interest rates faster than expected. As a result, on Friday all major financial asset types declined in value – there was no place to hide.

On Monday, the equity markets experienced an even deeper retreat than the prior Friday, with the S&P 500 declining by more than (4%). In contrast to Friday’s results, U.S. Treasury bonds appreciated significantly, rising by more than +1%, with long bonds outpacing intermediate bonds. These results translate into a classic “risk-off” environment. Interestingly, Friday’s U.S. risk markets ended with a flurry of activity and significant drawdowns at market closes. This finding was reported by several news agencies and largely reflects the increased use of quantitative and

algorithmic trading strategies that are now in place and trigger trades based on market behavior pushing through pre-determined thresholds.

On Tuesday (today), markets ended the day recovering half of the prior day's losses. Risk markets produced positive results, while flight-to-quality assets (such as U.S. Treasury bonds) fell slightly, indicating an initial reassessment of "risk-off" positions. VIX declined by over (20%) to 30 (but still nearly double the historical average).

Given recent trends, there is a reasonable chance that February 14th could prove to be the next market fulcrum point. This date is the next time the U.S. Government reports the Consumer Price Index (CPI) level. If it confirms recent inflation concerns or exceeds expectations, another round of market depreciation could occur. If CPI remains within a sanguine/benign range, risk markets may settle into a somewhat lower-than-current volatility regime and recover some of their recent losses over time.

Clearly, market volatility is back. Typical recent behavior is for volatility to spike rapidly and then slowly recede to a new equilibrium level. Our expectation is that market volatility expectations (as measured by VIX) will settle to a level that is materially higher than what we have experienced in the recent past. Such an environment will lead to heightened shorter-term risk-market uncertainty. In such environments, commitment to long-term strategies and rebalancing disciplines remain paramount.

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