On April 27th, the VIX® reached a closing low of 10.36, its lowest close since 2014 and only slightly above its all-time low of 9.31 on December 22nd, 1993. Low volatility has been persistent, as the VIX® averaged 12.03 for the year-to-date ended April 30, 2017 - the second lowest on record over the first four months of any year since the VIX's® inception in 1990.

While some commentators have expressed a view that wide-spread volatility selling has driven volatility to 'artificially' low levels, we do not share this view. In our January *Market Perspective,* we cited a study from Barclays Equity Research[1] that examined the impact of volatility selling from multiple perspectives and determined that volatility selling through instruments such as index options, VIX® futures and variance swaps is not likely contributing to low volatility. This is consistent with our own research and we can add two simple observations that bolster the idea that low volatility is driven by factors other than volatility selling: 1) volatility measures aren't only low in the U.S. equity market as relatively low volatility appears to be a global phenomenon, existing even in markets where access to volatility selling instruments and techniques is limited and 2) the lowest volatility periods in U.S. equity market history occurred before volatility selling was a widespread technique. For example, 1995 and 2006 began with average VIX® levels of 12.10 and 12.00, respectively, through the first four months. S&P 500® Index option open interest in both of those years was a fraction of what it is today. CBOE launched VIX® futures contracts as a trading instrument in 2004, making implied volatility futures a non-existent market in 1995 and a relatively small market in 2006.

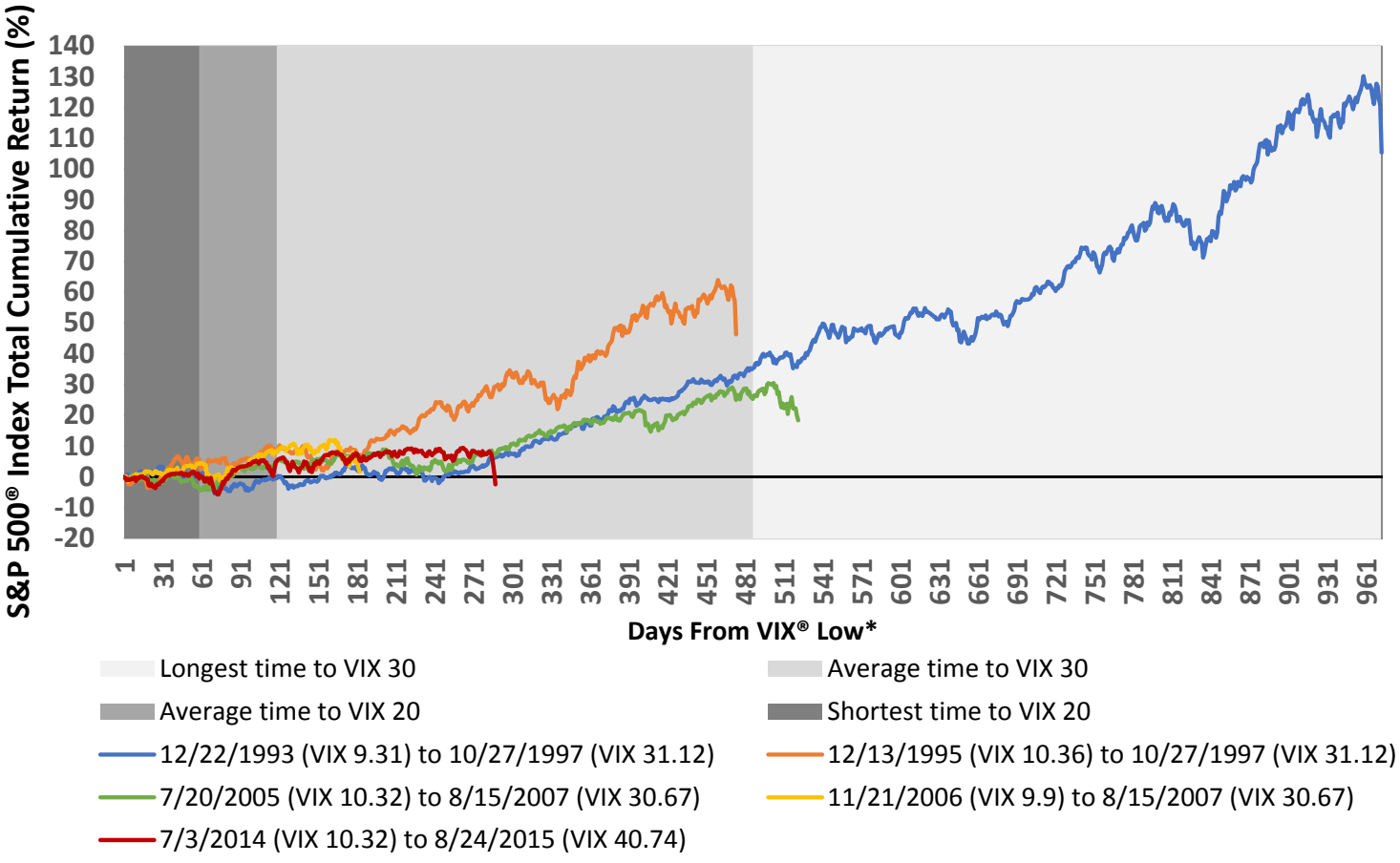
Our view is that implied volatility is low because realized volatility is low. Furthermore, there are key fundamental and structural reasons why realized volatility is low. Existing phenomena that are consistent with a low volatility environment range from the simple—e.g. an improving global economic backdrop, strong earnings growth and confidence in central bank policies, to the more subtle and complex—e.g. increased indexation, higher algorithmic trading volume and low cross-sectional stock correlation. Extended periods of well below average volatility have existed in the past and have lasted for months or even years. Given these fundamental and structural volatility dampeners, the current low volatility is not very surprising or unprecedented, despite distinct external market factors that could potentially trigger higher volatility.

Index Volatility Weekly, "Is Volatility selling contributing to low volatility?", Barclays Equity Research, January 25, 2017

1 Index Volatility Weekly, "Is Volatility selling contributing to low volatility?", Barclays Equity Research, January 25, 2017

A particular concern expressed by some who hold the view that the VIX® is 'artificially' low is the fear that a low VIX® creates an imminent threat of a spike in volatility and devastating market losses. While Gateway's low volatility strategies are always preparing to protect portfolios against a downside event and stand ready to capitalize on an increase in implied volatility, we don't see any evidence that either low realized volatility or a low VIX® reliably correlates with or predicts market crashes, or even market tops followed by extended down market periods. The VIX® has fallen below 10.50 in five periods over its history and, in each period, it had a gradual rise from its eventual low point back up to 20, a level consistent with its long-term average. The shortest number of days to reach 20 was 86 and the longest climb to 20 took nearly a year, while the average for the five periods was 172 days. Typically, it takes a downside event to drive the VIX® up and the path back to 20 for each of these time periods did, in fact, end with a loss. But, in each case, it was a single-digit equity market loss that drove the measure to 20 and in three out of the five periods the loss did not erase the market gains generated over the period that the VIX® remained under 20. Finally, and moreover, in each of the five cases it took a considerable amount of time after the VIX® reached 20 for the market to experience a downside event large enough to drive the VIX® to 30. On average, the VIX® broke 30 nearly one-and-a-half years after it broke 20.

S&P 500® Index Cumulative Returns as VIX® Rises from Historic Lows



Source: Bloomberg, L.P. *Number of days excludes weekends, holidays and other days that do not have data points due to the equity market not being open. Time periods referenced in the text are 'calendar days', i.e. inclusive of weekends, holidays and other days the equity market was not open.

There is no way to know how much time will pass until the market experiences higher volatility—in part because it is not yet known if the April 27th closing value for the VIX® will end up being its low point for the current period. History suggests both realized volatility and the VIX® could fall meaningfully below current levels since the lowest quarter of realized volatility for the S&P 500® Index was an annualized standard deviation of just 3.7% in the first quarter of 1964. Though implied volatility typically exceeds realized volatility, if current realized volatility dropped near all-time lows, the VIX® could easily set a new record low.

Finally, as low as the VIX® is, the case can be made that it should be even lower. If volatility sellers were pushing the VIX® down in a direct fashion, average VIX® levels would be more similar to realized volatility levels. Realized volatility for the year-to-date ended April 30, 2017 is a mere 6.9% annualized, resulting in a spread of over 5 points relative to the year-to-date VIX® average of 12.03. If the VIX® was artificially low, its average would need to be much closer to, or even below, realized volatility. As it stands, the spread between implied and realized isn't smaller than normal. In fact, it is more than one point *greater than* the average differential over the first four months of each year going back to the VIX® inception year of 1990. The spread between implied and realized volatility is probably the best evidence that the various forms of volatility selling are not having an undue influence on market conditions.