February triggered a 180-degree turn in multiple aspects of the market narrative. After years of anemic economic growth, commentators started to describe an economy that may be on the verge of overheating. Concern over inflation being too low quickly switched to a concern that it might soon be too high. And, as the bond market exhibited rising yields and falling prices while the equity market fell into correction territory, the bond market went from being discussed as a safe haven to being tagged as the proximate cause of the equity market's struggles. But by far the most dramatic change in the markets was the change in implied volatility. The trend of near record-low readings for the Cboe® Volatility Index (the VIX®) that was entrenched in 2017 continued into early 2018. But the 'low volatility narrative' came to an abrupt halt when the VIX® more than doubled on February 5th. The measure of implied volatility had an opening value of less than 19 and a closing value of nearly 39 that day and then continued to rise to an intra-day high of over 50 on February 6th. While this volatility spike was extreme, it was far from unprecedented—there have been spikes to similar levels several times over this history of the VIX, which dates back to 1990.

Some extreme volatility spikes have been triggered by specific identifiable events, such as: the Asian currency crisis of 1997, the collapse of hedge fund Long-Term Capital Management in 1998, the 9/11 terror attacks in 2001 and the bankruptcy of Lehman Brothers in 2008. Other volatility spikes were more similar to what occurred on the 5th and 6th of February, i.e. the causes weren't as immediately obvious. Examples include the flash crash in 2010 and the spike in August 2015.

As the table shows, equity market outcomes vary after extreme spikes in volatility, but common characteristics of post-spike periods include elevated market risk, both in terms of realized volatility (standard deviation) and drawdowns. However, equity investors have frequently been rewarded with attractive returns if they maintain equity market exposure through the post-spike period. Specifically, 12-month holding periods in the S&P 500® Index beginning at the end of a month that included an intra-day VIX® reading greater than 40, have been positive 19 of 22 times with an average return of 22.46%. But investors have had to endure realized volatility of over 22% and additional market drawdowns of at least 8%.

VIX® Index		S&P 500® Index Next 12 Months			BXM℠ Index Next 12 Months		
Month ending:	Intra-day High	Return	Risk*	Max Drawdown	Return	Risk*	Max Drawdown
10/31/1997	48.64	21.96%	20.27%	-19.19%	19.24%	15.09%	-15.36%
8/31/1998	45.02	39.80%	20.66%	-9.93%	40.42%	13.43%	-7.38%
9/30/1998	48.06	27.79%	18.87%	-10.35%	30.79%	11.07%	-7.38%
10/30/1998	49.53	25.66%	18.82%	-11.80%	23.91%	11.12%	-7.38%
9/28/2001	49.35	**-20.47%**	23.74%	-31.49%	**-12.50%**	17.07%	-23.99%
7/31/2002	48.46	10.63%	24.26%	-19.11%	17.15%	14.89%	-12.00%
8/30/2002	45.21	12.05%	22.48%	-15.02%	18.74%	14.24%	-10.59%
9/30/2002	41.86	24.36%	21.14%	-14.24%	25.76%	12.77%	-7.54%
10/31/2002	43.44	20.77%	18.58%	-14.24%	22.49%	11.16%	-7.54%
9/30/2008	48.40	**-6.92%**	42.73%	-41.17%	**-8.15%**	30.82%	-33.36%
10/31/2008	89.53	9.79%	35.80%	-31.90%	7.62%	22.57%	-23.54%
11/28/2008	81.48	25.37%	30.60%	-27.19%	27.63%	17.77%	-16.90%
12/31/2008	68.60	26.45%	27.27%	-27.19%	25.91%	17.36%	-16.90%
1/30/2009	57.36	33.12%	25.38%	-21.96%	25.59%	16.11%	-15.21%
2/27/2009	53.16	53.53%	23.73%	-8.03%	39.20%	15.14%	-6.26%
3/31/2009	53.25	49.70%	19.11%	-8.03%	30.66%	11.23%	-6.26%
4/30/2009	45.60	38.80%	17.61%	-8.03%	25.62%	10.84%	-6.26%
5/31/2010	48.20	25.95%	15.27%	-8.44%	16.65%	9.56%	-6.96%
8/31/2011	48.00	17.97%	19.00%	-9.67%	19.80%	11.46%	-6.74%
9/30/2011	43.87	30.16%	17.34%	-9.64%	25.31%	10.45%	-6.06%
10/31/2011	46.88	15.18%	15.44%	-9.58%	13.07%	9.19%	-6.06%
8/31/2015	53.29	12.52%	15.26%	-12.71%	8.17%	10.37%	-8.20%

	S&P 500® Index Next 12 Months			BXM℠ Index Next 12 Months		
	Return	Risk	Max Drawdown	Return	Risk	Max Drawdown
Best	53.53%	15.26%	-8.03%	40.42%	9.19%	-6.06%
Average	22.46%	22.43%	N/A**	20.14%	14.26%	N/A**
Worst	-20.47%	42.73%	-41.17%	-12.50%	30.82%	-33.36%

*Risk calculation is annualized standard deviation of daily returns

**Average drawdown is not calculated due to overlapping drawdown periods

Though the results have, on average, been attractive over the year following a dramatic spike in volatility, there also have been two negative periods, including a steep loss of over 20% for the S&P 500® Index after September 2001.

The table also shows that the Cboe® S&P 500 BuyWrite℠ Index (the BXM℠)[1] outperformed the S&P 500® Index in 9 of the 22 periods and had a lower standard deviation and smaller drawdown in every period. On average, the BXM℠ delivered nearly 90% of the S&P 500® Index's total return at less than 65% of the standard deviation. Like the S&P 500® Index, the BXM℠ had two negative periods, significantly outperforming when the S&P 500® Index lost more than 20% and slightly underperforming in the period with the smaller loss.

When implied volatility increases, the prices of index options generally increase as well. This can benefit index option writing programs similar to the call writing component of the BXM℠ as higher option prices generate more cash flow from written options. In turn, the cash flow available to such strategies can potentially result in more equity market participation than usual in the event of an market advance and more protection than usual in the event of a market decline.

Many investors are growing increasingly wary of equity market risks. However, the low returns that investment-grade bonds may deliver in a low-to-rising interest rate environment can make managing equity market risk with bonds problematic. Too much exposure to low-risk, low-return assets can potentially jeopardize the long-term returns of investor portfolios and create the risk that overall portfolio returns may fall short of those needed to meet long-term goals. Strategies that combine equity market exposure with option writing may be an attractive solution for investors who need to stay positioned for long-term growth but also need reliable risk reduction and downside protection.

[1]The Cboe® S&P 500 BuyWrite℠ Index (the BXM℠) is a passive total return index designed to track the performance of a hypothetical buy-write strategy on the S&P 500® Index. The construction methodology of the BXM℠ includes buying an equity portfolio replicating the holdings of the S&P 500® Index and selling a single one-month S&P 500® Index call option with a strike price approximately at-the-money each month on the Friday of the standard index option expiration cycle and holding that position until the next.