The Retail Investor Effect

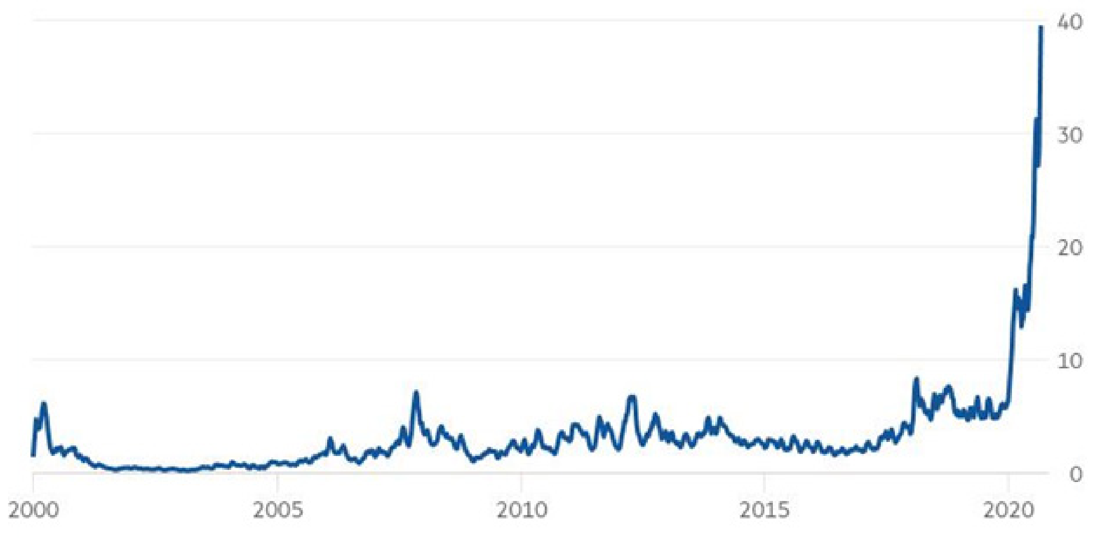
Fund in focus: Brompton North American Low Volatility Dividend ETF ("BLOV")

There has been much discussion about the influence of option activity on the stock market. Since stock options are derivatives of underlying stocks, one can conclude that call options shouldn't influence movement in underlying stock prices. The tail shouldn't wag the dog. Except in some cases it does; and since the pandemic, option activity has had some influence on the dynamics of the stock market.

Institutional investors use equity options mainly to hedge their portfolios and to generate additional yield (using a variety of payoff structures). Sophisticated retail investors also use options for hedging purposes as well as making speculative bets on stocks. However, there is also a growing class of retail investors that use call options purely for speculation, with little intent on holding the underlying stocks. This group of investors has exploded in size as a result of pandemic driven lockdowns earlier in the year, which attracted sport bettors into the stock market (when professional sports was unavailable) at a time when the stock market began its recovery. According to Bloomberg, online brokers (Robinhood, Charles Schwab, ETrade and Interactive Brokers) added 4.2 million new accounts in the first four months in 2020. The network effect amplified the success of this new breed of investors and ultimately widened the retail investor base to include many inexperienced investors.

The notional value of call options on US stocks tripled in 2020 to over $300 billion daily according to Goldman Sachs. Part of this increase is driven by the increase in retail activity, particularly call option buying. As illustrated in the Figure below, retail investors spent over $40 billion on call option premiums on US stocks over the 4-weeks leading up to mid-September 2020. This is 20x more than the historical average over the past 20 years. While this amount pales in comparison to the notional value of call options traded, these call options influence the dynamics of the underlying stocks. Large cap technology stocks have been the ideal candidate for call option trading by retail investors. This is attributed to the highly liquid option chain, multiple strike price availability and appreciation of the underlying stock prices.

US Equity purchase premiums on call options for trades of 10 contracts or less ($bn)[1]

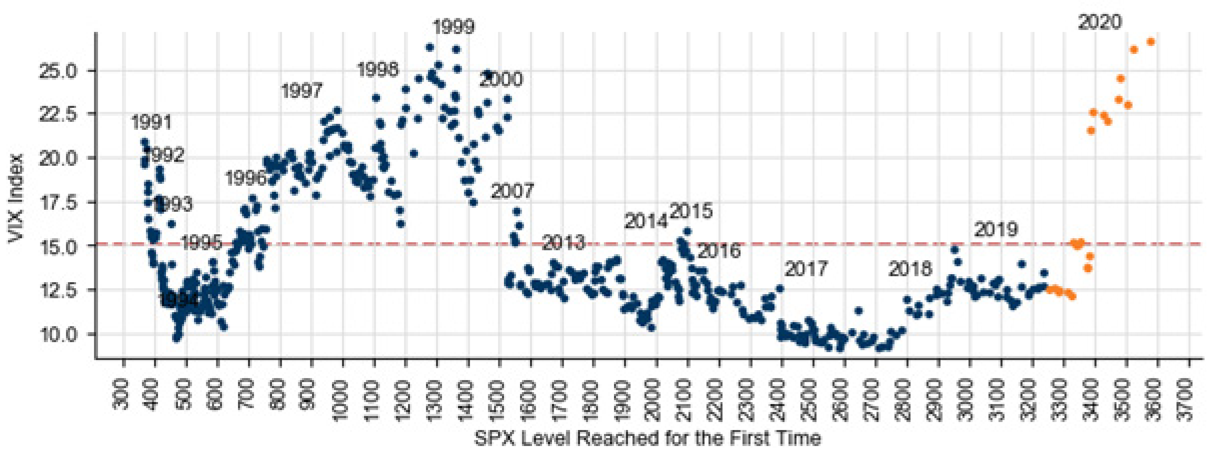


Source: Financial Times, Sundial Capital Research, Options Clearing Corp, as at Sept 10, 2020. Rolling 4 week averages.

Retail call option traders typically buy short dated options (two weeks or less to maturity) whereas institutional investors are active in one month, three month and six-month maturities. During Q2 2020, single stock option volumes with less than two weeks to maturity represented 75% of the total volumes and options with less than 24 hours to maturity represented 20% of the total, according to Goldman Sachs. Premiums on these short-dated options are very sensitive to movements in underlying stock prices especially if the underlying stock prices are close to the option strike price. Broker dealers typically sell these call options to retail investors. As a result, the dealer is considered to have a short exposure to the stock, and in order to hedge this exposure, the dealer buys the underlying stock. When the underlying stock price rises, the dealer has to buy more stock to maintain its hedge. This creates a positive feedback loop that has an amplifying effect (given the sensitivity of short-dated options), and this drives the stock price higher and spurs additional call option buying. On the downside, as the underlying stock price declines, dealers are inclined to sell stock to keep hedging intact, which creates a negative feedback loop.

The option frenzy and subsequent positive feedback effect on underlying equity price movements contributed to the phenomena, "spot up vol up" i.e. the implied volatility of stock prices increased as the price of stocks increased. This was evident in large cap tech stocks, which are also heavily weighted in the index and as a result, indices moved up as volatility increased. In the figure below we can see that new index highs with increased volatility are a rare occurrence and sometime coincide with market melt-ups. But we caution that correlation is not necessarily causation. In the current market environment, there are more volatility targeting investing strategies than in the past. Under certain conditions these strategies can have an amplifying effect on implied volatility.

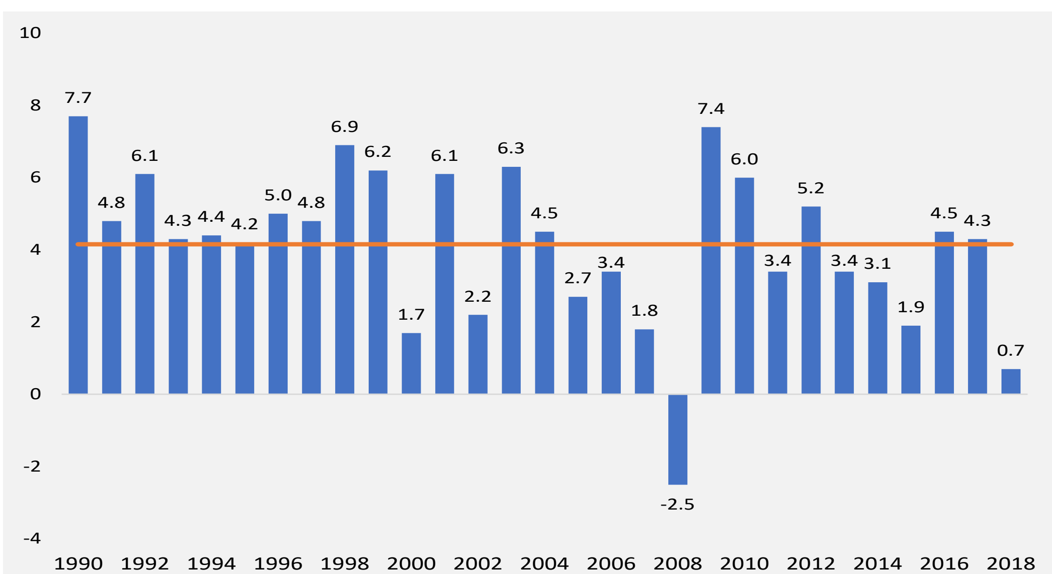
Volatility vs S&P 500 First Time Levels



Source: Goldman Sachs, August 26, 2020.

Implied volatility is usually overstated relative to realized volatility. This is attributed to investors' risk adverse nature, which results in a willingness to pay up for insurance to avoid losses. The chart below plots the difference between implied volatility and realized volatility and it shows this is generally a positive value, averaging (orange line) 420 bps since 1990 according to the CBOE. In some years the spread has been high as 700 bps. Option selling strategies can harvest the "volatility risk premium" and deliver attractive risk-adjusted returns during times of elevated implied volatility.

VIX Index Minus Subsequent S&P 500 1-Month Realized Volatility Annual Averages (1990 - 2018)



Source: CBOE, May 29, 2019.

Brompton's Approach

At Brompton, most of our equity portfolios use an active call writing overlay to enhance risk-adjusted returns. In declining or high volatility markets we may write calls at a higher percentage of the portfolio to generate additional option premium and provide a cushion against a market decline. Brompton typically writes covered call options that are short dated (1-2 months expiry) and out of the money, with strikes of 1% to 5% above the current market price and even higher in more volatile markets. Writing short-term call options can increase the likelihood that options will expire without being exercised, thereby allowing new calls to be written on the same underlying securities and potentially generating more premiums. For investors who are seeking lower volatility, Brompton North American Low Volatility Dividend ETF (BLOV) is designed to produce equity-like returns with lower volatility through investing in a diversified portfolio of North American large capitalization equities. Our Portfolio Management team employs quantitative analysis with an active fundamental overlay to construct a portfolio with lower overall volatility than the market. The team also overlays an options strategy with the goal of further lowering volatility while increasing distributable cash and total returns.

BROMPTON FUNDS

VALUE

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Investor Relations

PHONE 416.642.6000
TOLL FREE 1.866.642.6001
FAX 416.642.6001
EMAIL info@bromptongroup.com

Website

www.bromptongroup.com

Address

Bay Wellington Tower,
Brookfield Place
181 Bay Street
Suite 2930, Box 793
Toronto, Ontario M5J 2T3