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How monetisation triggers provide defensiveness

Robert Swan

Today's investors are at a crossroads, torn between which path to take. One direction investors can choose is sign-posted towards the potential upside arising from positive vaccine results and predicted economic recovery. The other, towards the downside, is marked by historically extreme valuations and record index levels.

To guard against any indecisiveness, investors should consider option strategies which will allow them to consider both paths, in other words they can obtain base-case positioning for their portfolios while also hedging for the alternative outcome.

Typically, when considering simple, defensive option-based approaches, investors buy and hold vanilla options to maturity while insuring against a downturn over the holding period; irrespective of whether the market falls below the strike.

As an alternative, this paper investigates how investors can harness monetisation to take advantage of the current mark-to-market fluctuations arising from optionality supply and demand, as well as the direction of the underlying market. It then examines how monetisation parameter choices impact the relative performance of the program by first modelling for a 90/80 put spread followed by a 95/85 put spread.

The paper then suggests the ability of a monetised option portfolio to outperform a buy and hold option portfolio depends on the nature of the drawdown, particularly around its depth and eventual reversion.

Over the long run, investors can use monetisation programs to add value by taking profits when market movements allow.

The 101: Monetisation

Monetisation takes advantage of mean reverting markets by selling option protection which has increased in value. During monetisation, the proactive monitoring of the value of an option strategy allows investors to convert buy-and-hold options and crystalise the impact of market corrections.

The success of monetisation ultimately depends on the rules and parameters of the program as well as the specifics of the market correction. Figure 1 demonstrates a typical program in which it is common for single option strategies to be split into two to three monetisation triggers, with a portion of the original position unwound with each trigger.

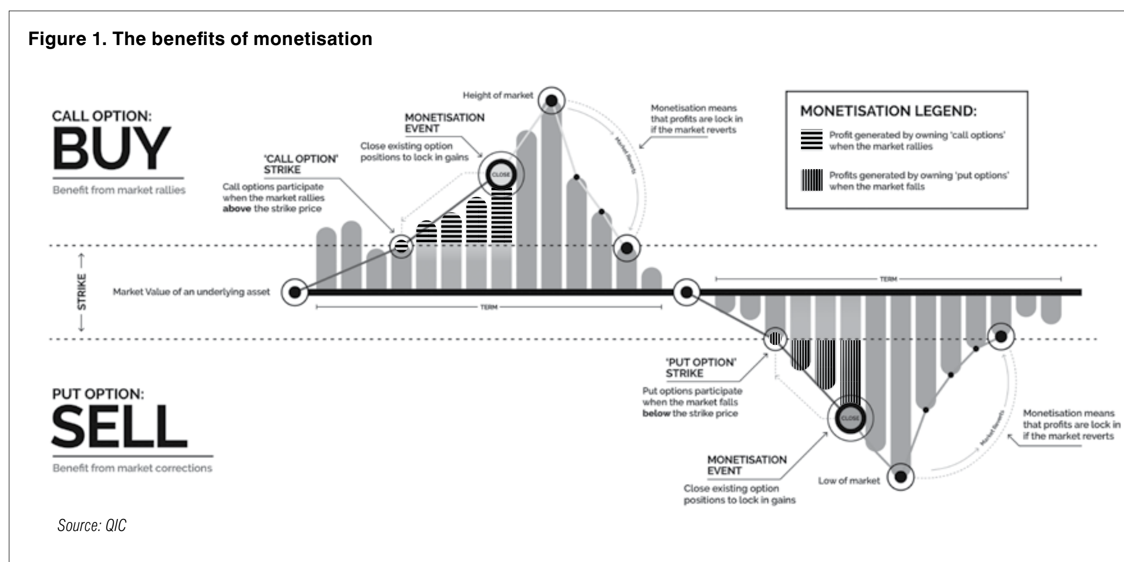
These triggers are chosen with respect to the original option strike, reflecting where in the distribution of returns the investor is willing to become risk-on following a market fall.

Adding monetisation to a buy and hold approach.

The success of monetisation is highly dependent on the depth of the equity correction, relative to the monetisation levels and chosen option strategy.

To demonstrate this, we look at the performance of buying and holding USD100m of 1-year protection, which is a 90/80 put spread,

Figure 1. The benefits of monetisation



Source: QIC

The quote

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in the *S&P 500* each quarter for the last 10 years with no monetisation (benchmark, or BM). This strategy is contrasted against one where we monetise 100% of a position (benchmark with monetisation, or BMMON) if the underlying index falls by more than 15% from the initial spot price (i.e. midway through the strike width of the put spread).

Figure 2 shows that monetisation only occurred twice in the last 10 years; once when volatility exploded at the end of 2018 and again during the COVID sell-off in 2020. Outside of this, the two benchmarks are similar as the options expire worthless.

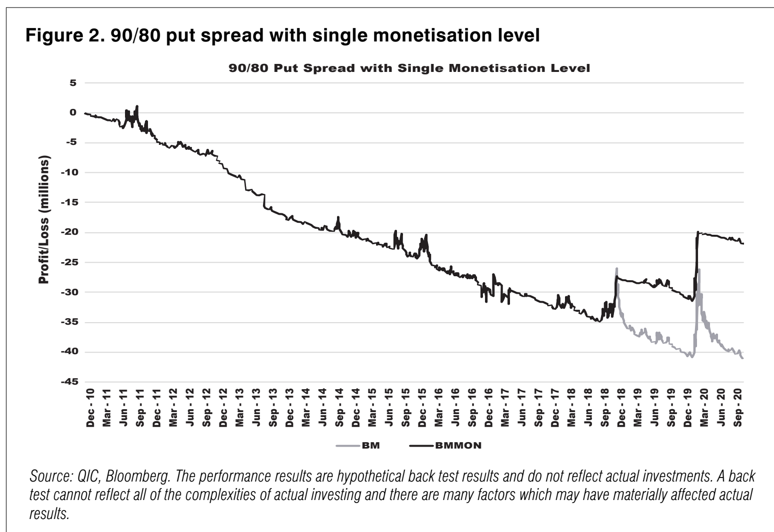
Figure 3 further unpacks the relative performance by plotting the excess return from having a single level monetisation program.

We see during the first eight years of the back-test, there is no difference between the two strategies, reflecting no opportunity to monetise. The first monetisation opportunity presents itself in late 2018. Over time there was positive cumulative profit from monetising as the equity market reverted during the option's life. However, there are short periods where the buy and hold portfolio outperforms the monetised portfolio. This tends to occur towards the lows of the equity market correction. Specifically, the monetisation process unwinds some, or all, our protection as the market continues to sell-off while the buy and hold strategy maintains its notional protection which continues to appreciate. Eventually, as the market recovers, the buy and hold portfolio gives back those mark-to-market gains leading to the long-term outperformance on the monetisation process.

How sensitive is monetisation to the number of triggers?

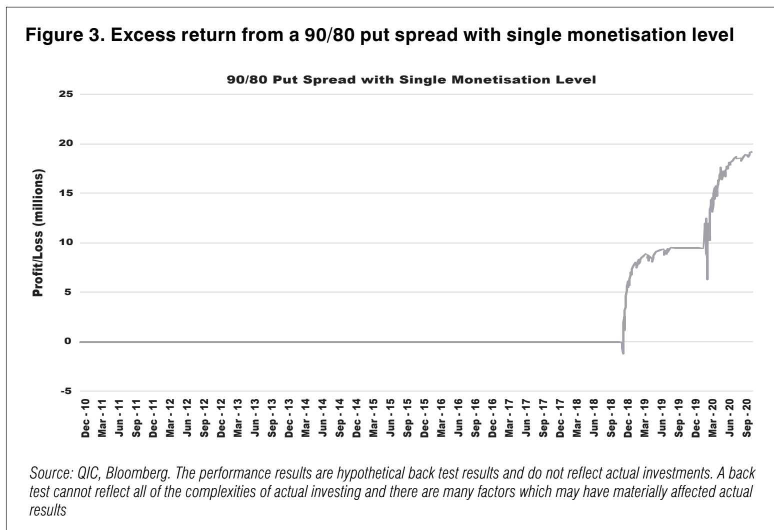
To test the sensitivity to the choice of monetisation level we repeat the comparison above, but this time we assume that a third of the position is monetised when the market

Figure 2. 90/80 put spread with single monetisation level



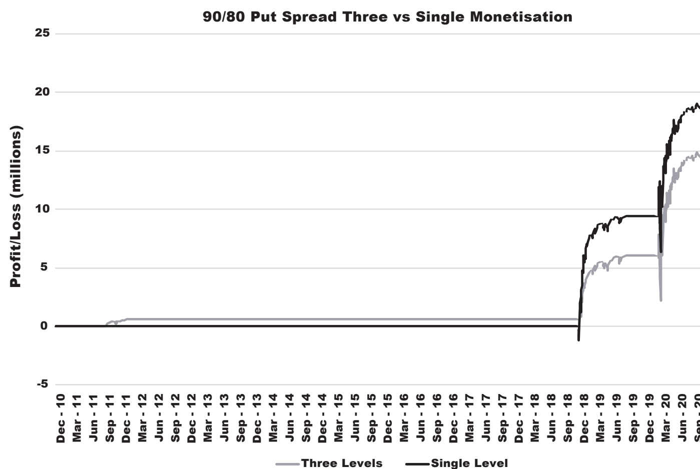
Source: QIC, Bloomberg. The performance results are hypothetical back test results and do not reflect actual investments. A back test cannot reflect all of the complexities of actual investing and there are many factors which may have materially affected actual results.

Figure 3. Excess return from a 90/80 put spread with single monetisation level



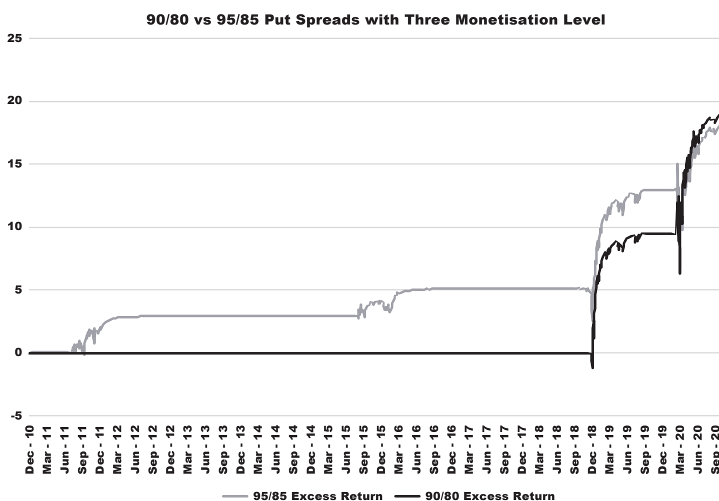
Source: QIC, Bloomberg. The performance results are hypothetical back test results and do not reflect actual investments. A back test cannot reflect all of the complexities of actual investing and there are many factors which may have materially affected actual results

Figure 4. 90/80 put spread three versus single monetisation



Source: QIC, Bloomberg. The performance results are hypothetical back test results and do not reflect actual investments. A back test cannot reflect all of the complexities of actual investing and there are many factors which may have materially affected actual results

Figure 5. 90/80 versus 95/85 put spreads with three monetisation level



Source: QIC, Bloomberg. The performance results are hypothetical back test results and do not reflect actual investments. A back test cannot reflect all of the complexities of actual investing and there are many factors which may have materially affected actual results

falls by 12.5%, 17.5% or 20% from the initial spot level.

Figure 4 shows that the two monetisation rules produce similar results, and the three-level approach has an additional monetisation in 2011. During the 2018 and 2020 corrections, the multiple monetisation approach underperforms as the higher monetisation trigger level forgoes further upside as the correction continues. If the correction been shallower, the multiple monetisation approach could have outperformed as it did in 2011.

Monetising a 'nearer the money' option strategy

In the above analysis, we examined how monetisation effects a 90/80 put spread. The analysis is now repeated using a 95/85 put spread, where one third of the position is monetarised when the market falls by 7.5%, 12.5% or 15% of the initial spot level to investigate how the results differ.

Figure 5 plots the monetisation excess return of the two option strategies. The higher strikes (i.e., monetisation levels), mean the probability of equity markets falling below the monetisation trigger is higher.

The analysis shows that in addition to the 90/80 put spread monetisation events, we observe monetisation in both 2011 and 2015. Overall, the performance of the two option strategies is found to be similar with monetisation adding value compared to the alternative buy and hold strategy.

Conclusion

The analysis presented in this paper suggests the ability of a monetised option portfolio to outperform a buy and hold option portfolio depends on the nature of the drawdown, particularly around its depth and eventual reversion.

Based on the past 10 years of *S&P 500* equity returns, there has been little to lose from having monetisation triggers as each correction has reverted entirely. Should this not occur in the future, there is the potential for the buy and hold approach to outperform and it must be remembered that monetisation is effectively reducing the amount of protection in place.

With perfect foresight the best monetisation trigger is the one that picks the bottom of the equity drawdown. Pragmatically it is unreasonable to believe we have this ability to consistently pick the bottom of an equity correction. This leads us to prefer multiple over single triggers, where the levels are viewed safe enough to take protection off and lock in the option return.

Options allow investors to manage the risks around their base case expectation. We further believe over the long-run, monetisation programs will add value compared to a buy and hold strategy by taking profits when market movements allow. **FS**