Case Study 4: Market Hedging Analysis

MRA
MACRO RISK ADVISORS

Client Type	Large Asset Manager
Asset Class	Equities
Portfolio Scenario	Client has been employing broad market hedges using combinations of SPY puts, VIX options and volatility ETNs. Carry costs have become increasingly important as market volatility has been compressed.
Client Request	Client seeks MRA's help to understand better the drivers of hedge performance through unique periods of market stress.
MRA Deliverables	▪ Identify 4 unique periods of market stress including the 2008 crisis, the Flash Crash of 2010, the US debt crisis of 2011 and the sovereign risk flare-up of 2012. ▪ Choose hedging instruments to be back-tested including SPY put options, SPY put spreads, VIX calls, VIX call spreads, VIX call "reapers" (sell 1 VIX call to buy 2 further OTM VIX calls) ▪ Choose a methodology to use as a basis for evaluating the hedging strategies including sizing, choice of expiration, strike selection and rolling strategy. ▪ Perform analysis of the performance of each hedge during the specific market volatility events. How well did each hedge defray losses in an equity portfolio in each period? What was the maximum value of each hedge and was there an optimal time to take profits on the hedges? ▪ Assess the carry cost of each instrument with attention to periods when market volatility was low. ▪ Study alternative frequencies of rolling each hedge with analysis of relative benefits and costs. ▪ Provide conclusions to client and make recommendations on a mix of hedges and a consistent rolling strategy that will perform in different market volatility environments.
Result	Client is utilizing the study to update hedging strategies.