Protective Collar with S&P 500® (SPX™) Options

Situation

A fund manager owns a diversified portfolio of U.S. stocks, and is interested in low-cost protection.

Market Assumption

Concerned about possible future stock market volatility that could hurt the value of the stock portfolio.

Possible Market Action

Construct a collar position with long SPX puts and short SPX calls.

More Discussion

If a fund manager would like to provide protection for a diversified stock portfolio, but minimize the upfront out-of-pocket costs for such protection, the manager could consider a protective collar strategy. The protective collar strategy provides downside protection through the use of index put options, but finances the purchase of the puts through the sale of short index call options, in effect trading away some upside potential. By simultaneously purchasing put options and selling call options with differing strike prices and the same expiration (the strike of the put is lower than that of the call), a collar often can be established for little or no out-of-pocket cost. The index puts place a "safety net" under a diversified portfolio by protecting value in a declining market, "insurance" against the risk of a decline. The index call sale generates income to offset the purchase of the protective puts. It is important to note that, depending on the call strike price and the level of the index at expiration, assignment of the short call position may have the effect of limiting portfolio gains.

As a simple hypothetical, assume Fund X maintains a portfolio roughly matching the composition of the Standard & Poor's® 500 Stock Index (SPX) and that the SPX is at 1200.

Fund X's manager wants to establish a collar to protect $120 million of the fund's value from a market decline of greater than 10 percent for the next 30 days. The fund manager might determine the number of times to implement the collar by dividing the amount to be hedged ($120,000,000) by the current aggregate SPX value (1200 x 100 or 120,000), i.e. 120,000,000/120,000 = 1000. Therefore, the fund implements the SPX collar by selling 1,000 call options and purchasing 1,000 put options.

To establish the collar, the fund manager might select an SPX put contract with a strike price approximately 10 percent below the current aggregate SPX value. With the SPX at 1200, an SPX put contract with a strike price of 1075 and 30 days until expiration might be quoted at 2.00.

Next, the fund manager may choose to select a call contract currently quoted at a price sufficient to pay for the put purchase. With the SPX at 1200, an SPX call contract with a strike price of 1300 and 30 days until expiration might be quoted at 2.30.

This collar can be established for a net credit of $30,000: $230,000 received from sale of calls (1,000 call contracts sold x $2.30 premium x $100) less $200,000 paid for purchase of puts (1,000 put contracts purchased x $2.00 premium x $100).

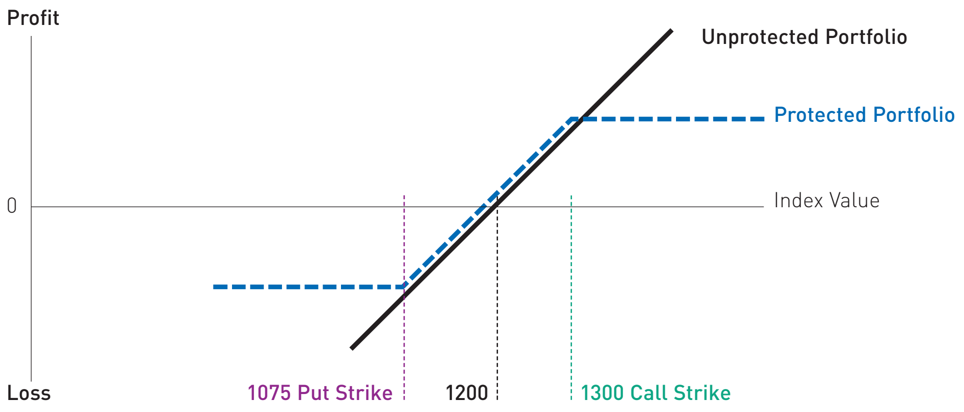
Possible Outcomes

The Index Rises
The portfolio participates in any upside move up to the strike price of the calls. Above the 1300 index level, losses from the short call position offset gains in the underlying portfolio. The puts expire worthless.

The Index Falls
The portfolio has protection on the downside. Below the 1075 index level, gains from the long put position offset losses in the underlying portfolio. The calls expire worthless.

The Index Remains Stable
If the index remains between the put strike of 1075 and the call strike of 1300, the options expire. In this case, the total value of the portfolio is increased by the $30,000 net premium received.

Protective Collar with Minimum Premium Costs
(At expiration)



If you would like to read more about protective strategies, please visit http://www.cboe.com/protection.

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