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Equity Options & ETF
Strategy

MONTRÉAL EXCHANGE

Long Put Butterfly

Description

A long put butterfly is composed of two short puts at a middle strike, and long one put each at a lower and a higher strike. The upper and lower strikes (wings) must both be equidistant from the middle strike (body), and all the options must be the same expiration.

Outlook

The investor is looking for the underlying stock to achieve a specific price target at expiration.

Summary

This strategy profits if the underlying stock is at the body of the butterfly at expiration.

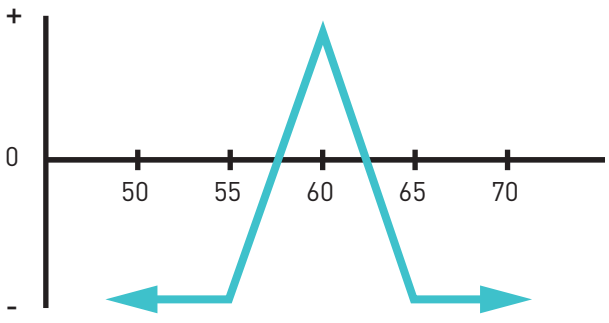
Motivation

Profit by correctly predicting the stock price at expiration.

Variations

The long call butterfly and long put butterfly, assuming the same strikes and expiration, will have the same payoff at expiration.

Long Put Butterfly
Net Position



Example

Long 1 XYZ 65 put
Short 2 XYZ 60 puts
Long 1 XYZ 55 put

MAXIMUM GAIN
High strike - middle strike - net premium paid

MAXIMUM LOSS
Net premium paid

They may, however, vary in their likelihood of early exercise should the options go into-the-money or the stock pay a dividend.

While they have similar risk/reward profiles, this strategy differs from the short iron butterfly in that a negative cash flow occurs up front, and any positive cash flow is uncertain and would occur somewhere in the future.

Max Loss

The maximum loss would occur should the underlying stock be outside the wings at expiration. If the stock were above the upper strike all the options would expire worthless; if below the lower strike all the options would be exercised and offset each other for a zero profit. In either case the premium paid to initiate the position would be lost.

Max Gain

The maximum gain would occur should the underlying stock be at the middle strike at expiration. In that case, the long put with the upper strike would be in-themoney and all the other options would expire worthless. The profit would be the difference between the upper and middle strike (the wing and the body), less the premium paid for initiating the position.

Profit/Loss

The potential profit and loss are both very limited. In essence, a butterfly at expiration has a minimum value of zero and a maximum value equal to the distance between either wing and the body. An investor who buys a butterfly pays a premium somewhere between the minimum and maximum value, and profits if the butterfly's value moves toward the maximum as expiration approaches.

Breakeven

The strategy breaks even if at expiration the underlying stock is above the lower strike or below the upper strike by the amount of the premium paid to initiate the position.

Volatility

An increase in implied volatility, all other things equal, will usually have a slightly negative impact on this strategy.

Time Decay

The passage of time, all other things equal, will usually have a positive impact on this strategy if the body of the butterfly is at-the-money and a negative impact if the body is away from the money.

Assignment Risk

The short puts that form the body of the butterfly are subject to exercise at any time, while the investor decides if and when to exercise the wings. The components of this position form an integral unit, and any early exercise could be disruptive to the strategy. Since the cost of carry sometimes makes it optimal to exercise a put option early, investors using this strategy should be extremely wary if the butterfly moves into-the-money.

And be aware, a situation where a stock is involved in a restructuring or capitalization event, such as a merger, takeover, spin-off or special dividend, could completely upset typical expectations regarding early exercise of options on the stock.

Expiration Risk

This strategy has an extremely high expiration risk. Consider that the maximum profit occurs when at expiration the stock is trading right at the body of the butterfly. Presumably the investor will choose to exercise their in-the-money wing, but there is no way of knowing for sure whether none, one or both of the puts in the body will be exercised. If the investor guesses wrong, they face the risk of the stock opening sharply higher or lower when trading resumes after the expiration weekend.