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Equity Options
Strategy

MONTRÉAL EXCHANGE

Short Ratio Put Spread

Description

The short ratio put spread involves buying one put (generally at-the-money) and selling two puts of the same expiration but with a lower strike. This strategy is the combination of a bear put spread and a naked put, where the strike of the naked put is equal to the lower strike of the bear put spread.

Outlook

The investor hopes for a slow move lower to the strike where they sold two puts, a limited trading range for the underlying product or a sharp fall in implied volatility during the life of the options.

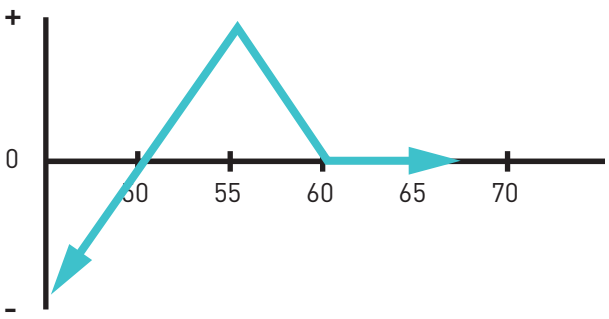
Summary

This strategy can profit from a slightly falling stock price, or from a rising stock price. The actual behavior of the strategy depends largely on the Delta, Theta and Vega of the combined position as well as whether a debit is paid or a credit received when initiating the position.

Motivation

Profit from limited stock move and/or falling implied volatility, and perhaps also earn income.

Short Ratio Put Spread
Net Position



Example

Long 1 XYZ 60 put
Short 2 XYZ 55 puts

MAXIMUM GAIN
High strike - low strike - net premium received

MAXIMUM LOSS
Low strike - (high strike - low strike) - net premium received (substantial)

Variations

One simple variation of this strategy is to use a different ratio such as 2x3 or 3x5. A more complex variation is the Christmas tree, where one side of the spread is split among different strikes. The general rules to variations is that the combined Delta of one side of the spread roughly equals the combined Delta of the other side to make it Delta-neutral, and that the passage of time will have a greater impact on the short puts provided the underlying remains within a limited range.

Max Loss

The maximum loss would occur should the underlying stock become worthless. If the strategy is analyzed as a bear put spread and a naked put combined, then when all the options go deep in-the-money the bear put spread has a positive value equal to the difference between the strikes, and the naked put has a negative value equal to the difference between lower strike price and the stock price.

Max Gain

The maximum gain would occur should the underlying stock be at the lower strike price at expiration. In this case, the two short puts expire worthless and the long put is in-the-money. The gain would be the in-the-money amount, which is the difference between the strike prices, plus the credit received (or minus the debit paid) when the position was initiated.

Profit/Loss

This strategy has a limited profit potential, but the potential loss is substantial. Probably the easiest way to analyze the strategy is to divide it into two sub-positions: a bear put spread and a naked put. Should the underlying stock drop sharply and all the options go deep in-the-money, the bear put spread has a positive value equal to the difference between the strikes and the naked put has a negative value equal to the difference between the lower strike and stock's price. Since the stock cannot go below zero, the strategy's potential loss is limited to the lower strike less the difference between the strikes, i.e., the naked put minus the bear put spread.

The best case scenario is that of a bear put spread when the stock goes right to the lower strike but no further.

Breakeven

Consider the strategy at expiration across a range of prices for the underlying stock: above the upper strike both options are worthless; as the stock moves below the upper strike the long put goes into the money and creates a gain; as the stock moves below the lower strike the short puts go into the money and start to offset the gain; when the stock is below the lower strike by the difference between the strikes the gain has been eliminated. From that point, move back up by the amount of the credit (or move lower by amount of debit) to find the breakeven level.

For a debit position there will be a second breakeven level equal to the upper strike minus the debit.

Volatility

An increase in implied volatility, all other things equal, will have a negative impact on this strategy. The combined Vega of the two short puts will generally be greater than that of the single long put. However, the extent to which the options are in-the-money or out-of-the-money, the time to expiration and level of interest rates are all factors that influence options' sensitivity to changes in market volatility, so the investor would be well-advised to test out any strategy using a theoretical model before actually executing a trade.

Time Decay

The passage of time, all other things equal, will generally have a positive impact on this strategy. However, the extent to which the options are in-the-money or out-of-the-money, the time to expiration and level of interest rates are all factors that influence options' sensitivity to the passage of time. The investor should analyze each

option that makes up the strategy to determine what will be the effect of time decay and is advised to test out any strategy on a theoretical model before actually executing a trade.

Assignment Risk

Early assignment, while possible at any time, generally occurs only when a put goes deep in-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

The investor cannot know for sure whether or not they will be assigned on either or both of the short puts until the Monday after expiration. Should the unexpected occur, the investor could find themselves with an unanticipated position on the Monday following expiration and subject to an adverse move in the stock over the weekend.

Related Position

Comparable Position: **Covered Ratio Spread**

Opposite Position: **Long Ratio Put Spread**