

MONTREAL EXCHANGE

Long Ratio Put Spread

Description

The long ratio put spread is a 1x2 spread combining one short put and two long puts with a lower strike. All options have the same expiration date. This strategy is the combination of a bull put spread and a long put, where the strike of the long put is equal to the lower strike of the bull put spread.

Outlook

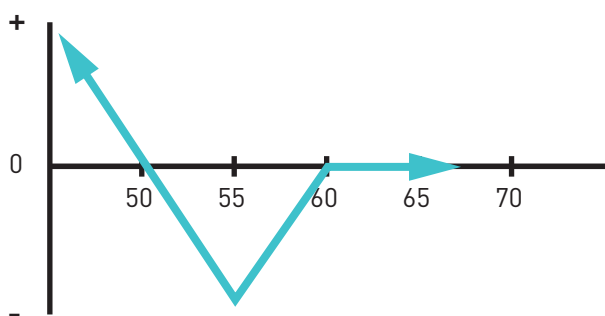
The investor is looking for either a sharp move lower in underlying stock or a sharp move higher in implied volatility during the life of the options.

Summary

The initial cost to initiate this strategy is rather low, and may even earn a credit, but the downside potential can be substantial. The basic concept is for the total Delta of the two long puts to roughly equal the Delta of the single short put. If the underlying stock only moves a little, the change in value of the option position will be limited. But if the stock declines enough to where the total Delta of the two long puts approaches -200, the strategy acts like a short stock position.

Long Ratio Put Spread

Net Position



Example

Short 1 XYZ 60 put
Long 2 XYZ 55 puts

MAXIMUM GAIN

Low strike - (high strike - low strike) - net premium paid

MAXIMUM LOSS

High strike - low strike - net premium paid

Motivation

The investor hopes to profit from a sharp downward move in the stock price for little initial cost.

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 rule to all these variations is that the combined Delta of one side of the spread roughly equals the combined Delta of the other side when the position is initiated, so that the strategy starts off being delta-neutral. If the underlying stock moves sharply lower the combined Delta of the long puts increases more quickly than that of the short put, thereby creating a negative relationship to the underlying.

Max Loss

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

Max Gain

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

Profit/Loss

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

The worst case scenario is that the stock goes right to the lower strike but no further at expiration.

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 short put goes into the money and creates a loss; as the stock moves below the lower strike the long puts go into the money and start to offset the loss; when the stock is below the lower strike by the difference between the strikes the loss has been offset. To break even from there, the stock needs to go still lower by the amount of the debit (or higher by the credit) to reach a complete breakeven.

Finally, if the position were initiated for a credit, there will be a second breakeven level equal to the upper strike less the credit.

Volatility

An increase in implied volatility, all other things equal, will have a very positive impact on this strategy. The combined Vega of the two long puts will generally be much greater than that of the single short 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 negative 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. Be warned, however, that using a long put to cover the short put assignment will require financing a long stock position for one business day.

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 the short put 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: N/A

Opposite Position: [Short Ratio Put Spread](#)