

MONTREAL EXCHANGE

Long Ratio Call Spread

Description

A long ratio call spread combines one short call and long two calls of the same expiration but with a higher strike. This strategy is essentially a bear call spread and a long call, where the strike of the long call is equal to the upper strike of the bear call spread.

Outlook

Looking for either a sharp move higher in the underlying stock or a sharp move higher in implied volatility during the life of the options.

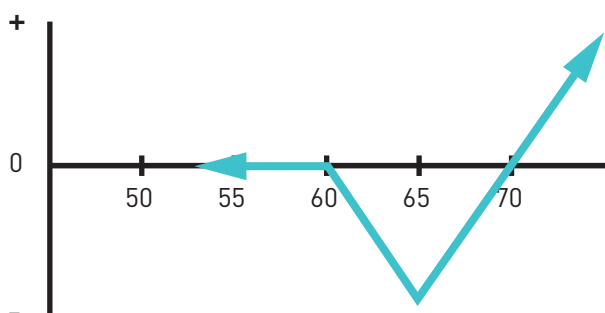
Summary

The initial cost to initiate this strategy is rather low, and may even earn a credit, but the upside potential is unlimited. The basic concept is for the total Delta of the two long calls to roughly equal the Delta of the single short call.

If the underlying stock only moves a little, the change in value of the option position will be limited. But if the stock rises enough to where the total Delta of the two long calls approaches 200, the strategy acts like a long stock position.

Long Ratio Call Spread

Net Position



Example

Short 1 XYZ 60 call
Long 2 XYZ 65 calls

MAXIMUM GAIN

Unlimited

MAXIMUM LOSS

High strike - low strike - net premium paid

Motivation

The strategy hopes to profit from a sharp upward 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. The general rule to 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 higher, the combined Delta of the long calls increases more quickly than that of the short call, thereby creating a positive relationship to the underlying.

Max Loss

At expiration, the maximum loss would occur should the underlying stock be at the upper strike price. In this case, the two long calls would expire worthless and the short call 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 go to infinity. If the strategy is analyzed as a bear call spread and a long call combined, then when all the options go deep in-the-money, the bear call spread has a negative value equal to the difference between the strikes, and the long call has a positive value equal to the difference between the stock's price and the upper strike price. Since there is no limit to the stock's upside potential, the option strategy's potential gain is also unlimited.

Profit/Loss

This strategy has an unlimited 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 bear call spread and a long call. Should the stock rise sharply and all the options go deep in-the-money, the bear call spread has a negative value equal to the difference between the strikes and the long call has a positive value equal to the difference between the stock's price and the upper strike price. Since there is no limit to the stock's upside potential, the strategy's potential gain is also unlimited.

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

Breakeven

Consider the strategy at expiration across a range of prices for the underlying stock: below the lower strike both options are worthless; as the stock moves above the lower strike the short call goes in-the-money and creates a loss; as the stock moves above the upper strike the long calls go into-the-money and start to offset the loss; when the stock is above the upper strike by the difference between the strikes the loss has been offset.

To break even from there, the stock needs to go still higher by the amount of the debit (or lower by the amount of credit) to reach a complete breakeven. Finally, note that if there is a credit position there will be a second breakeven level equal to the lower strike plus 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 calls will generally be much greater than that of the single short call. 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 the stock goes ex-dividend. Be warned, however, that using the long call to cover the short call assignment will require establishing a short 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 call 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 Call Spread](#)