



VAULT

Call Ratio Back Spread

CRBS Introduction

A Call Ratio Back Spread (CRBS) is a type of vertical, and is a simple way to capitalize on a very bullish outlook an operator has regarding an underlying equity.

A CRBS can result in one of three outcomes:

- 1: Profit (theoretically unlimited) if the underlying rises a large magnitude
- 2: If the market declines, a potential limited profit
- 3: A predefined loss if the market stays range-bound

A CRBS involves selling an in-the-money call, or one that is almost in-the-money. The second complement of the CRBS involves buying a multiple of the amount of calls sold. Depending on how bullish an operator's outlook is, he may modify this ratio to buy more calls.

When deploying a CRBS, it is important to deploy the trade for a small credit. This ensures that you are protected against any sharp downside moves in the underlying if held to expiry and all calls expire worthless. A credit is realized due to the premium collected for selling the ITM/ATM call exceeding the debit purchasing the OTM calls.

If the market stays range-bound, the maximum risk/loss an operator will realize is the width between the two strike prices, multiplied by 100 (the number of shares per contract).

Example: If an operator chooses to sell calls at the \$14 strike, and buys calls at the \$20 strike, the maximum loss is \$600 per CRBS.

Note: If an operator deploys the CRBS for a debit, include the debit within the maximum loss calculation.

Why deploy a CRBS?

A CRBS is structured such that an operator sacrifices potential profit for near to medium term security given by the credit received selling the ITM/ATM call. This protects the position against near to medium-term theta decay.

Obviously, there is a tradeoff. If the underlying rises considerably in value, a considerable amount of profit will still be realized, however, be less than the profit generated by purchasing only DOTM calls.

CRBS checklist:

1: Make sure Implied volatility is lower than historical volatility. A CRBS is a long volatility (volatility expansion) play, so if $IV < HV$, an operator will realize more gain on the CRBS rather than if $IV > HV$

2: Ideally, an operator will deploy a CRBS for a credit, unless it is absolutely necessary to deploy a CRBS for a debit. Remember, the premium received from selling the call will offset the theta-decay in the near to medium term.

3: When you're up 7-10x on any CRBS, take profits. You're playing the expected value game at this point; take the gift the market is giving you and use that captured capital for the next CRBS or DOTM play.

Note: When a CRBS is near-the-money or at-the-money, you have Vega, Gamma, and Delta working the maximum amount in your favor. These greeks are a double-edged sword; if the underlying moves sharply OTM, the value of the CRBS will decrease a considerable amount.

Micron CRBS Case Study

While we realized a 400% profit on our Micron (MU) DOTM play, we could've done considerably better if we were listening to what the market was telling us. Let us simulate what would've occurred if we translated that into a CRBS.



The axis at left is contract price, the yellow trace throughout the figure is contract price over time.

If we decided to deploy a CRBS instead of a pure DOTM play, the conditions would've been permissible. We had low volatility compared to historical volatility, and the 1:10 structure at the top of the figure would have resulted in a very small credit.

Note in late February that MU was quickly heading towards our strike price, at one time we were up

\$11,000/contract. However, once MU declined during early March, the value of our contract declined ~50%! This is the sting from the delta, gamma, and vega greeks moving against us when the underlying drops from at the money to out of the money. Although hindsight is always 20/20, we should've realized the gift that the market was giving us.