

Probabilities of Success: What the Market Implies

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1 Probability in Options

- Because Options have a set Strike price and set Expiration date, each Option has a probability linked to it - The probability of the Underlying reaching the strike price on the expiration date, also know as the probability of the Option being ITM.
- Careful: The probability of being ITM is not the same as the Probability of Success, as the latter accounts for premium paid/received and the former does not. For example:

Lets say we are looking at the following Call Option: BBPC \$50 Apr 15 Call. And this Call Option has a Probability of being ITM of 60%. This means that by April 15, there is a 60% chance that BBPC will be trading at or above \$50. This also implies of course that there is a 40% chance that BBPC will be trading below \$50 (40% chance BBPC will be trading OTM). However, since you have paid a premium to buy that Option, your Probability of success will be lower than 60%, as you have to recover the premium you paid as well, ie your break -even is higher. Conversely, if you sold the call Option, your Probability of Success will be higher than the 40% Probability of being OTM, as you have recieved a premium from the sale, ie. your break-even is lower.

2 Probability and Volatility

- The probabilities are calculated by taking the price of the Underlying, the price to expiration, and the current IV levels into account.
- A decrease in volatility will reduce the probabilities of Options being ITM, and an increase in the IV levels will increase these probabilities.
- Probabilities in Options on Underlyings with high IV Ranks are likely to be inflated, and the probabilities on Underlyings with low IV Ranks are likely to be depressed.

3 Probabilites & Strike Price

- Options that sit 1 Standard Deviation to 1.5 SD away from the current price of the Underlying have very low probabilities of being ITM (less than 20%).
- As a general rule, these are the types of Options you want to sell, and those you want to avoid buying.
- It is recommended to always consider the Probabilities of winning before entering a trade. Some website and mose decent online brokerages offer this information.

- 4 Make sure to read the documentation on how to use probabilities to decide a "fair price" for your trades