## OCC - Protective Puts \& Stock Repair Strategies

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by $l$ InteractiveBrokers



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## Protective Puts \& Stock Repair Strategies

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## Presentation Outline

- The basics of put buying
- Using puts to protect a stock portfolio
- The motivation and execution of the Stock Repair Strategy
- Choosing strike prices and managing positions
- Q\&A


The Protective Put

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## Why a Protective Put?

- Investor is bullish on a stock already owned but looking for protection against a downside move
- Establish a floor price at which investor can sell shares, if needed
- Can act like an "insurance policy" on a stock that represents a large \% of portfolio



## Rights of Put Buyers

- Options buyers (holders) have rights, not obligations
- Put buyers have the right to sell shares at their strike price
- For this right, they pay a premium to the seller
- When exercising this right, put buyers pay strike $\times \$ 100$ and deliver 100 shares of stock


## Similar to Insurance

- Difference between share price and strike price can be considered the equivalent of a deductible
- If shares plummet, investor can sell stock at strike price of the option
- If shares remain flat or rise, the option expires worthless
- Mindset if insurance is not used


## Which Strike to Buy?

- Strike selection is a balance of coverage vs. price
- How much protection do you need vs. how much are you willing to pay for?

Long shares from \$56.50

| Put Strike | Bid | Ask |
| :---: | :---: | :---: |
| $\$ 55.00$ | $\$ 2.16$ | $\$ 2.19$ |
| $\$ 52.50$ | $\$ 1.35$ | $\$ 1.39$ |
| $\$ 50.00$ | $\$ 0.84$ | $\$ 0.87$ |
| $\$ 47.50$ | $\$ 0.53$ | $\$ 0.55$ |

## How Long Do I Need Protection?

- Time is money-especially in options
- Corporate event (earnings, drug trial results, government contract?)
$\$ 56.50$ stock with $\$ 50.00$ Put strike

| Expiry | Bid | Ask |
| :---: | :---: | :---: |
| 15 days | $\$ 0.17$ | $\$ 0.21$ |
| 30 days | $\$ 0.39$ | $\$ 0.46$ |
| 60 days | $\$ 0.84$ | $\$ 0.87$ |
| 90 days | $\$ 1.32$ | $\$ 1.41$ |

## Strike vs. Expiry

- How much coverage do you want and for how long do you want it?
- Scenario: An investor is bullish but cautious on airline JETX due to upcoming government contract negotiations next month.

If the contract is approved, it's expected that shares will increase 10\%. If not, analysts are calling for a $20 \%$ reduction. Investor is long shares from $\$ 80$

## Strike vs. Expiry

Long stock from $\$ 80$ and looking for downside protection over the next 30 60 days:

| Expiry | Put Strike | Bid | Ask |
| :---: | :---: | :---: | :---: |
| March | 80 | $\$ 3.55$ | $\$ 3.80$ |
|  | 75 | $\$ 1.70$ | $\$ 1.84$ |
|  | 70 | $\$ 0.70$ | $\$ 0.85$ |
| April | 80 | $\$ 4.60$ | $\$ 4.85$ |
|  | 75 | $\$ 2.65$ | $\$ 2.71$ |
|  | 70 | $\$ 1.42$ | $\$ 1.49$ |

## Strike vs. Expiry

- Based on the investor's timeframe, protection needs, and overall cost, investor buys 1 April 75 put for $\$ 2.70$ or $\$ 270$
- If the contract is approved and stock rallies, the put expires worthless and the investor will lose $\$ 270$ on the option but gain on the shares
- If the contract is not approved and shares plummet to $\$ 65$, the investor can exercise and sell stock at $\$ 75$ or sell put back to market and reassess


## Protective Put Example \#1

Stock JETX is trading at $\$ 81.00$

- Investor is bullish/cautious and long from $\$ 80$
- Investor wants to limit downside risk

Investor buys a two-month, 75.00 strike put at $\$ 2.70$ (\$270)

- Premium represents roughly $3.4 \%$ of investment

| Stock price at Expiration | Long 75 Put P/L at <br> Expiration | Long $\$ 80.00$ <br> Stock Value | Total Profit/(Loss) |
| :---: | :---: | :---: | :---: |
| $\$ 90.00$ | $(\$ 2.70)$ | $\$ 10.00$ | $\$ 7.30$ |
| $\$ 80.00$ | $(\$ 2.70)$ | $\$ 0.00$ | $(\$ 2.70)$ |
| $\$ 75.00$ | $(\$ 2.70)$ | $(\$ 5.00)$ | $(\$ 7.70)$ |
| $\$ 70.00$ | $\$ 2.30$ | $(\$ 10.00)$ | $(\$ 7.70)$ |
| $\$ 65.00$ | $\$ 7.30$ | $(\$ 15.00)$ | $(\$ 7.70)$ |

## Protective Put Example

## Long Stock at \$80

Buy $\mathbf{7 5 . 0 0}$ strike put at $\$ 2.70$


## Break-even at Expiration:

Initial Share Price + Put Premium $\$ 80.00+\$ 2.70=\$ 82.70$

## Maximum Loss:

Initial Share Price + Put Premium Strike Price

$$
\$ 80.00+\$ 2.70-75=\$ 7.70
$$

## Protective Put Example \#2

- Investor has a $\$ 100,000$ portfolio, largely reflecting a broad-based index or ETF
- Cautious on the market for the next 90 days \& looking to limit downside risk beyond a 10\% correction
- Looking to buy puts in a corresponding ETF whose performance closely resembles the index



## Protective Put Example \#2

## Calculations/Inputs:

Portfolio value:
Desired Protection
Underlying Index/ETF:
10\% Out-of-money put:
Price of 90-day 225 put:
\$100,000
10\% downside $(\$ 90,000)$
\$250
$225(250-10 \%=225)$
\$3.00 (\$300 per contract)

## Protective Put Example \#2

## Calculations/Inputs: $\frac{\text { Portfolio } \$ \$ \$ \text { to hedge }}{\text { Notional Value of }}$ or $\frac{\$ 90,000}{225 \times 100}=4$ puts Strike Price

- Investor purchases 4 90-day 225 puts to hedge \$90,000 worth of risk
- $\$ 1,200$ premium ( $\$ 3.00 /$ contract $x 4$ puts $\times \$ 100$ ) is the cost of insurance
- Can also buy fewer puts to hedge less of the position
- Assumes 1-to-1 correlation between portfolio and hedge


## Protective Put Example \#2

## At Expiration:

Long 4 90-day 225 puts for $\mathbf{\$ 1 , 2 0 0}$ :

| Index/ <br> ETF | \% Gain | Expected <br> Portfolio <br> $\$$ Gain/Loss | Hedging <br> Cost | 225 Put <br> Value | Expected <br> Portfolio \% <br> Gain/Loss |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 300.00 | $+20 \%$ | $\$ 20,000$ | $\$ 1,200$ | $\$ 0$ | $\$ 18,800$ | $18.80 \%$ |
| 275.00 | $+10 \%$ | $\$ 10,000$ | $\$ 1,200$ | $\$ 0$ | $\$ 8,800$ | $8.80 \%$ |
| 250.00 | $+0 \%$ | $\$ 0$ | $\$ 1,200$ | $\$ 0$ | $\$ 1,200$ | $-1.20 \%$ |
| $\mathbf{2 2 5 . 0 0}$ | $-10 \%$ | $-\$ 10,000$ | $\$ 1,200$ | $\$ 0$ | $\$ 11,200$ | $-11.20 \%$ |
| 200.00 | $-20 \%$ | $-\$ 20,000$ | $\$ 1,200$ | $\$ 10,000$ | $\$ 11,200$ | $-11.20 \%$ |
| 175.00 | $-30 \%$ | $-\$ 30,000$ | $\$ 1,200$ | $\$ 20,000$ | $\$ 11,200$ | $-11.20 \%$ |

Put protection kicks in

## Stock Repair



## Stock Repair Strategy

## What is it?

- Ratio spread using calls to lower the breakeven point of a losing long stock position


## Who might benefit?

- Investors that are willing to forego potential long-term profits and/or investors unwilling to commit more funds to an already losing position


## What else might an investor do?

- Hold and hope
- Buy additional shares at lower prices to reduce overall breakeven


## Stock Repair Strategy

Scenario: Investor is long 100 shares of a stock from $\$ 65$. Due to recent market declines, the shares are currently trading $\$ 57$ and the investor is looking to recoup some of his/her losses.

## Possible remedies:

- Investor can 'stay the course' and hope that the stock rallies
- Investor can purchase an additional 100 shares at $\$ 57$, thus reducing the overall breakeven point to $\$ 61 /$ share. This would require him/her to invest an additional $\$ 5,700$ into an already losing position
- Investor can execute a Call Front Spread with little or no additional funds

| Strike | Delta | Bid | Ask |
| :---: | :---: | :---: | :---: |
| 57.00 | 53 | .92 | .98 |
| 59.00 | 37 | .60 | .66 |
| 61.00 | 26 | .47 | .50 |

## Call Front Spread Setup

- Long 100 shares from $\$ 65$
- Buy 157 call for $\$ .96$ Sell 261 calls for $\$ .48$
- Front Spread: Even money


## Call Front Spread Example (Stock Repair)

Long 100 shares from $\$ 65$ Long 157 call and short 261 calls for even money

| Share Price @ <br> Expiration | Long Stock P/L | Value of Long <br> 57 Call | Value of 2 <br> Short 61 calls | Net <br> Profit/Loss |
| :---: | :---: | :---: | :---: | :---: |
| $\$ 63.00$ | $(\$ 2.00)$ | $\$ 6.00$ | $(\$ 4.00)$ | $-0-$ |
| $\$ 61.00$ | $(\$ 4.00)$ | $\$ 4.00$ | $-0-$ | $-0-$ |
| $\$ 59.00$ | $(\$ 6.00)$ | $\$ 2.00$ | $-0-$ | $(\$ 4.00)$ |
| $\$ 57.00$ | $(\$ 8.00)$ | $-0-$ | $-0-$ | $(\$ 8.00)$ |
| $\$ 55.00$ | $(\$ 10.00)$ | $-0-$ | $-0-$ | $(\$ 10.00)$ |

## Call Front Spread Example (Stock Repair)



Long 100 shares from $\$ 65$
Long 157 call \& short 261 calls EVEN MONEY

Maximum Loss: Substantial (same as long stock position)
Maximum Gain: Breakeven

Breakeven: \$61—Down from \$65 of original long stock position

## For More Information

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