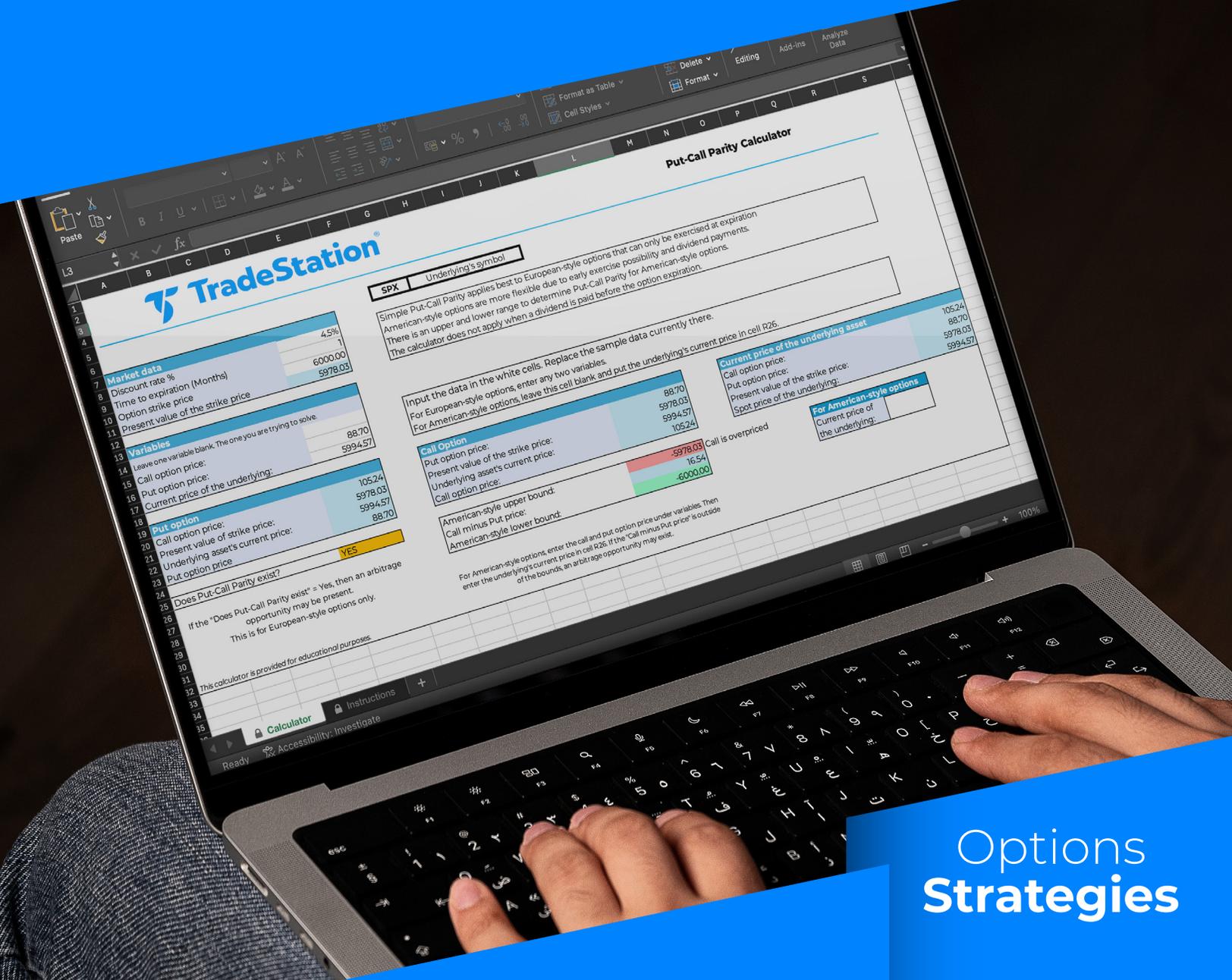


Put/Call Parity Calculator

Worksheet Instructions



The first step is to determine if you are calculating the Put-Call Parity for an American-style or European-style option.

Note: To modify values in the spreadsheet, you may need to click “Enable Editing” at the top of the Excel window.

For European-style options

Market Data

Discount rate – This is available on various financial websites. It is set by the Federal Reserve.

Time to expiration (Months) – Enter the months until the options expiration. Use a decimal if it is less than a month. For one week, use 0.25, two weeks – 0.50, three weeks – 0.75.

Options strike price – Enter the strike of the option you are checking.

| Market data | |
|-----------------------------------|---------|
| Discount rate % | 4.5% |
| Time to expiration (Months) | 1 |
| Option strike price | 6000.00 |
| Present value of the strike price | 5978.03 |

Variables

You will only enter two of the three variables. You can choose any two of the three available. The calculator solves for the missing one.

| Variables | |
|--|---------|
| Leave one variable blank. The one you are trying to solve. | |
| Call option price: | |
| Put option price: | 88.70 |
| Current price of the underlying: | 5994.57 |

Result

Does Put-Call Parity exist?

If this shows “Yes,” there is no arbitrage opportunity.

| | |
|-----------------------------|-----|
| Does Put-Call Parity exist? | YES |
|-----------------------------|-----|

If this shows “No,” there may be an arbitrage opportunity.

| | |
|-----------------------------|----|
| Does Put-Call Parity exist? | NO |
|-----------------------------|----|

For American-style options

Market Data

Discount rate – This is available on various financial websites. It is set by the Federal Reserve.

Time to expiration (Months) – Enter the months until the options expiration. Use a decimal if it is less than a month. For one week, use 0.25, two weeks – 0.50, three weeks – 0.75.

Options strike price – Enter the strike of the option you are checking.

| Market data | |
|-----------------------------------|---------|
| Discount rate % | 4.5% |
| Time to expiration (Months) | 1 |
| Option strike price | 6000.00 |
| Present value of the strike price | 5978.03 |

Variables

Only enter the Call option price, and the put option price. Leave the current price of the underlying.

| Variables | |
|--|---------|
| Leave one variable blank. The one you are trying to solve. | |
| Call option price: | |
| Put option price: | 88.70 |
| Current price of the underlying: | 5994.57 |

Go to the lower right of the Calculator under “For American-style options,” cell R26 and enter the current price of the underlying to calculate the range

| For American-style options | |
|----------------------------------|--|
| Current price of the underlying: | |

This is for American-style options without dividends due before the options' expiration.

Result

Based on the calculation, the difference between the call and put prices should be inside the lower and upper bound calculations.

| | |
|-----------------------------|----------|
| American-style upper bound: | -5978.03 |
| Call minus Put price: | 16.54 |
| American-style lower bound: | -6000.00 |

If the value is above, then the call may be overpriced.

If it is below, it may reflect that the put is overpriced.

In the example above, 16.54 is greater than the upper bound of -5978.03.

A note should appear beside it stating, “Call is overpriced.”

| | | |
|-----------------------------|----------|--------------------|
| American-style upper bound: | -5978.03 | Call is overpriced |
| Call minus Put price: | 16.54 | |
| American-style lower bound: | -6000.00 | |

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