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Straddles and Strangles



Straddles & Strangles

Common Characteristics



- Simultaneous purchase of a call and a put.
- Anticipating a substantial move in either direction.
- Benefit from an increase in volatility.
- Higher break even because of the two premiums being purchased.



When To Apply



- Earnings reports.
- Product launches.
- Law suits or legal rulings.
- Patent and product approvals
- Macroeconomic announcements.



Straddles



- Buy a call and buy a put.
- Same underlying security.
- Same expiration.
- Same strike.



Straddle Example



- Investor expects that the stock will be volatile.
- XYZ is trading at \$40.00 a share.
- 6-month \$40.00 call is asking \$3.10.
- 6-month \$40.00 put is asking \$2.90.



Straddle Cost



- Buy \$40.00 call at \$3.10.
- Buy \$40.00 put at \$2.90.
- Net cost is \$6.00.
- \$6.00 = maximum risk.



Straddle Break Even



Upside break even on expiration

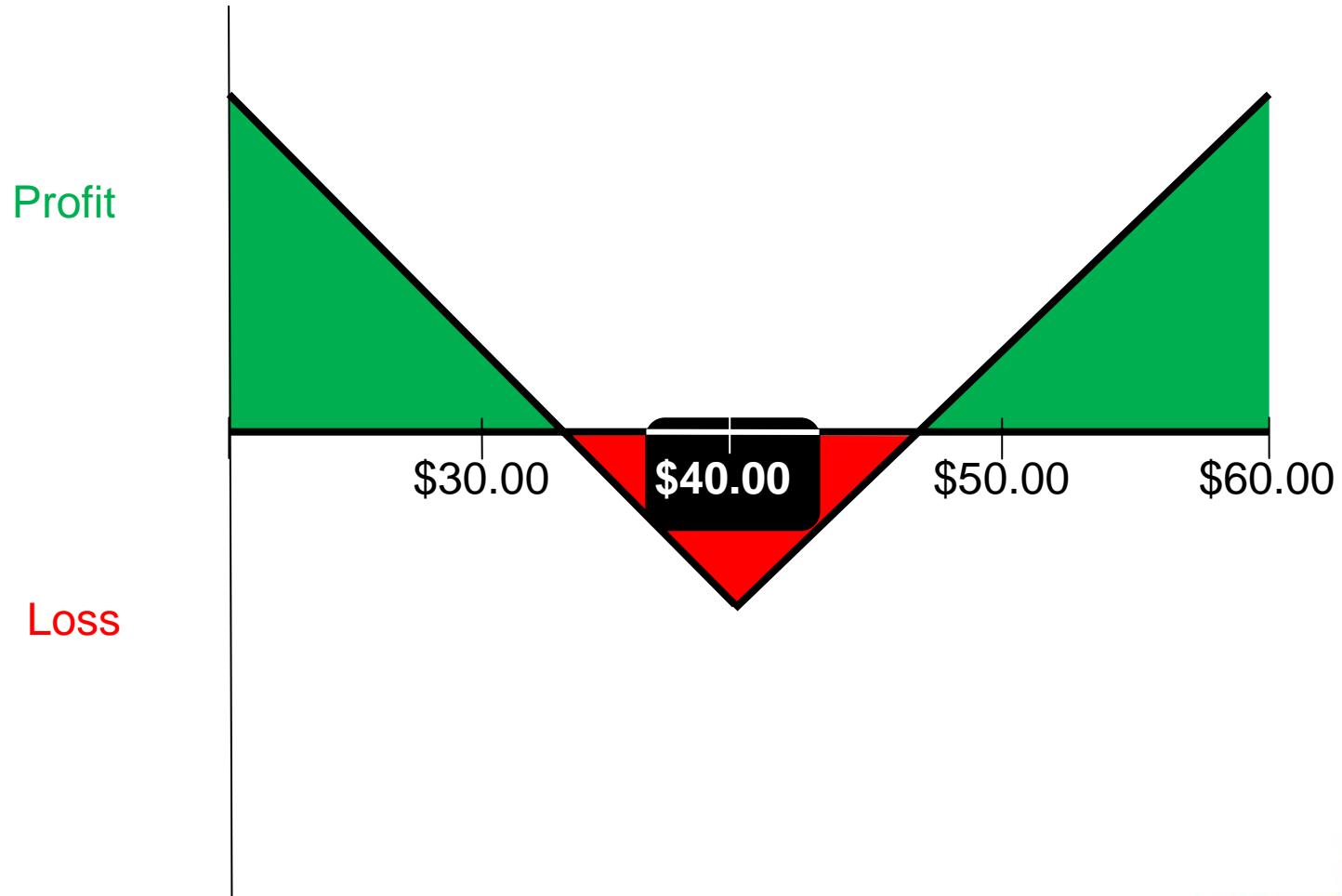
- $40 \text{ strike} + \$6.00 = \46.00

Downside break even on expiration

- $40 \text{ strike} - \$6.00 = \34.00



Straddle Risk Graph



Straddle Profit and Loss



Stock Price	\$40.00 Call P/L	\$40.00 Put P/L	Net Profit P/L
\$60.00	\$16.90	-\$2.90	\$14.00
\$50.00	\$6.90	-\$2.90	\$4.00
\$45.00	\$1.90	-\$2.90	-\$1.00
\$40.00	-\$3.10	-\$2.90	-\$6.00
\$35.00	-\$3.10	\$2.10	-\$1.00
\$30.00	-\$3.10	\$7.10	\$4.00
\$20.00	-\$3.10	\$17.10	\$14.00



Strangles



- Buy a call and buy a put.
- Same underlying security.
- Same expiration.
- Different strike prices.



Strangle Example



- Investor expects that the stock will be volatile.
- Stock XYZ is trading at \$40.00 a share.
- 6-month \$42.50 call is asking \$1.55.
- 6-month \$37.50 put is asking \$1.45.



Strangle Cost



- Buy \$42.50 call at \$1.55.
- Buy \$37.50 put at \$1.45.
- Net cost is \$3.00.
- \$3.00 = maximum risk



Strangle Break Even



Upside break even on expiration

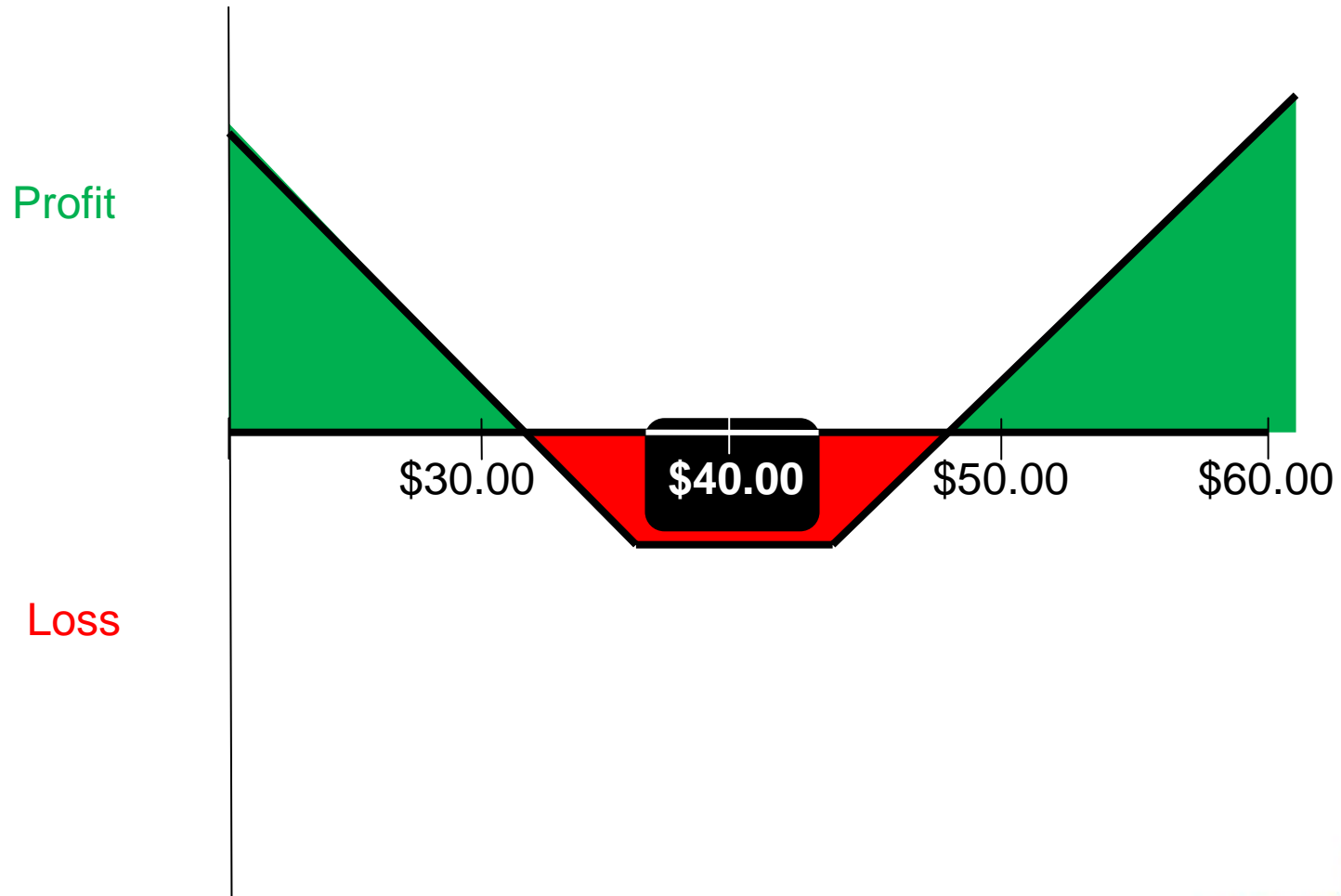
- $42.50 \text{ strike} + \$3.00 = \45.50

Downside break even on expiration

- $37.50 \text{ strike} - \$3.00 = \34.50



Strangle Risk Graph



Strangle Profit and Loss



Stock Price	\$42.50 Call P/L	\$37.50 Put P/L	Net Profit P/L
\$50.00	\$5.95	-\$1.45	\$4.50
\$45.00	\$0.95	-\$1.45	-\$0.50
\$42.50	-\$1.55	-\$1.45	-\$3.00
\$40.00	-\$1.55	-\$1.45	-\$3.00
\$37.50	-\$1.55	-\$1.45	-\$3.00
\$35.00	-\$1.55	\$1.05	-\$0.50
\$30.00	-\$1.55	\$6.05	\$4.50



Considerations



- A straddle at or close to the money will require less of a move to profit.
- Strangles are less expensive.
- Strangles allow for an adjustment in directional bias.
- The underlying must have the potential move in price sufficient to compensate for the cost of the position.



Short Straddles and Strangles



- Involves the simultaneous sale of a call and a put on the same underlying.
- With the same expiration month.
- Anticipate little to no move in the underlying security.
- Profit from a decrease in implied volatility and time depreciation.



When To Apply



- Objective is to generate income through the depreciation of the options premium.
- Underlying security is expected to remain within a close price range.
- Implied volatility is high and is expected to drop.



Short Straddles



- Sell a call and sell a put.
- Same underlying security.
- Same expiration.
- Same strike.



Short Straddle Example



- Investor expects that the stock will stay within a close price range.
- Stock XYZ is trading at \$30.00 a share.
- 1-month \$30.00-strike call is bidding \$1.00.
- 1-month \$30.00-strike put is bidding \$0.90.



Short Straddle Credit



- Sell \$30.00 call at \$1.00.
- Sell \$30.00 put at \$0.90.
- Net credit is \$1.90.
- Maximum risk is unidentified.



Short Straddle Break Even



Upside break even on expiration

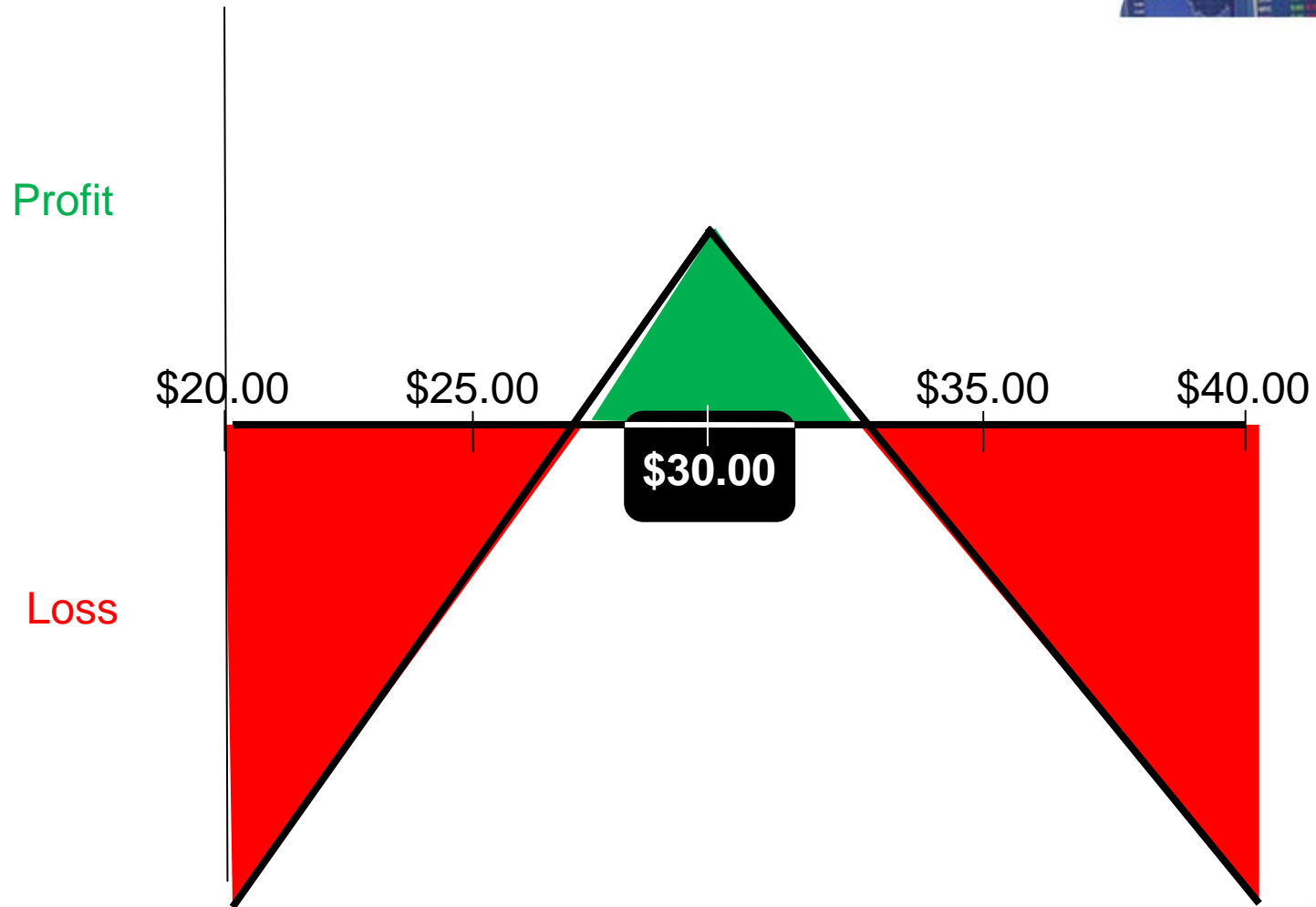
- $30 \text{ strike} + \$1.90 = \31.90

Downside break even on expiration

- $30 \text{ strike} - \$1.90 = \28.10



Short Straddle Risk Graph



Short Straddle Profit and Loss



Stock Price	\$30.00 Call P/L	\$30.00 Put P/L	Net Profit P/L
\$35.00	-\$4.00	\$0.90	-\$3.10
\$31.90	-\$0.90	\$0.90	\$0.00
\$31.00	\$0.00	\$0.90	\$0.90
\$30.00	\$1.00	\$0.90	\$1.90
\$29.00	\$1.00	-\$0.10	\$0.90
\$28.10	\$1.00	-\$1.00	\$0.00
\$25.00	\$1.00	-\$4.10	-\$3.10



Short Strangles



- Sell a call and sell a put.
- Same underlying security.
- Same expiration.
- Different strike.



Short Strangle Example



- Investor expects that the stock will stay within a close price range.
- Stock XYZ is trading at \$30.00 a share.
- 1-month \$32.00 call is bidding \$0.60.
- 1-month \$28.00 put is bidding \$0.50.



Short Strangle Credit



- Sell \$32.00 call at \$0.60.
- Sell \$28.00 put at \$0.50.
- Net credit is \$1.10.
- Maximum risk is unidentified.



Short Strangle Break Even



Upside break even on expiration

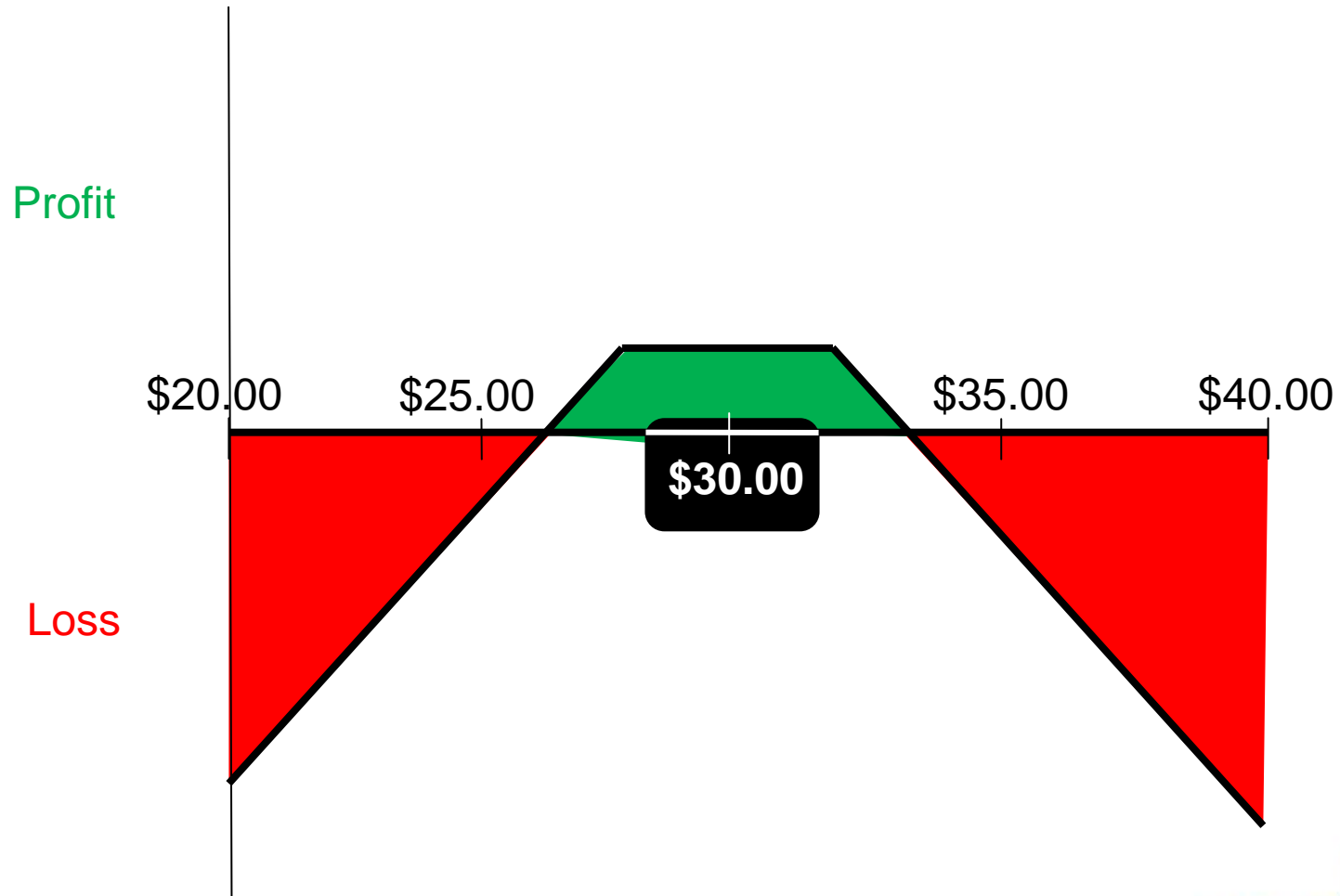
- $32 \text{ strike} + \$1.10 = \33.10

Downside break even on expiration

- $28 \text{ strike} - \$1.10 = \26.90



Short Strangle Risk Graph



Short Strangle Profit and Loss



Stock Price	\$32.00 Call P/L	\$28.00 Put P/L	Net Profit P/L
\$40.00	-\$7.40	\$0.50	-\$6.90
\$33.10	-\$0.50	\$0.50	\$0.00
\$33.00	-\$0.40	\$0.50	\$0.10
\$30.00	\$0.60	\$0.50	\$1.10
\$27.00	\$0.60	-\$0.50	\$0.10
\$26.90	\$0.60	-\$0.60	\$0.00
\$20.00	\$0.60	-\$7.50	-\$6.90



