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Meaning Of Covered Call Writing

A covered call is a call sold against a traders long stock position. The trader will sell a call at a ratio of 1 option for every 100 shares of stock. This strategy can create an extra dividend stream over time. It also creates a cushion to the downside if the stock sells off slightly. In order to avoid getting hung a trader would enter this order as a spread. Legging in by selling the call first can be very dangerous.

Covered Call Writing

Maximum Profit

Potential profits is limited to call premium received + stike price – commissions.

- **The maximum profit realized if the call is assigned and the stock is sold.**
- **Calls are generally assigned at expiration when the stock price is above the srike price.**

Maximum Risk

- **Risk is substantial if the stock price declines.**
- **The writer of a call has the full risk of stock price declines below the breakeven point.**

Maximum Loss Per Share = Stock Entry Price - Option Premium Received

Reasons why investor might choose this strategy

- To collect cash income when the forecast is for neutral-to-bullish price action in a stock.
- To sell a stock holding at a price that is above the current market price.
- To get a small amount of downside protection if the stock price declines.

WHY INVESTORS SELL COVERED CALLS

1. Income-oriented investors use covered calls with the goal of enhancing cash returns. In return for the call premium received, which increases income in neutral markets, the investor accepts a limit on upside profit potential. Whether the shares are purchased at the same time a covered call is sold or purchased previously, the investor should believe that the stock price will trade in a neutral-to-bullish range during the life of the call. If the call expires worthless, then a decision has to be made whether

(a) to sell another call,

(b) to continue holding the stock without selling another call, or

(c) to sell the stock and invest the funds elsewhere.

If the stock price rises above the strike price of the call, then a decision has to be made whether

(a) to let the stock be called away, or

(b) to buy the call and close out the obligation.

The call price may increase when the stock price rises, and buying back the call can result in a loss. If the stock price declines, then a decision has to be made whether

(a) to hold the stock and risk further declines or

(b) to close the covered call position, possibly at a loss

2. Investors who have a target selling price for a stock can sell a covered call hoping that the stock will be called away and thus achieving the target selling price. The “effective selling price” of a covered equals the strike price of the call **plus** the premium received. If the stock price rises above the strike price and the call is assigned, then the target selling price is achieved. If the stock price trades sideways or down, then the call expires and the call premium is kept as income. In this outcome, while the investor did not sell the stock as hoped, the investor benefitted from the call premium received.

3. Some investors sell covered calls to get a limited amount of downside protection when they expect a stock to decline in price. A covered call provides only limited downside protection, because the stock price can decline much more than the call premium. Investors who sell calls for this reason must also watch out in case the bearish forecast is wrong. If the stock price rises, contrary to the forecast, then the covered call contains the obligation to sell the shares. If it is not the investor’s intent to sell the shares, and if the price rises, then the call must be repurchased in the marketplace so that the obligation to sell the shares is closed.

Market forecast

- Impact of Stock price Change
  - Impact of change in volatility
  - Impact of time
- Risk of early assignment
  - Potential position created at expiration

Market forecast

Impact of Stock price Change

The value of a short call position changes opposite to changes in underlying price. Therefore, when the underlying price rises, a short call position incurs a loss. Also, call prices generally do not change dollar-for-dollar with changes in the price of the underlying stock. Rather, calls change in price based on their “delta.” The delta of a short at-the-money call is typically about -50%, so a Rs1 stock price decline causes an at-the-money short call to make about 50 cents per share. Similarly, a Rs1 stock price rise causes an at-the-money short call to lose about 50 cents per share. In-the-money short calls tend to have deltas between -50% and -100%. Out-of-the-money short calls tend to have deltas between zero and -50%.

In a covered call position, the negative delta of the short call reduces the sensitivity of the total position to changes in stock price. If the stock price rises (or falls) by one dollar, for example, then the net value of the covered call position (stock price minus call price)

Impact of change in volatility

- Volatility is a measure of how much a stock price fluctuates in percentage terms, and volatility is a factor in option prices. As volatility rises, option prices tend to rise if other factors such as stock price and time to expiration remain constant. As a result, short call positions benefit from decreasing volatility and are hurt by rising volatility. Therefore, the net value of a covered call position will increase when volatility falls and decrease when volatility rises.

Impact of time

- The time value portion of an option’s total price decreases as expiration approaches. This is known as time erosion. Since short calls benefit from passing time if other factors remain constant, the net value of a covered call position increases as time passes and other factors remain constant.

Risk of early assignment

- Stock options in the United States can be exercised on any business day, and the holder of a short stock option position has no control over when they will be required to fulfill the obligation. Therefore, the risk of early assignment is a real risk that must be considered when entering into positions involving short options.

- Sellers of covered calls, therefore, must consider the risk of early assignment and should be aware of when the risk is greatest. Early assignment of stock options is generally related to dividends, and short calls that are assigned early are generally assigned on the day before the ex-dividend date. In-the-money calls whose time value is less than the dividend have a high likelihood of being

Potential position created at expiration

- If a call is assigned, then stock is sold at the strike price of the call. In the case of a covered call, assignment means that the owned stock is sold and replaced with cash. Calls are automatically exercised at expiration if they are one cent (Rs0.01) in the money. Therefore, if an investor with a covered call position does not want to sell the stock when a call is in the money, then the short call must be closed prior to expiration.

Other considerations

- The “covered call” strategy is known by different names which have slightly different meanings. The name “buy-write” implies that stock is purchased and calls are sold at the same time. The name “over write” implies that stock was purchased previously and that calls are being sold against an existing stock position. The name “covered call” simply describes a short call position against which stock is owned and does not imply anything about the timing of the stock purchase relative to the sale of the call.

LTP	BID QTY	BID PRICE	ASK PRICE	ASK QTY	STRIKE PRICE	BID QTY	BID PRICE	ASK PRICE	ASK QTY	LTP
4/2/2021										
-	2,850	1,333.10	1,578.50	2,850	12,950.00	45,000	0.65	6.75	750	-
1,389.55	375	1,380.95	1,417.45	375	13,000.00	150	6.6	6.65	75	6.65
-	2,850	1,238.90	1,474.85	2,850	13,050.00	40,500	1.65	8.5	750	-
912.55	300	903.7	941.1	75	13,500.00	150	28.3	28.55	75	27.85
-	2,850	769.15	1,030.95	2,850	13,550.00	75	27	37.6	750	-
898.4	300	815.15	845.1	300	13,600.00	75	37.85	38.1	75	38.25
-	2,850	676.35	1,009.50	2,850	13,650.00	75	39.05	48.85	75	48.1
904	300	724.7	760.25	300	13,700.00	150	49.6	49.85	75	49.6
752	300	569.05	801.15	3,150	13,750.00	150	51.35	60.5	150	58.6
667.8	300	649.3	680.45	75	13,800.00	75	64.35	64.85	75	64.55
616.35	75	604.45	630.85	75	13,850.00	150	68.4	75.65	75	74.55
585	75	568.05	598.9	75	13,900.00	75	83.95	84.65	75	84.85
534.05	225	498.15	553.9	300	13,950.00	825	94.8	96	75	96.75
500	75	500	519.1	675	14,000.00	75	107.1	107.75	75	107.7
471.4	75	452.75	476.1	75	14,050.00	825	121.1	122.5	75	121.15
437.65	75	424.25	454.15	75	14,100.00	75	137.45	138.95	75	137.5
406.95	150	281.35	407.25	75	14,150.00	825	151.2	153.75	75	152
367.6	75	363	373	150	14,200.00	75	169.85	171.9	150	168.2
326.9	75	330.5	337.85	75	14,250.00	75	186.7	190.45	150	191.1
310	75	305.05	308.7	75	14,300.00	150	207.5	210.65	75	211
277.6	75	277	279.7	75	14,350.00	825	226.75	232.55	75	226.65
252.45	75	250	252.5	150	14,400.00	75	252.1	257.9	150	256.1
202.5	525	200	202.75	75	14,500.00	75	297.1	307.4	75	297
107.6	75	106.2	107.2	75	14,750.00	75	364.1	473.15	300	461.5
93.2	150	92.05	92.6	75	14,800.00	300	483.75	507.7	75	489.7
72.8	150	78.75	79.7	75	14,850.00	300	523.25	543.25	75	543.65
67	150	67.25	67.85	75	14,900.00	150	555.5	591.7	75	576.4
57.1	75	56.75	57.95	75	14,950.00	75	590.85	653.8	75	615.25

al No.	Possible values of spot	Premium Received	Intrinsic Value (IV)	P&L (Premium – IV)		amount received	loss in stock	gain /loss
1	35	3.25	35-40=0	3.55-0=+3.25	21000	68250	-84000	-15750
02	36	3.25	36-40=0	3.55-0=+3.25	21000	68250	-63000	5250
03	37	3.25	37-40=0	3.55-0=+3.25	21000	68250	-42000	26250
04	38	3.25	38-40=0	3.55-0=+3.25	21000	68250	-21000	47250
05	39	3.25	39-40=0	3.55-0=+3.25	21000	68250	0	68250
06	40	3.25	40-40=0	3.55-0=+3.25	21000	68250	21000	89250
07	41	3.25	41-40=1	3.25-1=+2.25	21000	47250	42000	89250
08	42	3.25	42-40=2	3.25-2=+1.25	21000	26250	63000	89250
09	43	3.25	3	3.25-3=+.25	21000	5250	84000	89250
10	44	3.25	4	3.25-4=-0.75	21000	-15750	105000	89250
11	45	3.25	45-40=5	3.25-5=-1.75	21000	-26750	126000	99250
12	46	3.25	46-40=6	3.25-6=-2.75	21000	-47650	147000	99350

VOLUME	LTP	BID QTY	BID PRICE	ASK PRICE	ASK QTY	STRIKE PRICE	BID QTY	BID PRICE	ASK PRICE	ASK QTY	LTP	VOLUME
-	-	25	2,051.85	2,395.95	25	29,000.00	500	132.2	139.95	25	132.2	8,384
-	-	25	1,615.15	1,971.90	25	29,500.00	25	204.7	227.9	25	196.75	6,629
8	1,548.00	25	1,501.60	1,577.95	25	30,000.00	25	305	328.9	25	319.85	11,338
47	1,230.00	50	1,156.35	1,235.95	25	30,500.00	25	455.75	474	50	474.5	9,424
919	896.55	100	880.2	904.8	25	31,000.00	25	640.05	659.75	50	658.05	14,348
107	806.8	50	794.8	844	25	31,100.00	100	663.8	733.55	50	682.65	599
605	801.95	25	757.05	799.6	50	31,200.00	25	725	768.65	100	758	2,263
805	743.7	50	700.15	766.1	100	31,300.00	25	776	831.55	200	795	2,430
603	696.9	25	670.1	699.95	100	31,400.00	25	808.8	877.65	100	878.1	2,404
5,743	636.5	25	619.55	635	25	31,500.00	75	882.25	931.25	25	891.75	11,262
1,264	572.55	25	570.05	593	25	31,600.00	100	908.65	1,063.05	25	938.45	2,614
1,119	549.4	50	515.8	559.95	50	31,700.00	200	921.3	1,133.80	200	926.15	2,460
4,318	510.95	50	501	510	25	31,800.00	25	1,057.85	1,176.95	25	1,009.75	3,514
3,533	460.4	25	444.95	472.3	25	31,900.00	150	1,083.05	1,182.85	25	1,081.40	2,988
18,529	420	50	415.05	425.35	50	32,000.00	25	1,180.00	1,234.10	25	1,186.75	12,244
3,743	396.25	100	373.65	409.1	50	32,100.00	25	1,212.40	1,402.10	875	1,331.20	1,911
3,701	351	25	339.8	364.95	25	32,200.00	875	1,213.30	1,392.80	25	1,299.70	1,312
3,975	333.5	25	317.4	348.3	25	32,300.00	25	1,346.90	1,481.05	25	1,393.45	207
1,839	305	25	287.15	314	25	32,400.00	25	1,438.30	1,556.95	25	1,450.15	118
13,602	295	50	255.45	284.95	25	32,500.00	50	1,509.95	1,623.05	25	1,549.00	2,759
1,950	249.4	25	226.75	280.75	25	32,600.00	25	1,494.05	1,682.10	25	1,600.00	63
1,943	234.9	25	194.5	257.75	25	32,700.00	25	1,619.80	1,760.30	25	1,682.65	72
1,494	218.45	25	191	219.75	50	32,800.00	25	1,713.00	1,855.00	25	1,803.80	48
974	187.35	25	162.85	209.4	50	32,900.00	25	1,765.95	1,919.95	25	1,803.10	14
15,025	160	25	156	160	1,700	33,000.00	25	1,858.05	1,969.95	25	1,969.95	591

VOLUME	LTP	CHNG	BID QTY	BID PRICE	ASK PRICE	ASK QTY	STRIKE PRICE	BID QTY	BID PRICE	ASK PRICE	ASK QTY	LTP	VOLUME
-	-	-	-	-	-	-	29	16,000	0.9	1.05	48,000	1	36
4	6.2	-0.8	16,000	5.25	6.4	16,000	30	16,000	1.25	1.35	32,000	1.25	121
-	-	-	48,000	2.85	7.15	32,000	31	16,000	1.5	1.8	16,000	1.6	9
-	-	-	64,000	1.3	7.5	3,68,000	32	16,000	2.05	2.3	16,000	2.1	65
-	5	-	48,000	3.5	6.95	3,68,000	33	16,000	2.3	2.7	16,000	2.4	39
1	4.5	-0.8	16,000	2.95	4.7	16,000	34	16,000	2.75	3.7	16,000	3.05	47
440	3.45	-0.8	96,000	3.4	3.5	64,000	35	1,28,000	3.6	3.7	32,000	3.6	225
93	3.05	-1	16,000	2.95	3.15	16,000	36	16,000	4.1	4.5	16,000	4.35	52
179	2.85	-0.85	32,000	2.5	2.85	32,000	37	16,000	3.8	5.85	16,000	4.8	54
102	2.4	-1.05	32,000	2.35	2.55	32,000	38	16,000	2.05	7.45	16,000	5.25	-
85	2.25	-0.85	16,000	2.1	2.25	16,000	39	32,000	2.7	7.6	48,000	-	-
826	2.05	-0.75	2,40,000	2	2.05	16,000	40	48,000	6.65	9.25	3,68,000	7	22
57	1.8	-0.8	16,000	1.75	2	16,000	41	32,000	4.7	9.65	32,000	-	-
42	1.7	-0.6	16,000	1.3	2	16,000	42	32,000	5.65	10.7	32,000	-	-
11	1.6	-0.4	16,000	1.3	2.9	32,000	43	3,68,000	5.6	11.7	32,000	-	-
6	1.2	-0.85	16,000	1.1	1.4	16,000	44	3,68,000	6.6	12.15	32,000	-	-

LONG STRANGLE

A Strangle is a slight modification to the Straddle to make it cheaper to execute. This strategy involves the simultaneous buying of a slightly out-of-the-money (OTM) put and a slightly out-of-the-money (OTM) call of the same underlying stock / index and expiration date. Here again the investor is directional neutral but is looking for an increased volatility in the stock / index and the prices moving significantly in either direction. Since OTM options are purchased for both Calls and Puts it makes the cost of executing a Strangle cheaper as compared to a Straddle, where generally ATM strikes are purchased. Since the initial cost of a Strangle is cheaper than a Straddle, the returns could potentially be higher.

However, for a Strangle to make money, it would require greater movement on the upside or downside for the stock / index than it would for a Straddle. As with a Straddle, the strategy has a limited downside (i.e. the Call and the Put premium) and unlimited upside potential.

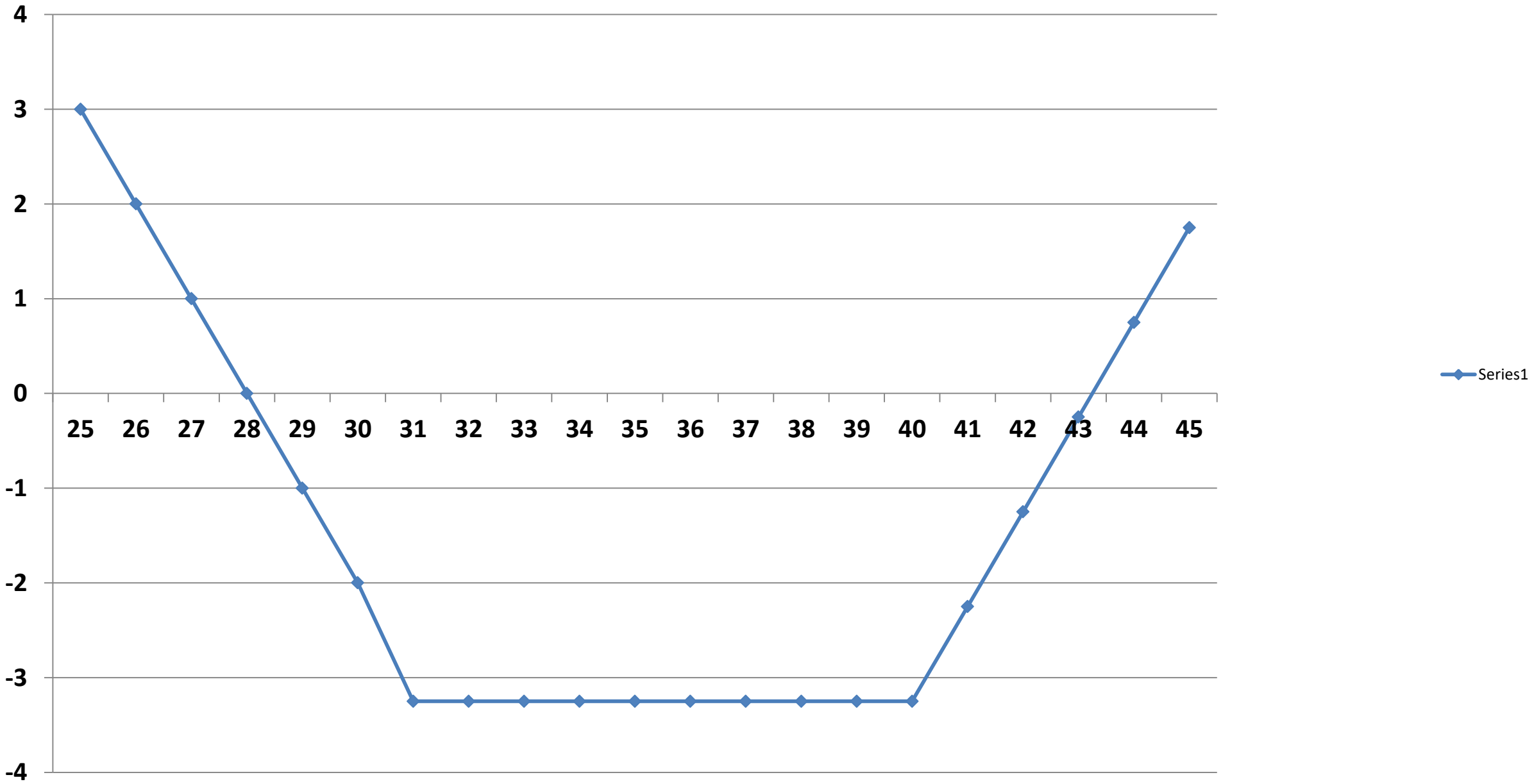
Long strangle

- **Example**
- **Suppose Nifty is at 4500 in May. An investor, Mr.**
- **A, executes a Long Strangle by buying a Rs. 4300**
- **Nifty Put for a premium of Rs. 23 and a Rs 4700**
- **Nifty Call for Rs 43. The net debit taken to enter**
- **the trade is Rs. 66, which is also his maxi mum**
- **possible loss.**
- **Strategy : Buy OTM Put + Buy OTM Call**
- Nifty index Current Value 4500
- Buy Call Option Strike Price (Rs.) 4700
- Mr. A pays Premium (Rs.) 43
- Break Even Point (Rs.) 4766
- Buy Put Option Strike Price (Rs.) 4300
- Mr. A pays Premium (Rs.) 23
- Break Even Point (Rs.) 4234

- **When to Use: The investor thinks**
- that the underlying stock / index will
- experience **very high levels of**
- **volatility in the near term.**
- **Risk: Limited to the initial premium**
- paid
- **Reward: Unlimited**
- **Breakeven:**
- · Upper Breakeven Point = Strike
- Price of Long Call + Net Premium
- Paid
- · Lower Breakeven Point = Strike
- Price of Long Put - Net Premium

SHORT STRANGLE

A Short Strangle is a slight modification to the Short Straddle. It tries to improve the profitability of the trade for the Seller of the options by widening the breakeven points so that there is a much greater movement required in the underlying stock / index, for the Call and Put option to be worth exercising. This strategy involves the simultaneous selling of a slightly out-of-the-money (OTM) put and a slightly out-of-the-money (OTM) call of the same underlying stock and expiration date. This typically means that since OTM call and put are sold, the net credit received by the seller is less as compared to a Short Straddle, but the break even points are also widened. The underlying stock has to move significantly for the Call and the Put to be worth exercising. If the underlying stock does not show much of a movement, the seller of the Strangle gets to keep the Premium.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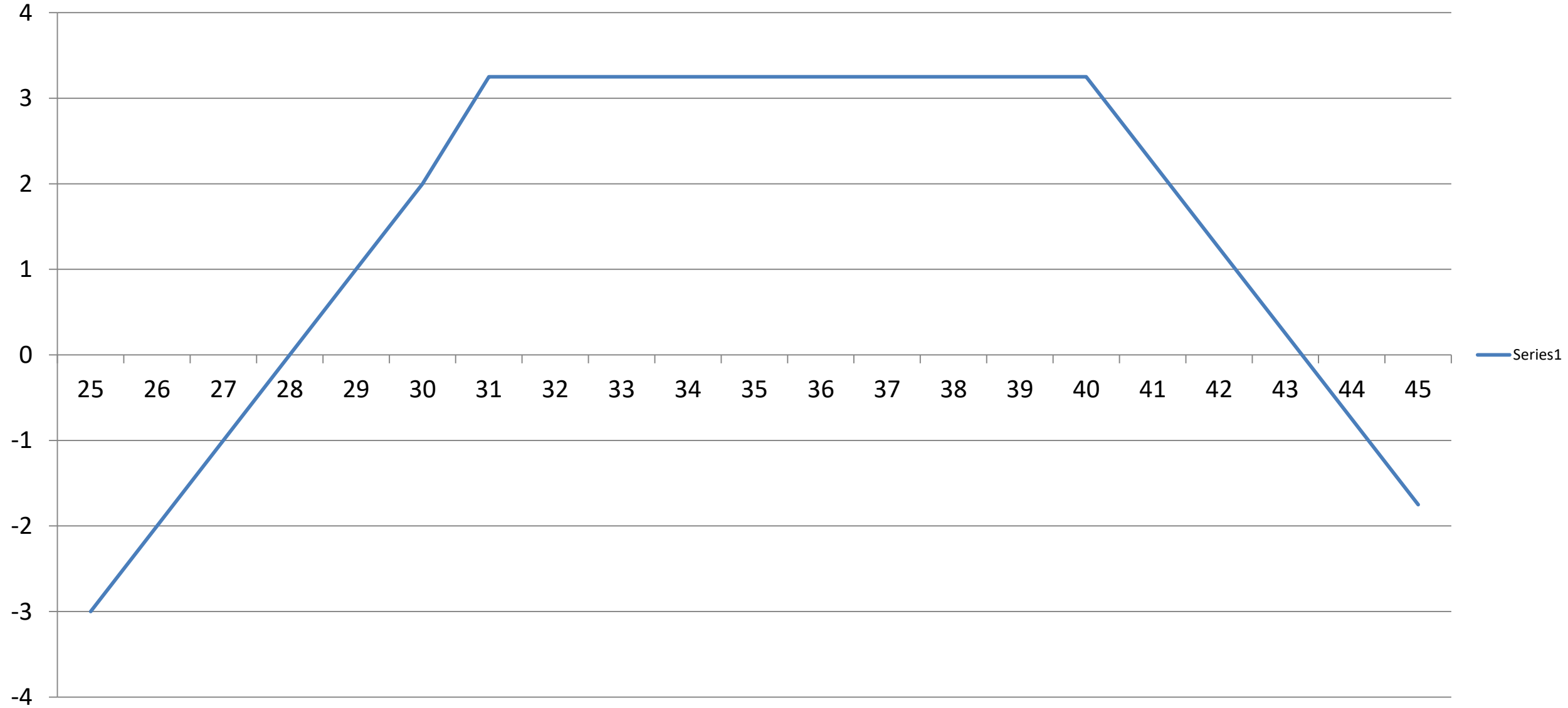
31	-1.25	-2	-3.25
32	-1.25	-2	-3.25
33	-1.25	-2	-3.25
34	-1.25	-2	-3.25
35	-1.25	-2	-3.25
36	-1.25	-2	-3.25
37	-1.25	-2	-3.25
38	-1.25	-2	-3.25
39	-1.25	-2	-3.25
40	-1.25	-2	-3.25
41	-1.25	-1	-2.25
42	-1.25	0	-1.25
43	-1.25	1	-0.25
44	-1.25	2	0.75
45	-1.25	3	1.75

Payoff of a short strangle



On expiry PNB closes at	Net Payoff from Put sold (Rs.)	Net Payoff from Call sold (Rs.)	Net Payoff (Rs.)
25	-5	2	-3
26	-4	2	-2
27	-3	2	-1
28	-2	2	0
29	-1	2	1
30	0	2	2
31	1.25	2	3.25
32	1.25	2	3.25
33	1.25	2	3.25
34	1.25	2	3.25
35	1.25	2	3.25
36	1.25	2	3.25
37	1.25	2	3.25
38	1.25	2	3.25
39	1.25	2	3.25
40	1.25	2	3.25
41	1.25	1	2.25
42	1.25	0	1.25
43	1.25	-1	0.25
44	1.25	-2	-0.75
45	1.25	-3	-1.75

When to Use: This options tradings trategy is taken when the options investor thinks that the underlying stock will experience little volatility in the near term.
Risk: Unlimited
Reward: Limited to the premium received
Breakeven:
· Upper Breakeven Point = Strike Price of Short Call + Net Premium Received
· Lower Breakeven Point = Strike Price of Short Put - Net Premium Received

Example
Suppose Nifty is at 14500 . An investor, Mr. A, executes a Short Strangle by selling a Rs. 14300 Nifty Put for a premium of Rs. 123 and a Rs. 14700 Nifty Call for Rs 143. The net credit is Rs. 266, which is also his maximum possible gain

Strategy : Sell OTM Put + Sell OTM Call		
Nifty index	Current Value	14500
Sell Call Option	Strike Price (Rs.)	14700
Mr. A receives	Premium (Rs.)	143
	Break Even Point (Rs.)	14966
Sell Put Option	Strike Price (Rs.)	14300
Mr. A receives	Premium (Rs.)	123
	Break Even Point (Rs.)	14034

On expiry Nifty closes at	Net Payoff from Put sold (Rs.)	Net Payoff from Call sold (Rs.)	Net Payoff (Rs.)
13800			
13900			
14000			
14100			
14200			
14234			
14300			
14400			
14500			
14600			
14700			
14766			
14800			
14900			
15000			
15100			
15200			
15300			

BULL CALL SPREAD STRATEGY:
BUY CALL OPTION, SELL CALL OPTION

A bull call spread is constructed by buying an in-the-money (ITM) call option, and selling another out-of-the-money (OTM) call option. Often the call with the lower strike price will be in-the-money while the Call with the higher strike price is out-of-the-money. Both calls must have the same underlying security and expiration month.

The net effect of the strategy is to bring down the cost and breakeven on a Buy Call (Long Call) Strategy. This strategy is exercised when investor is moderately bullish to bullish, because the investor will make a profit only when the stock price / index rises. If the stock price falls to the lower (bought) strike, the investor makes the maximum loss (cost of the trade) and if the stock price rises to the higher (sold) strike, the investor makes the maximum profit. Let us try and understand this with an example.

When to Use: Investor is moderately bullish.
Risk: Limited to any initial premium paid in establishing the position. Maximum loss occurs where the underlying falls to the level of the lower strike or below.
Reward: Limited to the difference between the two strikes minus net premium cost. Maximum profit occurs where the underlying rises to the level of the higher strike or above
Break-Even-Point (BEP): Strike Price of Purchased call + Net Debit Paid

Example:
Mr. XYZ buys a Nifty Call with a Strike price Rs. 4100 at a premium of Rs. 170.45 and he sells a Nifty Call option with a strike price Rs. 4400 at a premium of Rs. 35.40. The net debit here is Rs. 135.05 which is also his maximum loss.

Strategy : Sell a Put + Buy a Put		
Nifty Index	Current Value	4191.10
Sell Put Option	Strike Price (Rs.)	4000
Mr. XYZ Receives	Premium (Rs.)	21.45
Buy Put Option	Strike Price (Rs.)	3800
Mr. XYZ Pays	Premium (Rs.)	3.00
	Net Premium Received (Rs.)	18.45
	Break Even Point (Rs.)	3981.55

STRADDLES

On expiry Nifty Closes at	Net Payoff from Call Buy (Rs.)	Net Payoff from Call Sold (Rs.)	Net Payoff (Rs.)
3500.00	-170.45	35.40	-135.05
3600.00	-170.45	35.40	-135.05
3700.00	-170.45	35.40	-135.05
3800.00	-170.45	35.40	-135.05
3900.00	-170.45	35.40	-135.05
4000.00	-170.45	35.40	-135.05
4100.00	-170.45	35.40	-135.05
4200.00	-70.45	35.40	-35.05
4235.05	-35.40	35.40	0
4300.00	29.55	35.40	64.95
4400.00	129.55	35.40	164.95
4500.00	229.55	-64.60	164.95
4600.00	329.55	-164.60	164.95
4700.00	429.55	-264.60	164.95
4800.00	529.55	-364.60	164.95
4900.00	629.55	-464.60	164.95
5000.00	729.55	-564.60	164.95
5100.00	829. 55	-664.60	164.95
5200.00	929.55	-764.60	164.95

The Bull Call Spread Strategy has brought the breakeven point down (if only the Rs. 4100
strike price Call was purchased the breakeven point would have been Rs. 4270.45), reduced
the cost of the trade (if only the Rs. 4100 strike price Call was purchased the cost of the
trade would have been Rs. 170.45), reduced the loss on the trade (if only the Rs. 4150
strike price Call was purchased the loss would have been Rs. 170.45 i.e. the premium of the
Call purchased). However, the strategy also has limited gains and is therefore ideal when
markets are moderately bullish.

On expiry Nifty Closes at	Net Payoff from Put Buy (Rs.)	Net Payoff from Put Sold (Rs.)	Net Payoff (Rs.)
3500	297	-478.55	-181.55
3600	197	-378.55	-181.55
3700	97	-278.55	-181.55
3800	-3	-178.55	-181.55
3900	-3	-78.55	-81.55
3981.55	-3	3	0
4000	-3	21.45	18.45
4100	-3	21.45	18.45
4200	-3	21.45	18.45
4300	-3	21.45	18.45
4400	-3	21.45	18.45
4500	-3	21.45	18.45
4600	-3	21.45	18.45
4700	-3	21.45	18.45
4800	-3	21.45	18.45

Goal

To profit from a big price change – either up or down – in the underlying stock.

Straddles

- **A *straddle* is the best-known option combination**

- **You are long a straddle if you own both a put and a call with the same**
  - **Striking price**
  - **Expiration date**
  - **Underlying security**

A long straddle consists of one long call and one long put. Both options have the same underlying stock, the same strike price and the same expiration date. A long straddle is established for a net debit (or net cost) and profits if the underlying stock rises above the upper break-even point or falls below the lower break-even point. Profit potential is unlimited on the upside and substantial on the downside. Potential loss is limited to the total cost of the straddle plus commissions.

- Maximum profit

Profit potential is unlimited on the upside, because the stock price can rise indefinitely. On the downside, profit potential is substantial, because the stock price can fall to zero.

- Maximum risk

Potential loss is limited to the total cost of the straddle plus commissions, and a loss of this amount is realized if the position is held to expiration and both options expire worthless. Both options will expire worthless if the stock price is exactly equal to the strike price at expiration.

- Breakeven stock price at expiration
- There are two potential break-even points:
  - Strike price plus total premium
  - Strike price minus total premium
- Profit/Loss diagram and table: long straddle

Appropriate Market Forecast

- A long straddle profits when the price of the underlying stock rises above the upper breakeven point or falls below the lower breakeven point. The ideal forecast, therefore, is for a “big stock price change when the direction of the change could be either up or down.” In the language of options, this is known as “high volatility.”

STRATEGY

- A straddle strategy involves the following:

  1) Either buying or selling of call/put options,

  2) The options should have the same underlying asset,

  3) They should be traded at the same strike price,

  4) And they must have same expiry date/expiration

Cost for any straddle involves two points:

- Call option – Premium (value of option)
- Put option – Premium (value of option)

- One can also look at the implied volatility of the market to determine the best time to buy or sell options.

  a) Low implied volatility can be a buy/entry signal for a ‘long straddle’

  b) High implied volatility can be a buy/entry signal for a ‘short straddle’

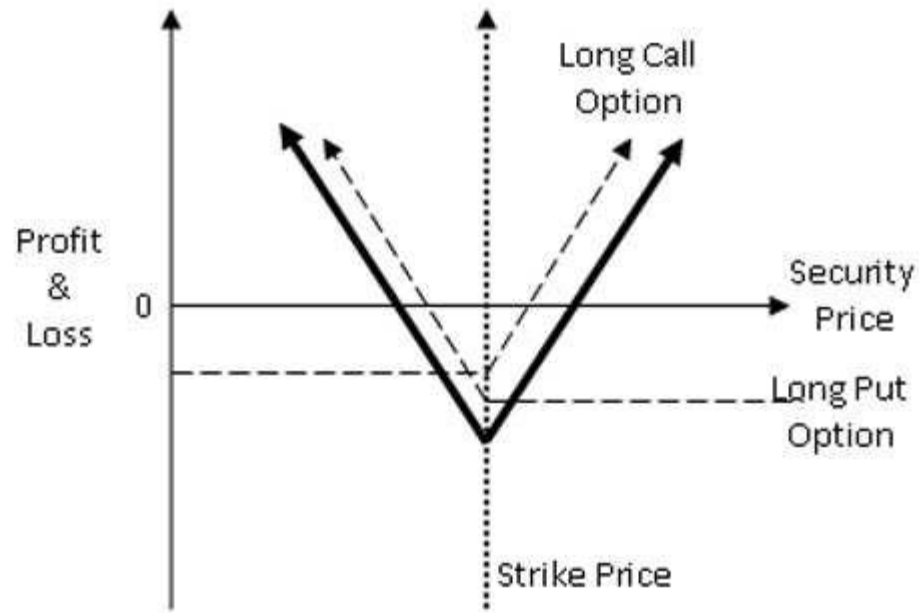
LONG STRADDLE

Long straddle This involves buying both Call and Put options with the same expiry date, strike price and underlying security (index, commodity, currency, interest rates). The best time to buy Call/Put options is when they are undervalued or discounted irrespective of how the spot price of the security moves. The strategy involves limited risk, as the cost of both the options is the maximum value that the trader can lose in this trade.

Breakeven points for a long straddle are:

Upper breakeven point = Long Call option (strike price + premium paid (value of option)

Lower breakeven point = Long Put option (strike price – premium paid (value of option)


Long Call
Option
Profit
&
Loss
0
Security
Price
Long Put
Option
Strike Price

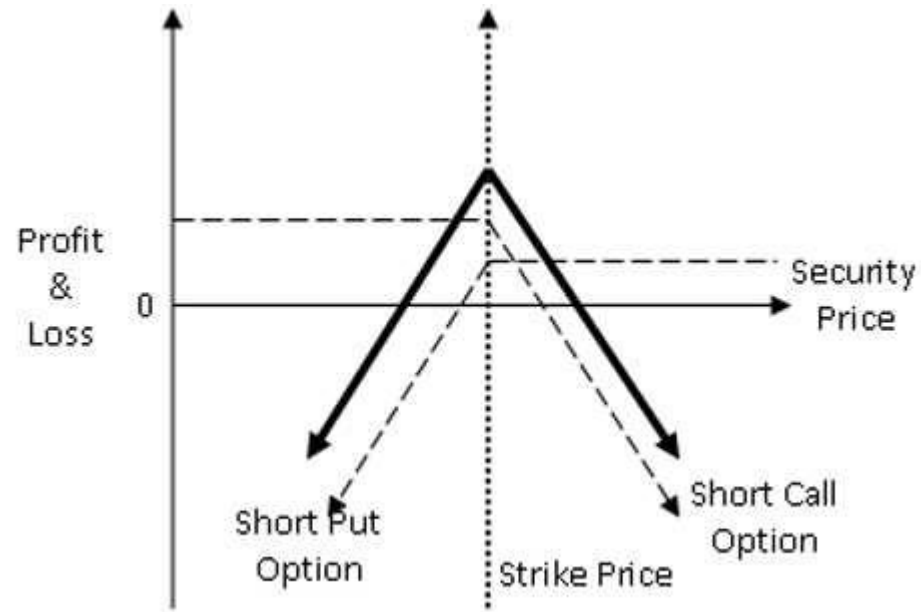
Short Straddle

Short straddle involves selling both call and put options with the same expiry date, strike price and underlying security (index, commodity, currency, interest rates). The best time to sell call/put options is when they are overvalued irrespective of where the spot price of security moves and by how much. This strategy involves unlimited risk, as one may lose up to entire value of the security in case of sale of both options, but profit will be limited to the premiums received on both options.

Breakeven points for short straddle strategy are:

- Upper breakeven point = Short Call option (strike price + premium received(value of option)

  Lower breakeven point = Short Put option (strike price – premium received (value of option)


Profit
&
Loss
0
Security
Price
Short Put
Option
Strike Price
Short Call
Option

Straddles (cont'd)

- **You are short a straddle if you are short both a put and a call with the same**
  - **Striking price**
  - **Expiration date**
  - **Underlying security**

Buying a Straddle

- **A long call is bullish**
- **A long put is bearish**

- **Why buy a long straddle?**
  - **Whenever a situation exists when it is likely that a stock will move sharply one way or the other**

Buying a Straddle (cont'd)

- **The worst outcome for the straddle buyer is when both options expire worthless**
  - **Occurs when the stock price is at-the-money**
- **The straddle buyer will lose money if MSFT closes near the striking price**
  - **The stock must rise or fall to recover the cost of the initial position**

Buying a Straddle (cont'd)

- **If the stock rises, the put expires worthless, but the call is valuable**

- **If the stock falls, the put is valuable, but the call expires worthless**

Writing a Straddle

- **Popular with speculators**
- **The straddle writer wants little movement in the stock price**
- **Losses are potentially unlimited on the upside because the short call is uncovered**

STRANGLES

Meaning of Strangles

- Strangle is an investment method in which call and put options with the same maturity dates – but a different market price – are traded. In a strangle, a holder, in effect, combines the features of both call and put options into a single trade, and the overall position is the net of the two options.

Strangles

- **A *strangle* is similar to a straddle, except the puts and calls have different striking prices**

- **Strangles are very popular with professional option traders**
- The strangle is an improvisation over the straddle.
- The improvisation mainly helps in terms of reduction of the strategy cost, however as a tradeoff the points required to breakeven increases.

The strangle requires you to

- Buy OTM call
- put options

- when compared to the ATM strike, the OTM will always trade cheap, therefore this implies setting up a strangle is cheaper than setting up a straddle.

How Does a Strangle Work?

- Strangles come in two forms:
- Long Strangle
- Short Strangle

Long Strangle

- In a **long strangle**—the more common strategy—the investor simultaneously buys an out-of-the-money call and an out-of-the-money put option. The call option's strike price is higher than the underlying asset's current market price, while the put has a strike price that is lower than the asset's market price. This strategy has large profit potential since the call option has theoretically unlimited upside if the underlying asset rises in price, while the put option can profit if the underlying asset falls. The risk on the trade is limited to the premium paid for the two options.

Short Strangle

- An investor doing a **short strangle** simultaneously sells an out-of-the-money put and an out-of-the-money call. This approach is a neutral strategy with limited profit potential. A short strangle profits when the price of the underlying stock trades in a narrow range between the breakeven points. The maximum profit is equivalent to the net premium received for writing the two options, less trading costs.

Strangle vs. Straddle

- A strangle and a straddle share a few characteristics because they facilitate large back-and-forth movements that are profitable to investors. Similarly, a short straddle and short strangle are the same, with a limited profit equal to the collected premium from both options.
- Nevertheless, a long straddle involves buying both the call and put options at the same time, where profit is made at both sides of a trade, rather than out-of-the-money options.
- With straddle, investors profit before expiration when the strike price of a call or put option exceeds the total premium collected from both sides of a trade. This implies that a straddle does not necessarily require a price jump to be profitable.
- Another difference that sets the two strategies apart is that a strangle is generally less expensive but laden with higher risk because profit is generated if the underlying asset makes a significant movement.

Involves buying an equal number of call and put options with the same expiration date but two different strike prices

Involves buying an equal number of call and put options with the same expiration date and a common strike price

Pros and Cons of a Strangle

- **Pros**
- Offers profit potential on both sides of price movement
- Less expensive compared to other trading strategies such as straddle
- Offers unlimited profit potential in both directions

- **Cons**
- Only profitable following a massive adjustment in the underlying asset’s strike price
- Comes with more risks compared to other strategies
- Effects of time decay reduce profits

STRIP

- The strip is a modified, more bearish version of the common straddle. It involves buying a number of at-the-money calls and twice the number of puts of the same underlying stock, striking price and expiration date.
- Strips are unlimited profit, limited risk options trading strategies that are used when the options trader thinks that the underlying stock price will experience significant volatility in the near term and is more likely to plunge downwards instead of rallying.
- Strip Construction Buy

  1 ATM Call Buy

  2 ATM Puts

UNLIMITED PROFIT POTENTIAL

- Large profit is attainable with the strip strategy when the underlying stock price makes a strong move either upwards or downwards at expiration, with greater gains to be made with a downward move.
- The formula for calculating profit is given below:
  - Maximum Profit = Unlimited
  - Profit Achieved When Price of Underlying > Strike Price of Calls/Puts + Net Premium Paid OR Price of Underlying < Strike Price of Calls/Puts - (Net Premium Paid/2)
  - Profit = Price of Underlying - Strike Price of Calls - Net Premium Paid OR 2 x (Strike Price of Puts - Price of Underlying) - Net Premium Paid

Limited Risk

- Maximum loss for the strip occurs when the underlying stock price on expiration date is trading at the strike price of the call and put options purchased. At this price, all the options expire worthless and the options trader loses the entire initial debit taken to enter the trade.
- The formula for calculating maximum loss is given below:
  - Max Loss = Net Premium Paid + Commissions Paid
  - Max Loss Occurs When Price of Underlying = Strike Price of Calls/Puts

BREAKEVEN POINT(S)

There are 2 break-even points for the strip position.

The breakeven points can be calculated using the following formulae.

- Upper Breakeven Point = Strike Price of Calls/Puts + Net Premium Paid
- Lower Breakeven Point = Strike Price of Calls/Puts - (Net Premium Paid/2)

When is this appropriate to use

When the investor is expecting the prices to decrease

STRAP

- The strap is a modified, more bullish version of the common straddle. It involves buying a number of at-the-money puts and twice the number of calls of the same underlying stock, striking price and expiration date.
- Straps are unlimited profit, limited risk options trading strategies that are used when the options trader thinks that the underlying stock price will experience significant volatility in the near term and is more likely to rally upwards instead of plunging downwards.
- Strap Construction
  - Buy 2 ATM Calls
  - Buy 1 ATM Put

UNLIMITED PROFIT POTENTIAL

- Large profit is attainable with the strap strategy when the underlying stock price makes a strong move either upwards or downwards at expiration, with greater gains to be made with an upward move.
- The formula for calculating profit is given below:
  - Maximum Profit = Unlimited
  - Profit Achieved When Price of Underlying > Strike Price of Calls/Puts + (Net Premium Paid/2) OR Price of Underlying < Strike Price of Calls/Puts - Net Premium Paid
  - Profit = 2 x (Price of Underlying - Strike Price of Calls) - Net Premium Paid OR Strike Price of Puts - Price of Underlying - Net Premium Paid

LIMITED RISK

Maximum loss for the strap occurs when the underlying stock price on expiration date is trading at the strike price of the call and put options purchased. At this price, all the options expire worthless and the options trader loses the entire initial debit taken to enter the trade.

The formula for calculating maximum loss is given below:

- Max Loss = Net Premium Paid + Commissions Paid
- Max Loss Occurs When Price of Underlying = Strike Price of Calls/Puts

BREAKEVEN POINT(S)

There are 2 break-even points for the strap position. The breakeven points can be calculated using the following formulae.

- Upper Breakeven Point = Strike Price of Calls/Puts + (Net Premium Paid/2)
- Lower Breakeven Point = Strike Price of Calls/Puts - Net Premium Paid

Strap appropriate for

The investor is betting that there will be a big stock price move; however, an increase in the stock price is considered to be more likely than a decrease