

How Collar Strategy works in different scenarios?

Let's take a look at how the strategy works with this position. For the sake of our illustration and to make our calculations easy let's establish the collar using the December 27.5 put and the December 30 call, with both trading at \$1.00.

Remember our stock price was \$28.50. The cost of the collar will be \$0 because you paid \$1.00 for the put but you collected \$1.00 from the sale of the call. How does the collar work in our usual three scenarios: the "up" scenario, the "down" scenario and the "stagnant" scenario?

In the "up" scenario, we find that when the stock rises, the investor gains penny for penny until the stock reaches the call strike. Once the stock reaches that level, the position no longer gains because the stock is at the point where it will be called away.

Capital gains of the position are maximized when the stock reaches the call's strike price. Let's take a closer look at what happens as the stock price goes up. With the stock at \$29.00, both the Dec. 30 calls and the Dec. 27.5 puts are out of the money and thus worthless. Since there was no debit or credit incurred in the options, the option profit (loss) is \$0. Only the stock position remains. The stock purchased at \$28.50 is now trading at \$29.00 for a \$.50 profit.

Let's raise the stock price to \$30.00. The puts and calls are again worthless so your profit (loss) is solely determined by the stock. The stock, which was purchased for \$28.50 is now worth \$30.00 and represents a gain of \$1.50. This \$1.50 gain is the maximum gain the position allows.

Once the stock goes over \$30.00, the Dec. 30 call, which we are short, would become in-the-money and therefore the stock position would be called away at that price. When the stock price rises to \$31.00, the puts would be out-of-the-money thus worthless but the calls would be worth \$1.00.

You received no money for the establishment of the collar so you would have a \$1.00 loss in the options. Meanwhile, the stock that you purchased at \$28.50 is now worth \$31.00 at expiration, which is a \$2.50 gain.

Combine the \$2.50 gain in the stock with the \$1.00 options loss; you have a \$1.50 profit again. You may do this calculation with higher and higher



stock prices but the outcome will always be the same. This example shows how your upside potential is limited.

Obviously, if the option portion of the collar incurred a debit or credit, that inflow or outflow of money must be added to or subtracted from the stock gain to get the overall return of the position.

Normally, there will be a debit or credit incurred in the collar. It is usually difficult to find a put and a call that you want to use in the collar trading at an equal value. Let's use our last example with some minor price changes.

If the put had been trading at \$1.25 instead of \$1.00, then there would be a \$.25 capital outflow that would have to be subtracted from the \$1.50 gain to reduce it to only a \$1.25 gain.

On the other hand, if the call was trading at \$1.25 then you would have collected an extra \$.25 which added to the \$1.50 gain would produce a \$1.75 gain. The cost of the collar always impacts the bottom line profit or loss of the position.

Looking at the collar in the "stagnant" scenario, the stock price would be unchanged thus neutral in terms of return. Therefore, the potential profit or loss would come strictly from the debit or credit of the two options.

If the stock does not move, as in our example, both the put and call would finish out-of-the-money and be worthless.

Our profit or loss would simply be calculated from whether you paid for the collar or collected from the collar and how much that amount was.

Using the same prices as the previous example (the stock purchase price of \$28.00, the Dec. 27.5 put \$1.00 and the Dec 30 call \$1.00) we will now take a look at the "down" scenario. Let's set the stock price at \$28.00 on expiration.

At this price both the Dec. 27.5 put and the Dec. 30 call are out-of-the money and worthless. Since there is no credit or debit incurred in the option position (\$1.00 inflow from the calls, \$1.00 outflow from puts) the total return of the position is simply the gain or loss from the stock.

With the stock purchase price of \$28.50 and a stock price of \$28.00 on expiration, there will be a \$.50 loss in the position. Setting the stock price at \$27.50, we see that the Dec. 27.50 puts and the Dec. 30 calls are again worthless and with no debit or credit incurred, the positions profit or loss



will come down to the gain or loss on the stock.

With the purchase price of the stock being \$28.50 and the stock price at expiration \$27.50, there will be a \$1.00 loss. In this case, we have reached the maximum loss. No matter how low the stock goes, you can only incur a maximum loss of \$1.00.

Now, let's set the stock price at \$26.00 and see if this holds true. With the stock at \$26.00 on expiration, the Dec. 30 calls are out-of-the-money and worthless. The Dec. 27.5 puts, however, are in-the-money and now worth \$1.50.

The stock you purchased for \$28.50 is now worth \$26.00 on expiration which is a \$2.50 loss. Combining the \$2.50 stock loss with the \$1.50 gain in the puts and you have a \$1.00 loss in the overall position.

This demonstrates that \$1.00 is the maximum loss of the position. Keep in mind that if the stock position creates a debit or a credit, it must be added to, or subtracted from the stock loss.

Most of the time, there will be a small debit or credit incurred in the option position. It is relatively infrequent that the put and call used in the collar are trading at the exact same price.

Collar Example Return Table			
Stock Price	Stock P & L	Option P & L	Total P & L
32.00	+3.50	-2.00	+1.50
31.50	+3.00	-1.50	+1.50
31.00	+2.50	-1.00	+1.50
30.50	+2.00	- .50	+1.50
30.00	+1.50	0	+1.50
29.50	+1.00	0	+1.00
29.00	+ .50	0	+ .50
28.50	0	0	0
28.00	- .50	0	- .50
27.50	-1.00	0	-1.00
27.00	-1.50	+ .50	-1.00
26.50	-2.00	+1.00	-1.00
26.00	-2.50	+1.50	-1.00

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