

# MONTREAL EXCHANGE

## Collar (Protective Collar)

### Description

An investor writes a call option and buys a put option with the same expiration as a means to hedge a long position in the underlying stock. This strategy combines two other hedging strategies: protective puts and covered call writing.

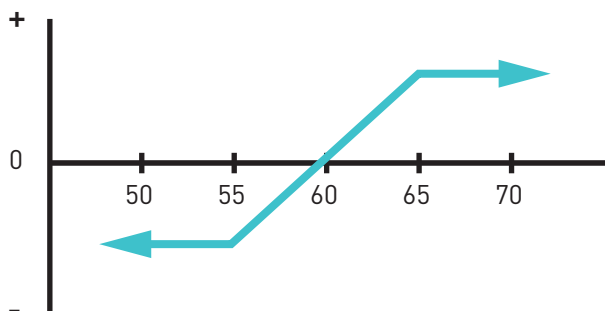
Usually, the investor will select a call strike above and a long put strike below the starting stock price. There is latitude, but the strike choices will affect the cost of the hedge as well as the protection it provides. These strikes are referred to as the 'floor' and the 'ceiling' of the position, and the stock is 'collared' between the two strikes.

The put strike establishes a minimum exit price, should the investor need to liquidate in a downturn.

The call strike sets an upper limit on stock gains. The investor should be prepared to relinquish the shares if the stock rallies above the call strike.

#### Collar

Net Position (at expiration)



#### Example

Long 100 share XYZ stock  
Short 1 XYZ 65 call  
Long 1 XYZ 55 put

#### MAXIMUM GAIN

Call strike - stock purchase price - net premium paid  
or  
Call strike - stock purchase price + net credit received

#### MAXIMUM LOSS

Stock purchase price - put strike + net premium paid  
or  
Stock purchase - put strike - net credit received

In return for accepting a cap on the stock's upside potential, the investor receives a minimum price where the stock can be sold during the life of the collar.

## Outlook

For the term of the option strategy, the investor is looking for a slight rise in the stock price, but is worried about a decline.

## Summary

The investor adds a collar to an existing long stock position as a temporary, slightly less-than-complete hedge against the effects of a possible near-term decline. The long put strike provides a minimum selling price for the stock, and the short call strike sets a maximum profit price. To protect or collar a short stock position, an investor could combine a long call with a short put.

## Motivation

This strategy is for holders or buyers of a stock who are concerned about a correction and wish to hedge the long stock position.

## Max Loss

The maximum loss is limited for the term of the collar hedge. The worst that can happen is for the stock price to fall below the put strike, which prompts the investor to exercise the put and sell the stock at the 'floor' price: the put strike. If the stock had originally been bought at a much lower price (which is often the case for a long-term holding), this exit price might actually result in a profit. The short call would expire worthless.

The actual loss (profit) would be the difference between the floor price and the stock purchase price, plus (minus) the debit (credit) from establishing the collar hedge.

## Max Gain

The maximum gain is limited for the term of the strategy. The short-term maximum gains are reached just as the stock price rises to the call strike. The net profit remains the same no matter how much higher the stock might close; only the position outcome might differ.

If the stock is above the call strike at expiration, the investor will likely be assigned on the call and liquidate the stock at the 'ceiling': the call strike. The profit would be the ceiling price, less the stock purchase price, plus (minus) the credit (debit) from establishing the collar hedge.

If the stock were to close exactly at the call strike, it would expire worthless, and the stock would probably remain in the account. The profit/loss leading up to that point would be identical, but from that day forward the investor would still continue to face a stockowner's risks and rewards.

## Profit/Loss

This strategy establishes a fixed amount of price exposure for the term of the strategy. The long put provides an acceptable exit price at which the investor can liquidate if the stock suffers losses. The premium income from the short call helps pay for the put, but simultaneously sets a limit to the upside profit potential.

Both the potential profit and loss are very limited, depending on the difference between the strikes. Profit potential is not paramount here. This is, after all, a hedging strategy. The issues for the protective collar investor concern mainly how to balance the level of protection against the cost of protection for a worrisome period.

## Breakeven

In principle, the strategy breaks even if, at expiration, the stock is above (below) its initial level by the amount of the debit (credit). If the stock is a long-term holding purchased at a much lower price, the concept of breakeven isn't relevant.

## **Volatility**

Volatility is usually not a major consideration in this strategy, all things being equal. Since the strategy involves being long one option and short another with the same expiration (and generally equidistant from the stock value), the effects of implied volatility shifts may offset each other to a large degree.

## **Time Decay**

Usually not a major consideration. Since the strategy involves being long one option and short another with the same expiration (and generally equidistant from the stock value), the effects of time decay should roughly offset each other.

## **Assignment Risk**

Yes. Early assignment of the short call option, while possible at any time, generally occurs only just before the stock goes ex-dividend.

And be aware, a situation where a stock is involved in a restructuring or capitalization event, such as for example a merger, takeover, spin-off or special dividend, could completely upset typical expectations regarding early exercise of options on the stock.

## **Expiration Risk**

The option writer cannot know for sure whether or not assignment actually occurred on the short call until the following Monday. However, this is generally not an issue since the investor has stock to deliver if assigned on the call.

## **Comments**

This strategy lends itself to use as a long-term options hedge, where time value tends to make premiums higher and the period of protection is longer. The collar offers more protection than a covered call, but at a lower up-front cost than a protective put. See both of these alternatives for additional details.