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Topic 1: About this course

This course builds on ASX's 'Introduction to Options' course.

In 'Advancing in options', we go into the detail of option pricing, and discuss how to implement and manage advanced option strategies, before taking an in-depth look at several of these strategies.

'Introduction to Options' covers the basics of options and option pricing, and introduces the strategies of buying call and put options, and writing calls over your stock.

What I should know before doing this course

This is an advanced course.

To get the most out of the course, it is important that you are familiar with the concepts covered in the 'Introduction to Options' course, including:

- basic option pricing
- the bought call
- the bought put, and
- the covered call.

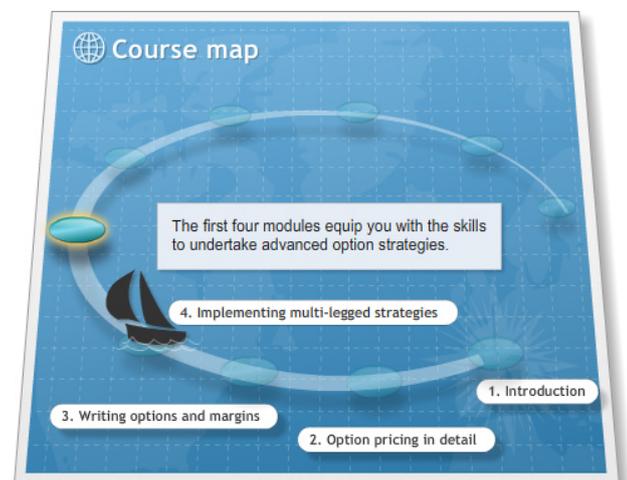
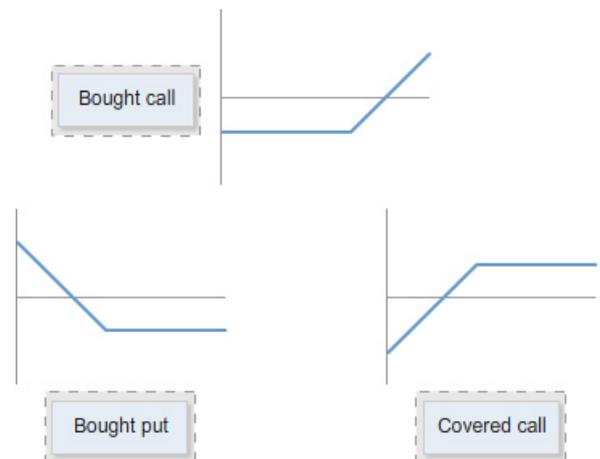
If you are not comfortable with this material, we encourage you to revise the introductory course.

What will I learn?

After completing these modules you should:

- have a sound knowledge of option pricing concepts
- understand when margins will be payable and how they are calculated
- be able to evaluate, implement and manage an advanced option strategy
- have a detailed knowledge of six popular option strategies.

The skills and knowledge you acquire from these modules can be applied to any option strategy, not just the strategies covered in this course.



Strategy modules

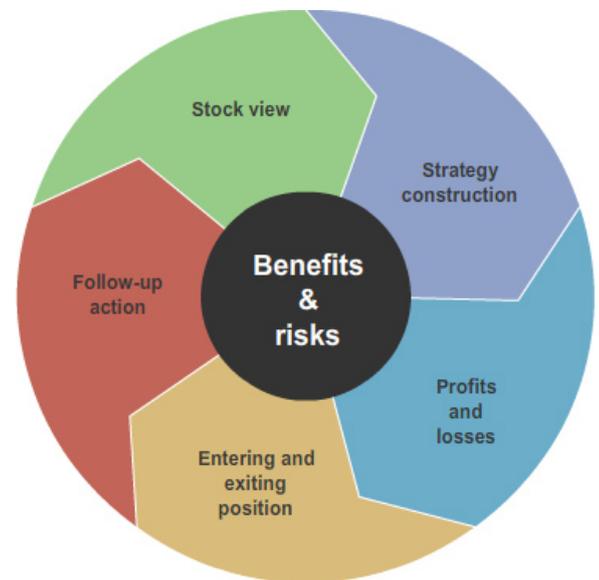
Modules 5 to 10 are devoted to specific strategies, including:

- strategies for a moderate price increase
- strategies for a moderate price decrease
- strategies for a price breakout
- strategies for a flat market
- using options for damage control.

This is not an exhaustive list of option strategies, but a selection of strategies that suit a range of market outlooks.

In each strategy module, you will learn:

- the view on the underlying stock the strategy reflects
- how the strategy is constructed
- benefits and risks
- breakeven points and potential profits and losses
- how to enter and exit the position
- follow-up action required once the strategy is in place.



Topic 2: Multi-legged strategies

Legs

Most strategies discussed in this course involve more than one 'leg'.

A leg can be an option position or a stock position.

The four basic option positions are:

- taken call
- written call
- taken put
- written put

The two stock positions are:

- long stock
- short stock.

These basic positions are the building blocks of all option strategies.

Multi-legged strategies

A multi-legged strategy is one that includes two or more of these legs.

Multi-legged strategies are often described using terminology such as 'straddle', 'strangle' or 'spread'. These terms will be explained in later modules.

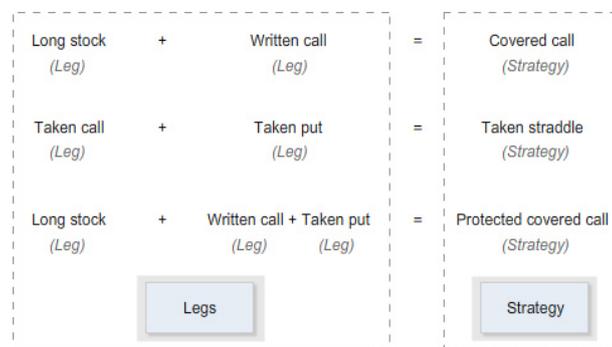
For example, the covered call comprises a stock leg and an option leg:

- long stock
- written call

The taken straddle comprises two option legs:

- taken call
- taken put.

	Buy	Sell
Stock	Long stock	Short stock
Call option	Taken call	Written call
Put option	Taken put	Written put



Why use multiple legs?

A broad, directional view can generally be traded using a basic option strategy.

For a more targeted view, a more advanced strategy may be required.

Multi-legged strategies can give effect to a market view that a single option position cannot reflect. By combining two or more legs, you can tailor a strategy to suit almost any market view.

For example, if you are strongly bullish, simply buying a call option may be the most appropriate strategy.

But if your view is only moderately bullish, a bull call spread (consisting of a taken call, and a written call with a higher strike price) may give you a better result if the stock behaves as you expect.



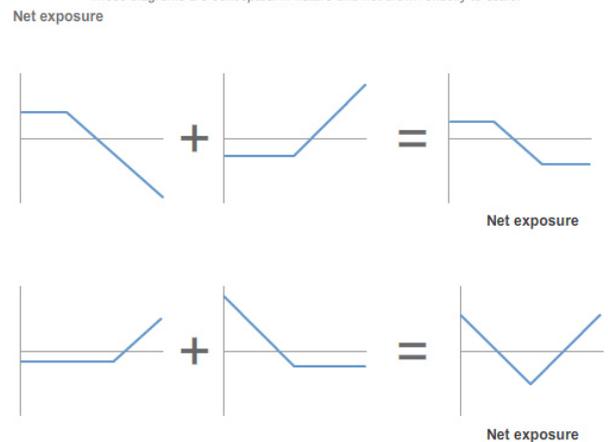
Concentrate on the whole strategy

When evaluating a multi-legged strategy, you should look at the strategy as a whole, rather than just considering the legs in isolation.

Your focus should be on the net exposure the strategy provides. Focusing on the component legs individually can give a misleading impression of your exposure.

For example, the bear call spread includes a taken call option. A taken call in isolation is bullish. But the bear call spread, as its name suggests, reflects a view the stock price will fall.

**These diagrams are conceptual in nature and not drawn exactly to scale.*



Topic 3: Payoff diagrams

Payoff diagrams

Throughout this course we will use payoff diagrams (also called 'profit and loss profiles') to illustrate the profit and loss potential for an option strategy.

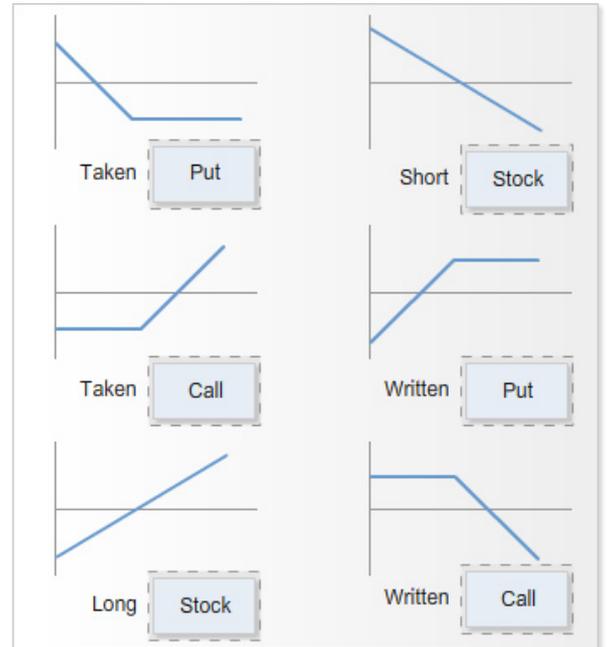
A payoff diagram shows the profit or loss your strategy would make for any given share price at expiry. It also shows the breakeven point(s) for your strategy.

There are four payoff diagrams for the four basic option positions:

- taken call
- written call
- taken put
- written put

There are two payoff diagrams for stock positions:

- long stock
- short stock



The taken call payoff diagram

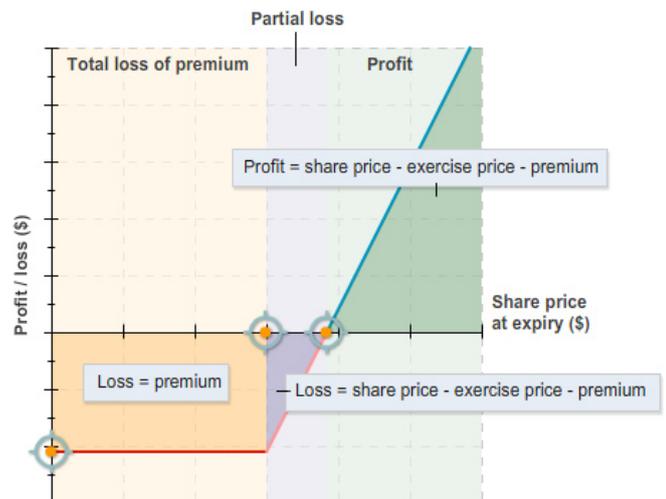
This is a quick refresher of the main parts of the taken call payoff diagram.

The most you can lose when you take a call is the premium you pay. You will make this loss if at expiry the share price is at or below the exercise price.

If the share price is above the exercise price, the option will have intrinsic value. The higher the share price is, the more the option will be worth.

The breakeven point is the exercise price plus the premium paid. At this point, the option is worth what you paid for it.

Above the breakeven point, you will make a profit - the higher the share price, the greater your profit.



The taken put payoff diagram

The most you can lose when you buy a put is the premium you paid. You will incur this loss if at expiry the share price is at or above the exercise price.

If the share price is below the exercise price, the put option will have intrinsic value. The lower the share price is, the more the option will be worth.

The breakeven point is the exercise price less the premium paid. At this point, the option is worth what you paid for it.

Below the breakeven, you will make a profit - the lower the share price, the greater your profit.

The payoff diagram for a single option position is fairly simple.

It shows the potential profit and loss of the position at expiry.

In each case there is one breakeven point.

Payoffs for multi-legged strategies

The diagram for a multi-legged strategy may be more complex.

For example, there may be more than one breakeven point.

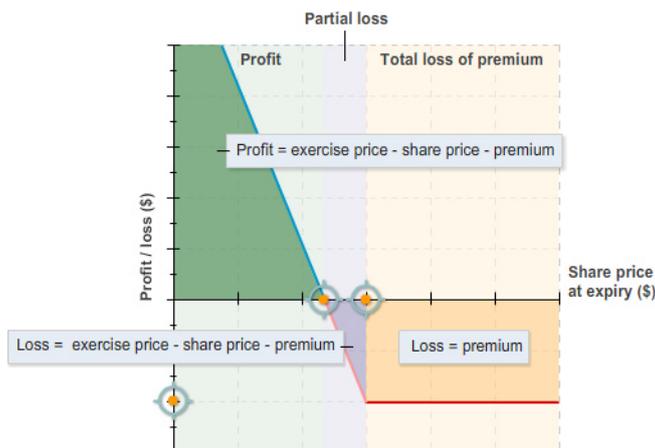
However, the information the diagram presents is the same - the profit or loss you will make for any given share price at expiry.

The process of interpreting the diagram is the same whether the strategy involves one, two or more legs.

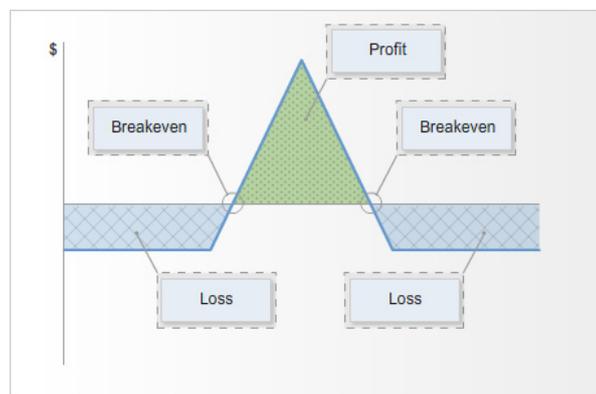
A simple payoff diagram can only show with accuracy your potential profit and loss at expiry.

At expiry, an option has only intrinsic value. Given a certain share price, you know what the option will be worth, and therefore what your profit or loss will be.

Before expiry, your option may have time value as well as intrinsic value. Estimating what this time value will be involves assumptions about volatility and other variables.



	Taken	Written	Feedback
	<input type="radio"/>	<input checked="" type="radio"/>	Written options have potentially limited profits and unlimited losses.
	<input checked="" type="radio"/>	<input type="radio"/>	Taken options have potentially limited losses and unlimited profits.
	<input checked="" type="radio"/>	<input type="radio"/>	Taken options have limited losses and gains only limited to share price falling to zero.
	<input type="radio"/>	<input checked="" type="radio"/>	Written options have potentially limited profits and losses limited to the share price falling to zero.



If you use a payoff diagram to plot your profit and loss for a pre-expiry date, the result will only be as accurate as your assumptions about these variables.

Online tools

There are many tools available online that plot payoff diagrams.

The '[Strategy Modelling Tool](#)' (for PC) can be downloaded from the ASX website.

An online 'Position Simulator' can be accessed at the [Options Industry Council website](#).

As well as plotting payoff diagrams for your position at expiry, both these tools enable you to estimate a pre-expiry profit/loss position based on your assumptions about volatility and other variables.

Strategy Modelling Tool

Deal Details:		Analysis Parameters:	
Stock Price: 12.50	Get price	Deal Date: Today 14-Jan-00	Select
Initial debit/credit: (200)	Historic	Deal Expiration: 25-Mar-00	Select
Volatility: 30.00%	Spot	Price in centre of graph: 12.50	Days to Expiry: 71
Underlying: Risk Free Rate: 5.75%	Ex Date:	Graph Increment: 0.250	Analysis Date: 14-Jan-00
Pricing Model: Black-Scholes European		Cycle time to expiry	
Vary option parameters		Percent to target	
Reset days to maximum		Analyze	
Reset days to minimum		Calc Implied Volatility	
Split/unsplit screen		Trade 1	
Switch to table view		Trade 2	
Clear current strategy		Trade 3	
Hedge position		Trade 4	
		Trade 5	

Action	Buy/Sell	Type	No. Opt's	Strike	Volatility	Trade Expiry	Override Price	Days to Expiry	Option Value	Debit/Credit	Delta	States
Option Trade 1	Buy	C	10,000	12.50				71	0.7275	7,275	0.56	At Money
Option Trade 2												
Option Trade 3												
Option Trade 4												
Option Trade 5												

Stock Trades:	Buy/Sell	No. Shares	Price
Stock Trade 1	Buy	10,000	(125,000)
Stock Trade 2	Sell		(125,000)

Days to expiry: 71



Position "Greeks"

No Greeks

Retrieve saved strategies

Sample: Covered Call

Save strategy

Replace current strategy

Delete saved strategies

Financial analysis (ROI)

Copy to comparison area

Individual trade analysis

Switch to comparison area

Strategy dissection

ASX CODE LIST

<http://www.hoadley.net/options>

Summary

- A multi-legged option strategy consists of two or more option legs, or a stock leg plus one or more option legs.
- Multi-legged strategies can give effect to a market view that a single option position cannot reflect.
- When evaluating a multi-legged strategy, it is important to look at the strategy as a whole, rather than just considering the legs in isolation.
- A payoff diagram shows the profit or loss your strategy would make for any given share price at expiry.

Practical examples of option strategies are given throughout these modules.

Prices used in the examples were calculated using an option pricing model, and are based on the following, unless otherwise specified:

- Underlying stock price: \$10.00
- Volatility: 25%
- Risk free interest rate: 5%
- Days to expiry: 30
- The stock does not go ex-dividend during the life of the option
- American exercise style

Brokerage costs are not included in the examples. It is, however, important to take brokerage costs into account when trading options.

Please note that some payoff diagrams that appear in this course are conceptual in nature, and may not be drawn exactly to scale.