ASX
AUSTRALIAN SECURITIES EXCHANGE

Understanding Options Trading

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Before you begin

The ASX exchange traded options market has been operating since 1976. Since the market started, volumes have increased significantly. There are now over 100 different companies and several indices to choose from. A list of companies and indices over which Exchange Traded Options (options) are traded can be found on the ASX website, **www.asx.com.au/options** (under Option Stocks in the "Trading Information" section).

This booklet explains the concepts of options, how they work and what they can be used for. It should be noted that this booklet deals exclusively with Exchange Traded Options over listed shares and indices, and not company issued options. Information on other ASX products is available by calling 1300 300 279 or visiting **www.asx.com.au**. To assist in your understanding there is a glossary of terms on page 33.

Option sellers are referred to as 'writers' because they underwrite (or willingly accept) the obligation to deliver or accept the shares covered by an option. Similarly, buyers are referred to as the 'takers' of an option as they take up the right to buy or sell a parcel of shares.

Every option contract has both a taker (buyer) and a writer (seller). Options can provide protection for a share portfolio, additional income or trading profits. Both the purchase and sale of options, however, involve risk. Transactions should only be entered into by investors who understand the nature and extent of their rights, obligations and risks.

What is an option?

An option is a contract between two parties giving the taker (buyer) the right, but not the obligation, to buy or sell a security at a predetermined price on or before a predetermined date. To acquire this right the taker pays a premium to the writer (seller) of the contract.

For illustrative purposes, the term shares is used throughout this booklet when referring to the underlying securities. When considering options over an index, the same concepts generally apply. From time to time options may be available over other types of securities such as instalment receipts or preference shares.

The standard number of shares covered by one option contract on ASX is 1,000. However, this may change due to adjustment events such as a new issue or a reorganisation of capital in the underlying share.

All of the examples in this booklet assume 1,000 shares per contract and ignore brokerage and ASX fees. You will most definitely need to consider these when evaluating an option transaction. For options over an index, the contract value is based on a dollar value point. Details can be checked in the contract specifications.

There are two types of options available: call options and put options.

Call options

Call options give the taker the right, but not the obligation, to **buy the underlying shares** at a predetermined price, on or before a predetermined date.

Call option example

Assume Santos Ltd (STO) shares have a last sale price of $14.00. An available 3 month option would be a STO 3 month $14.00 call. A taker of this contract has the right, but not the obligation, to buy 1,000 STO shares for $14.00 per share at any time until the expiry*. For this right, the taker pays a premium (or purchase price) to the writer of the option. In order to take up this right to buy the STO shares at the specified price, the taker must exercise the option on or before expiry.

On the other hand, the writer of this call option is obliged to deliver 1,000 STO shares at $14.00 per share if the taker exercises the option. For accepting this obligation the writer receives and keeps the option premium whether the option is exercised or not.

It is important to note that the taker is not obligated to exercise the option.

* The expiry day for stock options is usually the Thursday before the last Friday in the expiry month unless ACH determines another day. This may change for various reasons (eg. for public holidays), so please check with your broker. For index options, refer to the contract specifications.

Put options

Put options give the taker the right but not the obligation to **sell the underlying shares** at a predetermined price on or before a predetermined date. The taker of a put is only required to deliver the underlying shares if they exercise the option.

Put option example

An available option would be a STO 3 month $14.00 put. This gives the taker the right, but not the obligation, to sell 1,000 STO shares for $14.00 per share at any time until expiry. For this right, the taker pays a premium (or purchase price) to the writer of the put option. In order to take up this right to sell the STO shares at a specified price the taker must exercise the option on or before expiry. The writer of the put option is obliged to buy the STO shares for $14.00 per share if the option is exercised. As with call options, the writer of a put option receives and keeps the option premium whether the option is exercised or not.

Once again it is important to note that the taker is not obligated to exercise the option.

If the call or put option is exercised, the shares are traded at the specified price. This price is called the exercise or strike price. The last date when an option can be exercised is called expiry day.

There are two different exercise styles: American style, which means the option can be exercised at any time prior to the expiry; and European style, which means the option can only be exercised on the expiry day. Most stock options traded on ASX are American style.

* The taker of a put and writer of a call option do not have to own the underlying shares.

Advantages of option trading

Risk management

Put options allow you to hedge against a possible fall in the value of shares you hold. This can be considered similar to taking out insurance against a fall in the share price.

Time to decide

By taking a call option, the purchase price for the shares is locked in. This gives the call option holder until the expiry day to decide whether or not to exercise the option and buy the shares. Likewise the taker of a put option has time to decide whether or not to sell the shares.

Speculation

The ease of trading in and out of an option position makes it possible to trade options with no intention of ever exercising them. If you expect the market to rise, you may decide to buy call options. If you expect a fall, you may decide to buy put options.

Either way you can sell the option prior to expiry to take a profit or limit a loss.

Leverage

Leverage provides the potential to make a higher return from a smaller initial outlay than investing directly. However, leverage usually involves more risks than a direct investment in the underlying shares. Trading in options can allow you to benefit from a change in the price of the share without having to pay the full price of the share. The following example helps illustrate how leverage can work for you.

The table below compares the purchase of 1 call option and 1,000 shares. The higher percentage return from the option demonstrates how leverage can work.

	OPTION	STOCK
Bought on October 15	$380	$4,000
Sold on December 15	$670	$4,500
Profit	$290	$500
Return on investment (not annualised)	76.3%	12.5%

Diversification

Options can allow you to build a diversified portfolio for a lower initial outlay than purchasing shares directly.

Income generation

You can earn extra income over and above dividends by writing call options against your shares, including shares bought on margin. By writing an option you receive the option premium up front. While you get to keep the option premium, there is a possibility that you could be exercised against and have to deliver your shares at the exercise price.

Option features

The ease of trading in and out of options on ASX's Options Market is assisted by the standardisation of the following option contract components:

1. Underlying securities,
2. Contract size,
3. Expiry day, and
4. Exercise prices.

There is a fifth component, the option premium, which is not standardised but rather determined by market forces. ASX operates the Options Market, while Australian Clearing House Pty Ltd (ACH) operates the clearing facility for ASX's Options Market. Among ASX's responsibilities is the setting of the standardised option components.

1 option contract usually represents 1,000 underlying shares.

The 5 components of an option contract

1. Underlying securities/approved indices

Options traded on ASX's Options Market are only available for certain securities and approved indices. These securities are referred to as underlying securities or underlying shares. They must be listed on ASX and are selected by ACH according to specific guidelines. The issuers of underlying securities do not participate in the selection of securities against which options may be listed.

Calls and puts over the same underlying security are termed classes of options. For example, all call and put options listed over Lend Lease Corporation (LLC) shares, regardless of exercise price and expiry day, form one class of option. A list of all the classes of options trading on ASX's Options Market can be found on the ASX website **www.asx.com.au/options** (in the "Trading Information" section).

2. Contract size

On ASX's Options Market an option contract size is standardised at 1,000 underlying shares. That means, 1 option contract represents 1,000 underlying shares. As mentioned earlier, this may change if there is an adjustment such as a new issue or a reorganisation of capital in the underlying share. In the case of index options, contract value is fixed at a certain number of dollars per index point (for example, $10 per index point). The size of the contract is equal to the index level x the dollar value per index point (for example, for an index at 6,000 points, 1 contract would be 6,000 x $10 = $60,000).

3. Expiry day

Options have a limited life span and expire on standard expiry days set by ACH. The expiry day is the day on which all unexercised options in a particular series expire and is the last day of trading for that particular series. For shares this is usually the Thursday before the last Friday in the month. For index options, expiry is usually the third Thursday of the contract month. However, ACH has the right to change this date should the need arise. In general, all options for a particular class follow one of the three quarterly cycles listed below:

- January/April/July/October;
- February/May/August/November; or
- March/June/September/December.

Options are usually listed for the next three months in the quarterly expiry cycle.

For example, assume it is now June 2007 and ANZ Banking Group Limited (ANZ) follows the January/April/July/October expiry cycle. There would be currently listed a July 2007, an October 2007 and a January 2008 series. When the July series expires, an April 2008 series will be listed. When the October 2007 series expires, a July 2008 series will be listed and so on.

For example, a November expiry means that the option expires on the expiry day in November. If Thursday is not a business day, the expiry day is brought forward. Expiry day information is available on the ASX website, **www.asx.com.au/options** (under Expiry Calendar in the "Trading Information" section).

In addition to quarterly expiry cycles, a current or spot month is available for most classes of options. These are options that expire at the end of the current month and are used to trade short term price changes in the underlying shares.

The top twenty shares by options volume also have a twelve month expiry cycle listed to provide a longer time frame for investors. There are also longer term option contracts listed over certain securities, some with terms of up to five years. For more information on these types of options please ask your broker.

4. Exercise (or strike) prices

The exercise price is the predetermined buying or selling price for the underlying shares if the option is exercised.

ACH sets the exercise prices for all options listed on ASX's Options Market with a range of exercise prices available for options on the same expiry. New exercise prices are listed as the underlying share price moves.

For example, if the underlying share is trading at $3.50, it is likely that option contracts with the following strike prices would be listed: $3.00, $3.25, $3.50, $3.75 and $4.00. A range of exercise prices allows you to more effectively match your expectations of the price movement in the underlying share to your option position. Exercise prices may also be adjusted during the life of the option if there is a new issue or a reorganisation of capital in the underlying shares.

5. Premium

The premium is the price of the option which is arrived at by the negotiation between the taker and the writer of the option. It is the only component of the five option components that is not set by ACH.

Option premiums are quoted on a cents per share basis. To calculate the full premium payable for a standard size option contract, multiply the quoted premium by the number of shares per contract, usually 1,000.

For example, a quoted premium of 16 cents represents a total premium cost of $160.00 ($0.16 x 1,000) per contract. To calculate the full premium payable for an index option, you simply multiply the premium by the index multiplier. For example, a premium of 30 points, with an index multiplier of $10, represents a total premium cost of $300 per contract.

Dividends and voting

The taker of the call option or the writer of a put option does not receive dividends on the underlying shares until the shares are transferred after exercise. Nor do they obtain any voting rights in relation to the shares until that time.

Option information can be monitored on our website www.asx.com.au or in The Australian Financial Review newspaper.

Adjustments to option contracts

The specifications of option contracts listed on ASX's Options Market are standardised as much as possible.

However, ASX may make adjustments to options to preserve, as far as practicable, the value of positions in options held by takers and writers. Adjustments are made as a result of corporate events that affect the value of the underlying, such as a bonus issue, share split or rights issue.

Adjustments may be made to one or more of the components of an option, including exercise price, contract size, underlying securities, and number of contracts. With some events, ASX has adopted adjustments which are understood by the market to be conventions that will be applied when those circumstances arise. These are specific adjustments in the ASX Market Rules.

The adjustment assumes that the corporate event giving rise to a need to make an adjustment has an ex-date or a deemed ex-date, and the event must affect the parcel of underlying securities. ASX considers that the value of the option to both the taker and the writer is best preserved over the ex-date by maintaining the total exercise value and assuming that the total volatility of the underlying securities remains constant. The total exercise value is the product of three parameters:

- the quantity of option contracts;
- the number of the underlying securities represented by the option contract; and
- the exercise price of option contracts in the series.

Corporate events that do not strictly affect shares in a pro-rata manner, that is proportionally, are generally excluded from an option adjustment. For instance, an entitlement issue of 500 shares for each shareholder, (irrespective of the number of shares held by a shareholder) is not a strictly pro-rata issue. But a bonus issue of 1 for 2 does result in an adjustment as it is a pro-rata issue of 500 new shares for each 1,000 old shares held.

The various adjustment circumstances and also a detailed treatment of option adjustments, titled Explanatory Guide for Option Adjustments can be found on the ASX website at **www.asx.com.au/options** (under "Exchange Notices").

This document covers:

- What an adjustment is
- Why adjustments are made
- How adjustments are determined
- Different types of adjustments
- Examples of past adjustments.

Option pricing fundamentals

When considering an option it is important to understand how the premium is calculated. Option premiums change according to a range of factors including the price of the underlying share and the time left to expiry. An option premium can be separated into two parts – intrinsic value and time value. Different factors influence intrinsic and time value.

Intrinsic value

Intrinsic value is the difference between the exercise price of the option and the market price of the underlying shares at any given time. Here are some examples for call and put options.

Call options

For example, if National Australia Bank (NAB) June $40.00 call options are trading at a premium of $1.50 and NAB shares are trading at $41.00 per share, the option has $1.00 intrinsic value. This is because the option taker has the right to buy the shares for $40.00 which is $1.00 lower than the market price. Options that have intrinsic value are said to be **'in-the-money'**.

NAB SHARE PRICE	OPTION PREMIUM		INTRINSIC VALUE (SHARE PRICE – EXERCISE PRICE)		TIME VALUE (OPTION PREMIUM – INTRINSIC VALUE)
$41.00	$1.50	=	$1.00	+	$0.50

In this example, the remaining 50 cents of the premium is time value.

However, if the shares were trading at $39.00 there would be no intrinsic value because the $40.00 call option contract would only enable the taker to buy the shares for $40.00 per share which is $1.00 higher than the market price. When the share price is less than the exercise price of the call option, the option is said to be **'out-of-the-money'**.

Remember, call options convey to the taker the right but not the obligation to buy the underlying shares. If the share price is below the exercise price it is better to buy the shares on the share market and let the option lapse.

Put options

Put options work the opposite way to calls. If the exercise price is greater than the market price of the share the put option is in-the-money and has intrinsic value. Exercising the in-the-money put option allows the taker to sell the shares for a higher price than the current market price.

For example, a NAB June $41.00 put option allows the holder to sell NAB shares for $41.00 when the current market price for NAB is $40.00. The option has a premium of $1.20 which is made up of $1.00 of intrinsic value and 20 cents time value.

A put option is out-of-the-money when the share price is above the exercise price, as a taker will not exercise the put to sell the shares below the current share price.

NAB SHARE PRICE	OPTION PREMIUM		INTRINSIC VALUE (SHARE PRICE – EXERCISE PRICE)		TIME VALUE (OPTION PREMIUM – INTRINSIC VALUE)
$40.00	$1.20	=	$1.00	+	$0.20

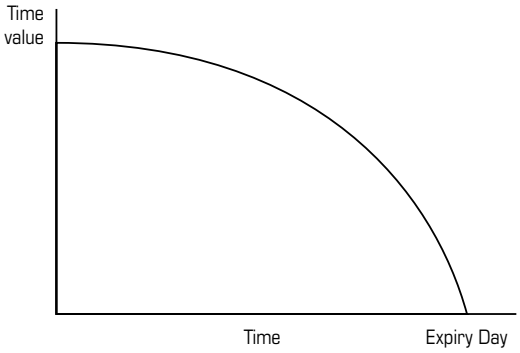
Once again, remember put options convey the right but not the obligation to sell the underlying shares. If the share price is above the exercise price it is better to sell the shares on the share market and let the option lapse.

When the share price equals the exercise price, the call and the put options are said to be **'at-the-money'**.

Time value

Time value represents the amount you are prepared to pay for the possibility that the market might move in your favour during the life of the option. Time value will vary with in-the-money, at-the-money and out-of-the-money options and is greatest for at-the-money options.

As time draws closer to expiry and the opportunities for the option to become profitable decline, the time value declines. This erosion of option value is called time decay. Time value does not decay at a constant rate, but becomes more rapid towards expiry.



Time value

The amount you are willing to pay for the possibility that you could make a profit from the option transaction. It is influenced by the following factors:

- Time to expiry
- Volatility
- Interest rates
- Dividend payments
- Market expectations.

For more information on option pricing refer to **www.asx.com.au/options** (under "Options tools and calculators").

As a general guide, an option will lose 1/3 of its time value during the first half of its life and 2/3 during the second half.

THE KEY FACTORS WHICH AFFECT THE TIME VALUE OF AN OPTION ARE:

Time to expiry	The longer the time to expiry, the greater the time value of the option.
Volatility	In general, the more volatile the price of the underlying share or index, the higher the premium will be. This is due to the wider range over which the stock can potentially move.
Interest rates	A rise in interest rates will push call option premiums up and put option premiums down.
Dividend payments	If a dividend is payable during the life of an option, the premium of a call option will be lower, and the premium of a put option higher, than if no dividend was payable. Holders of option contracts who do not own the underlying securities are not eligible for dividends payable on those shares.
Market expectations	Ultimately supply and demand determine the market value of all options. During times of strong demand, premiums will be higher.

Parties to an option contract

The option taker

An option taker is an investor or trader anticipating a significant move in a particular share price. Taking an option offers the opportunity to earn a leveraged profit with a known and limited risk.

Taking a call option gives you the right to buy the shares covered by the option at the exercise price at any time until expiry. In general, call option premiums rise as the underlying share price rises. For this reason the taker of a call option expects the underlying share price will rise.

Taking a put option gives you the right, but not the obligation, to sell the underlying shares. Put option premiums usually rise as the underlying share price falls. For this reason the taker of a put option expects the underlying share price to fall.

In taking this right to buy or sell shares, the taker pays the premium. This premium represents the maximum possible loss on the option for the taker.

It is important to remember that it is not necessary for the taker of a put option to own the underlying shares at the time of taking the put. Certainly, if the taker chooses to exercise the put option they will be required to deliver the underlying shares, at the exercise price, to a randomly selected writer of put options in that series. However, the taker also has the choice of closing out the position on ASX's Options Market prior to expiry. A full explanation of closing out can be found on page 17.

If the taker chooses to close out the option, a loss will be incurred if the premium that the investor receives on closing out is lower than the premium paid by the investor for the original taken contract. A profit will occur if the reverse is true. Any time value in the premium for the option will be lost if the option is exercised.

On average, less than 15% of options are exercised. The remaining 85% or so either expire unexercised or are closed out. This figure represents the average over recent times and varies depending on current volatility and other factors.

Call buying example

Assume Amcor Ltd (AMC) shares are trading at $7.24. Anticipating an increase in the share price, you take a 3 month AMC $7.25 call for 45 cents, or $450 total premium ($0.45 x 1,000 shares per contract).

Close to the expiry day, AMC shares are trading at $8.25 and the option premium is now $1.02 per share. You can exercise the option and buy 1,000 AMC shares at $7.25, which is $1.00 below the current market price, realising a gain of 55 cents per share: $1.00 – $0.45 = $0.55 (excluding fees and commissions).

Alternatively you can close out the call on ASX's Option Market by completing an equal and opposite transaction to your opening transaction. In this example you would write an AMC August $7.25 call for $1.02 (the current premium) and realise a gain of 57 cents per share (excluding fees and commissions).

On average less than 15% of options are exercised.

The 2 cent profit difference between exercising and closing out the call is due to the option having some remaining time value (as explained on page 10).

If AMC shares had declined over this period, the call premium would have also declined. Depending on the timing and magnitude of the share price decline, the option may have retained some value prior to expiry, allowing you to recoup a portion of the original premium by liquidating the position. The first table on the following page summarises the two alternatives.

EXERCISE VS CLOSEOUT

CURRENT HOLDING: ONE $6.50 AMC CALL
AMC SHARES TRADING AT $7.50

EXERCISE	CLOSEOUT
Buy 1,000 AMC shares for $7.25*	Sell ONE AMC $7.25 call for $1.02**
Sell 1,000 AMC shares at market price of $8.25*	
Total profit $8.25 - $7.25 = $1.00 per share ($1,000)	Less initial cost $1.02 - $0.45 = $0.57 cents profit per share ($570)
Less initial cost $1.00 - $0.45 = $0.55 cents profit per share ($550)	

* FEES AND Commission are payable on each of these steps

** FEEs and Commission are paid on the sale of the option to close

Put buying example

Say Brambles Limited (BXB) shares are trading at $13.48. Anticipating a fall in the share price, you take a 3 month BXB $13.25 put option for 15 cents per share.

Close to the expiry day, BXB shares are trading at $12.00 and the option premium is now $1.30 per share.

You can exercise the option and sell 1,000 BXB shares at $13.25 which is $1.25 above the current market price, realising a gain of $1.10 per share (excluding fees and commissions).

Alternatively, you can close out the option by selling the 3 month BXB $13.25 put at $1.30 (the current market premium) and realise a gain of $1.15 per share (excluding fees and commissions). The 5 cent difference represents time value remaining in the option premium. If BXB shares had risen in price over this period, the option premium would have declined. As with the call option, the put option may have retained some value and you may have been able to close out the option to recover some of the initial premium. The second table summarises the two alternatives.

EXERCISE VS CLOSEOUT

CURRENT HOLDING: ONE $13.25 BXB PUT
BRAMBLES SHARES TRADING AT $12.00

EXERCISE	CLOSEOUT
Buy 1,000 BXB shares at market price of $12.00*	Sell ONE BXB $13.25 put for $1.30**
Sell 1,000 BXB shares for $13.25* Total profit $13.25 - $12.00 = $1.25 per share ($1,250)	Less initial cost $1.30 - $0.15 = $1.15 cents profit per share ($1,150) profit per share ($1,150)
Less initial cost $1.25 - $0.15 = $1.10 profit per share ($1,100)	

* Fees and commission are payable on each of these steps

** Fees and commission are paid on the sale of the option to close

The option writer

Option writers earn premium for selling options. Both put and call option writers are generally looking for prices to remain steady.

Call writing example

Suppose you own 1,000 BHP Billiton Limited (BHP) shares and write one BHP February $35.00 call option. If you are exercised against, you must sell 1,000 BHP shares for $35.00 per share. If you do not already own BHP shares you will be obliged to buy 1,000 BHP shares at the current market price. Writing uncovered call options therefore exposes the writer to substantial risk and should not be undertaken lightly.

Put writing example

The writer of an AMP Ltd (AMP) December $9.50 put option is obliged to buy 1,000 AMP shares at $9.50 as long as the position remains open. If AMP shares fall to $8.50 and the taker of the put option exercises the option, the writer is obliged to buy the shares at $9.50. On the other hand if the AMP shares rise to $10.00 it is unlikely that the taker of the put option will exercise and accordingly, the put writer will earn the option premium.

As the example shows, the writer of a put option has risk if the share price falls. In extreme cases the risk is that the price of the shares falls to zero.

The decision to exercise the option rests entirely with the option taker. An option writer may be exercised against at any time prior to expiry. However, this is most likely to occur when the option is in-the-money and close to expiry, or when the underlying share is about to pay a dividend. Call option takers may exercise in order to receive the dividend. ACH will require payment of margins to ensure the obligations of the option writer to the market are met. To find out more about margins and the margining process download the ASX booklet called Margins, from **www.asx.com.au/options** (under Publications in the "Trading Information" section).

Tracking positions and costs

When deciding whether to trade options, there a number of factors to be aware of:

- The costs of trading options
- How to track the value of your options or option positions
- The requirement to pay margins when selling options.

ASX CODE	EX PRICE	FAIR VALUE	LAST SALE	VOL 000'S	OPEN INT	IMPLIED VOLATILITY	DELTA	ANNUAL % RETURN
CALL OPTIONS								
Telstra Corp Last Sale Price $4.76								
Jun 07	4.05	0.83	0.83	7	916	-	1	88.09
Jun 07	4.3	0.48	0.52	58	8680	42.96	0.94	11.49
Jun 07	4.77	-	0.05	448	10709	9.74	0.51	22.98
Jun 07	5	0.01	0.01	270	9580	24.34	0.11	7.66
Jul 07	4.77	0.26	0.14	103	6095	26.62	0.54	33.99
Jul 07	5	0.06	0.06	120	3875	20.94	0.28	10.53
Jul 07	5.25	0.02	0.02	300	3560	22.73	0.12	3.83
Jul 07	5.49	0.01	0.01	200	-	28.3	0.08	2.87
Aug 07	4.54	0.32	-	1	10	17.62	0.79	10.25
Aug 07	4.77	0.19	0.19	5	8	19.3	0.56	19.96
Aug 07	5	-	0.1	1	85	14.02	0.28	5.39
Sep 07	4.54	0.34	0.31	20	2549	15.02	0.8	8.64
Sep 07	4.77	-	0.16	122	2186	11.73	0.61	11.64
Sep 07	5	0.25	0.08	30	16373	23.61	0.42	12.77
Sep 07	5.25	-	0.05	200	1734	17.82	0.21	3.75
Dec 07	4.54	-	0.35	27	1435	9.98	0.87	6.35
Dec 07	5	0.19	0.17	98	4883	16.16	0.46	7.34
Jan 07	4.5	0.46	0.44	9	-	12.29	0.84	6.67
Feb 07	4.25	0.66	0.59	1	106	-	0.79	4.36
Mar 07	5	0.25	0.28	50	290	15.04	0.52	6.61
Sep 07	4.8	0.44	0.38	100	650	12.05	0.68	7.12
Dec 07	4.8	0.59	0.53	100	402	-	0.66	4.89

Source: www.afr.com/tables.aspx Daily Summary, Derivatives Call Options: Tuesday 19 June 2007

How to track options via the internet and in the newspapers

Option codes and prices are available in the options section of the ASX website. To access this go to **www.asx.com.au/options**. The ASX website also has pricing and other information about the underlying securities or indices. Details of the previous day's trading are published in summary form in the Australian Financial Review. Current option prices are also available from your broker.

Costs

Brokerage is payable at a flat rate or as a percentage based on the full premium. ACH charges a fee per contract, and also an exercise fee, if you exercise an option. For more information contact your broker, or visit the ASX website, **www.asx.com.au/options** (under Costs In the "Trading Information" section).

Margins

Margins are designed to protect the financial security of the market. If you write an option contract, you have a potential obligation to the market because the taker of the option may exercise their position. A margin is an amount that is calculated by ACH as necessary to ensure that you can meet that obligation on that trading day.

Note that ACH's relationship is with your broker, and not directly with you. Once an option trade is registered with ACH, the process of novation results in ACH becoming the counterparty to both the buying and the selling broker. ACH calls margins from your broker, who then calls margins from you.

How margins are calculated

ACH calculates margins using a system known as TIMS (Theoretical Intermarket Margining System). TIMS takes into account the volatility of the underlying security when calculating margin obligations.

The total margin for ETOs is made up of two components:

1. the **premium margin** is the market value of the position at the close of business each day. It represents the amount that would be required to close out your option position.

2. the **risk margin** covers the potential change in the price of the option contract assuming the maximum probable inter-day movement (daily volatility) in the price of the underlying security. The daily volatility figure, expressed as a percentage, is known as the **margin interval**.

Each week ACH publishes the margin interval for all option classes. You can find this figure on the ASX website at **www.asx.com.au/options** (under Margins and Collateral in the "Trading Information" section). If you have a number of option positions open, TIMS will evaluate the risk associated with your entire options portfolio and calculate your total margin obligation accordingly. It is possible that some option positions may offset others, leading to a reduction in your overall obligation.

The ASX website has a tool available to help you to *estimate* your margin liability. It can be found at www.**asx.com.au/options** (under "Calculators and tools").

How margins are met

Your broker will require you to provide cash or collateral to cover your margin obligations. Note that minimum margin requirements are set by ACH, but higher margin requirements may be imposed by brokers.

There is a range of collateral that is acceptable to ACH. This includes certain shares, instalment warrants, bank guarantees and Austraclear pledged securities. ACH applies a "haircut" in relation to the value of some collateral to protect against a sudden fall in the value of collateral held. For example, ACH generally applies a 30% haircut to the current market value of shares. A 40% haircut is applied to instalment warrants.

Details of eligible collateral are published on the ASX website at **www.asx.com.au/options** (under Margins and Collateral in the "Trading Information" section).

Payment of margins

Margins are recalculated on a daily basis to ensure an adequate level of margin cover is maintained. This means that you may have to pay more if the market moves against you. If the market moves in your favour, margins may fall.

Settlement requirements for trading options are strict. You must pay margin calls by the time stated in your Client Agreement. This is usually within 24 hours of being advised of the margin call by your broker. If you do not pay in time, your broker can take action to close out your positions without further reference to you.

More information

A detailed explanation of the option margining process can be found in the booklet 'Margins', which can be downloaded from the ASX website at **www.asx.com.au/options** (under Publications in the "Trading Information" section).

Taxation

It is beyond the scope of this booklet to provide a detailed treatment of the taxation issues that are relevant to trading or investing in options. You should, however, take taxation into consideration when you are investing in options, just as you would when investing in shares.

Some of the issues that may be relevant include:

- Are you classified as a trader, as a speculator or as a hedger?
- Is an option trade on revenue account or on capital account?
- Are there timing issues, for example when an option is opened in one tax year and closed in the next tax year?
- Where an option strategy is in place around the time a stock goes ex-dividend, are you in danger of not satisfying the 45-day Holding Period Rule and therefore being disqualified from receiving the franking credits attached to the dividend?
- Could the exercise of an option position crystallise a taxation event for the underlying shareholding?

This is by no means a comprehensive list of the taxation issues of options trading. The information contained in this booklet is provided for educational purposes only and does not constitute investment, taxation or financial product advice. Taxation issues will vary from investor to investor. It is therefore important to discuss your taxation situation with your financial adviser or accountant, to ensure that any options trades you enter will not have adverse taxation implications.

For a paper discussing the taxation treatment of options, prepared by Patrick Broughan, Taxation Partner of Ernst and Young, Melbourne, please refer to the ASX website, at **www.asx.com.au/options** (under Tax in the "Trading Information" section).

This document covers aspects of options trading such as:

- Classification of the options trader as a trader, speculator, hedger or investor
- The treatment of realisation of profits or losses from options trading
- The use of options in superannuation funds
- Franking Credits – Holding Period Rule and Related Payments Rule.

Tradeability

As explained previously, an option is a contract between two parties – the taker and the writer. An option contract comes into existence when a writer and a taker agree on the option price and the contract is registered with ACH. The establishment of a contract is referred to as an open position.

Once the taker has an open position they have three alternatives:

1. The taker can close out their position by writing an option in the same series as originally taken and instructing their broker to 'close out' the position;

   For example, if you take a call option as an opening transaction, you may liquidate or close out your right to exercise by writing an identical call option to another party; or

2. The taker can exercise the option and trade the underlying shares. In the case of index options it is impractical to take delivery of the many shares contained in the index, so index options are only exercisable at expiry into a cash payment. Index options are further explained on page 19.

3. The taker can hold the option to expiry and allow it to lapse.

The writer of an option has two alternatives:

1. Close out the option prior to the expiry. For example, if you write a put option as an opening transaction, you may liquidate or close out your obligations by taking an identical put option contract with another party; or

2. Let the option go to the expiry day and will either be exercised against or expire worthless.

You would close out:

- to take a profit
- to limit a loss
- when there is a risk of unwanted early exercise.*

With options, there is no transfer of rights or obligations between parties.

* Note that with index options, exercise can only occur on the expiry day, so this risk does not exist for index options.

It is important to note that once the taker exercises an option it is too late for the writer of that option to close out their position.

How can options work for you?

There are a number of different reasons why investors trade in options. Some of these are outlined below.

1. Earn income

Writing options against shares you already own or are purchasing can be one of the simplest and most rewarding strategies. Below are three scenarios when this strategy may be appropriate. In each of these scenarios, your risk is that you will have to sell your shares at the exercise price but you still keep the option premium. This is most likely to happen if the market rises strongly.

Scenario 1: Writing options against shares you already own

Assume you own 1,000 Commonwealth Bank of Australia (CBA) shares. The current price is $55.00 and you would be happy to sell your shares if the price reached $57.50. You look in the newspaper and see a one month CBA call option is worth around 70 cents. You call your broker and instruct them to sell a one month CBA call option which they do for 72 cents ($720 plus fees and commissions). You now have the obligation to sell your CBA shares for $57.50 any time between now and expiry. For undertaking this obligation you received $720 (less brokerage and exchange fees), Calls can also be written against stock bought on margin. Find out more from your margin lender, broker or ASX.

Scenario 2: Writing options at the same time as buying the shares

Assume you are interested in purchasing 1,000 CBA shares but would like to reduce the cost of doing so. You could establish a buy and write over CBA shares. This means you would buy 1,000 CBA shares at around $55.00 and at the same time sell a one month CBA $57.50 call for say 72 cents. The extra income of $720 (less brokerage and exchange fees) reduces the cost of buying the shares. You now have the obligation to sell your CBA shares for $57.50 at any time between now and expiry.

Scenario 3: Writing options to sell your shares above the current market price

Assume you own 1,000 CBA shares and you have sold a one month CBA $57.00 call for 72 cents. At expiry, if CBA shares are over $57.00 then the taker will exercise their option. You will receive $57,000 from the exercise of the option. You have already received $720 from writing the option, so you have effectively sold your shares for $57,750 or $57.75 per share.

2. Protecting the value of your shares

This strategy can be useful if you are a shareholder in a particular company and are concerned about a short term fall in the value of the shares. Without using options you can either watch the value of your shares fall, or you could sell them.

Scenario 1: Writing call options to give you downside protection

Previous examples show how you can generate extra income from your shares by writing options. Writing call options can also generate extra income to offset a decline in share price.

If CBA is trading at $57.00, writing a one month $55.00 call option for $2.50 means the shares could fall by $2.50 before you begin to incur a loss. If the share price falls to $54.50 the loss on CBA shares is offset by the $2.50 option premium. If CBA falls further, the $2.50 premium will not be enough to offset the fall in price.

If CBA closes above $55.00 at expiry, the option will be exercised unless the option has been closed out.

Scenario 2: Take put options

Assume you own 1,000 CBA shares and you think the price will fall. Writing call options will offset some of the loss, but you would like to be able to lock in a sale price for your shares if the market does fall. You could take 1 CBA June $57.00 put option for 90 cents ($900 plus fees and commissions). If the price falls, you have until the end of June to exercise your put option and sell your shares for $57.00. If you are wrong and the market rises you could let the option lapse or alternatively close out before the expiry day.

3. Capitalising on share price movements without having to purchase shares

You can profit from a movement, either up or down, in the underlying shares without having to trade the underlying shares themselves. Some examples are outlined below.

Scenario 1: Take calls when expecting the market to rise

Buying call options allows you to profit from an increase in the price of the underlying shares. Suppose you believe AMP Ltd (AMP) shares will rise in price over the next few months. You don't want to pay the full $9,000 to buy 1,000 shares so you decide to buy a 3 month $9.50 call for 40 cents ($400 plus brokerage and exchange fees). If you are correct and the price of AMP shares rises then the value of your option will also rise. You can then sell an equivalent call option to close out any time prior to the expiry date and take your profit. You will not have to buy the AMP shares if you don't want to.

If the market doesn't move as expected, you can either close out the option and recoup some of your initial investment, or you can simply let the option expire worthless. When you take a call option, the most you can lose is the premium you have paid in the first place.

Scenario 2: Take puts when expecting the market to fall

Assume you believe AMP shares will fall in value. You don't like the idea of short selling the shares as you believe this is too risky so you decide to buy a 3 month AMP $9.00 put option for 60 cents ($600 plus fees and commissions). If you are correct and the price of AMP falls, the value of your put will rise. You can then sell the put to close out any time up to and including the expiry. If the market does not fall, then you can close out the option and recoup some of your initial investment, or you can simply let the option expire worthless.

When you take a put option you don't have to own the underlying shares and, as with call options, the most you can lose is the premium you have paid in the first place.

4. Using options gives you time to decide

Taking a call option can give you time to decide if you want to buy the shares. You pay the premium which is only a fraction of the price of the underlying shares. The option then locks in a buying price for the shares if you decide to exercise. You then have until the expiry day of the option to decide if you want to buy the underlying shares.

Put options can work in a similar manner. By taking a put option you can lock in a selling price for shares that you already own and then wait until the expiry day of the option to see if it is worthwhile exercising the option and selling your shares. Or you can let the option lapse if the price does not fall as expected.

In both cases the most you can lose is the premium you have paid for the option in the first place.

5. Index options let you trade all the stocks in an index with just one trade

By using call and put options over an index, you can trade a view on the general direction of the market, or hedge a portfolio with just one trade. If you are bullish on the market but don't know what stock to buy or which sector of the market will rise, you can buy a call option over the whole index. This means you don't have to choose a particular stock to invest in, you can just take a view on the direction of the broad stockmarket. If the level of the index rises the value of the call options will rise, just as for call options over individual shares. All the concepts about call and put options explained in this booklet apply to index options, which are explained in detail on page 20.

6. Other strategies

Stock bought on margin is an increasingly popular way to write covered calls. Writing covered calls on stock bought on margin is an increasingly popular strategy. Options can allow you to construct strategies that enable you to take advantage of many market situations. Some can be quite complex and involve varying levels of risk.

Trading index options

How are index options different?

Except where specific reference has been made to index options, up to this point the options we have been discussing have been over shares in individual companies. Individual stock options enable you to trade a view on a particular company. ASX also offers options which are traded over a stock index (that is, a group of listed securities).

As the name suggests, index options give you exposure to a sharemarket index. They offer similar benefits and flexibility to that of options traded over individual stocks, with the added advantage of offering exposure to a broad range of securities comprising an index rather than being limited to one particular company. You can use index options to trade a view on the market as a whole, or on the sector of the market that is covered by the particular index.

There are some important differences between index options and options over individual securities:

- Index options are cash settled, rather than deliverable, because it is not practical to deliver all the securities which make up the index. You will receive a cash payment on exercising an in-the-money index option.
- Index options are European in exercise style. This means there is no risk of early exercise for sellers.
- The strike price and premium of an index option are usually expressed in points.

A multiplier is then applied to give a dollar figure. For example, the multiplier may be $10 per point, meaning that to buy an index option with a premium of 50 points, you would pay $500 (plus brokerage and exchange fees).

Settlement method

The index options settlement price is based on the *opening* price of each stock in the underlying index on the morning of the expiry date. It is not based on the closing index level. As the stocks in the index open, the first trading price of each stock is recorded. Once all stocks in the index have opened, an index calculation is made using these opening prices.

This process is called the Opening Price Index Calculation (OPIC). Shortly afterwards the OPIC is confirmed to ASX and ACH, it is announced to the market.

This method of calculating the index level for settling index options is used by several major exchanges internationally. It is regarded as an effective way to manage potential volatility around the expiry of index options and futures contracts.

The Australian market staggers the opening of stocks, with stocks opening in five tranches, according to the initial letter of the stock name:

- A and B
- C to F
- G to M
- N to R
- S to Z.

The staggered opening means it is not possible for the entire market to be traded in one 'hit' during the opening period. The unwinding of large positions to match the index option expiry can be done in a more orderly fashion. Furthermore, market opening is typically a time of higher liquidity, and therefore the time the market is better able to absorb orders placed by traders looking to unwind index arbitrage strategies.

Some key advantages of trading index options

1. Exposure to the broader market

Investing in index options approximates trading a share portfolio that tracks a particular index. It provides exposure to the broader market which the index represents, with no specific company risk. Often index options are over benchmark indices traded by professional investors, who are less dependent on having to 'pick individual winners'.

2. Greater leverage

Like options over a single company, index options can provide leveraged profit opportunities. When the market rises (or falls), percentage gains (or losses) are far greater for the option than rises (or falls) in the underlying index.

3. Protection for a share portfolio

By purchasing index put options, you can lock in the value of a share portfolio. You may fear a market downturn, but have good reasons for not wanting to sell stocks. By purchasing index put options, you can make profits if the index falls. Profits on put options should compensate you for the loss of value in the stocks in the portfolio. This outcome effectively insures the portfolio at the level of the put options less the cost of the put.

For example, with the index at 6300 points assume you buy a 3 month 6300 put option for 60 points (or $600 plus fees and commissions). At expiry the index has fallen to 6000 points. You receive a cash payment equal to the difference between 6300 points (the insured value) and the level of the index at expiry, in this case 6000 points.

In other words, you receive a cash payment of $3,000 (300 points x $10 a point). If your share portfolio has moved in line with the underlying index, then the profits on the put options purchase will largely offset the fall in the value of the portfolio.

DATE	INDEX	OPTION TRADE	PREMIUM VALUE
Late today	6300 points	Buy 3 month 6300 Put @ 60 points	$600
Expiry	6000 points	Exercise option, Receive 300 points x $10	$3,000
			PROFIT = $2,400

Examples of how trading index options can work for you

Example 1: using an index put option to protect a share portfolio

When you decide to buy shares in the stock market you are exposed to two types of risks:

1. Company risk – the risk that the specific company you have bought into will underperform.

2. Market risk – the risk that the whole market underperforms, including your shares.

There are a number of ways to protect your shares against maker risk using index options. You can, for example, buy the shares you believe in and buy and index put option to protect yourself against a fall in the whole market. Depending on the amount of risk you wish to remain exposed to, you can choose to hedge all or only part of your portfolio. Let's assume that it is June, and the broad market index is at 6300 points. You have a share portfolio worth $126,000 which approximately tracks the index. You believe that there may be a downturn in the market over the next three months. As an alternative to selling shares, you decide to buy index put options to protect your portfolio. As the 3 month 6300 index put option has a contract value of $63,000 (6300 points x $10 per point), you are able to protect your $126,000 portfolio by buying two contracts, for 60 points each. The total cost is $1,200 (ignoring transaction costs).

The 3 month 6300 put gives you the right, but not the obligation, to "sell" the index at a level of 6300 at expiry. Ignoring fees and commissions, your break-even point at expiry is 6300 - 60 = 6240.

At expiry, the index has fallen to 6000 points, and your options have the following value:

DATE	INDEX	SHARE PORTFOLIO	6300 PUT	PREMIUM VALUE
Today	6300 points	$126,000	60 points	2 contracts x $600 = $1,200
Expiry	6000 points	$120,000	300 points	2 contracts x $3,000 = $6,000
Profit/Loss		($6,000)		2 contracts x $2,400 = $4,800

Your net position is a loss of $1,200. The loss of $6,000 in the value of your shares has been largely offset by the profit of $4,800 on the option trade. The overall loss of $1,200 is the premium value, or cost of the insurance.

Alternatively, you could buy index put options with an exercise price greater than the value of the share portfolio you want to protect. This will provide you with a larger profit on the option trade if the index falls as expected. However, you will be paying a higher amount in premium, an amount which will be lost if the expected market decline does not take place.

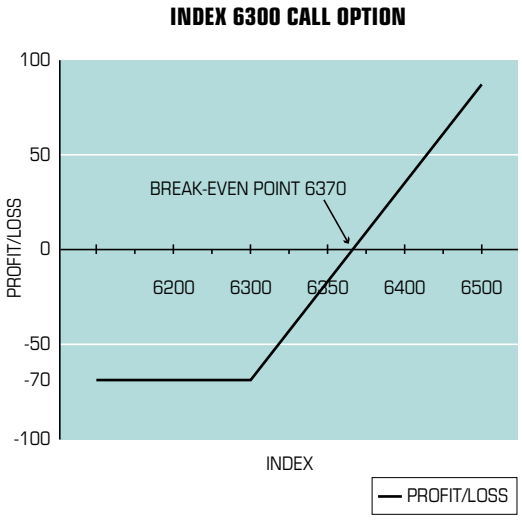
Example 2: Using an index call option to trade a bullish view of the market

You are expecting the broad stockmarket to rise over the next 3 months. Assume the index is at 6300. As an alternative to buying a portfolio of shares directly, you decide to buy a 3 month 6300 index call option for 70 points, or $700 (plus fees and commissions). That gives you the right, but not the obligation, to "buy" the index at a level of 6300 at expiry. Ignoring brokerage, your break even point at expiry is 6300 + 70 = 6370.

The most you are risking in this trade is $700, the cost of the option. You have potentially unlimited profits. At expiry, for every point the index is above your break-even point of 6300 points, you will make a profit of $10. Two months later, it turns out that you were right in your prediction. The value has increased as shown in the table below:

DATE	INDEX	4800 CALL	PREMIUM VALUE
Now	6300 points	70 points	$700
2 Months later	6615 (+5%)	315 points	$3,150
Profit / loss			+$2,450 (+350%)

The profit/loss profile (or pay-off diagram) for this position at expiry looks like this:



The chart above is called a pay-off diagram. To learn more about these, check page 24.

As you can see, the option has more than doubled in value from a relatively small (+5%) increase in the index. This is the advantage of the leverage which an index call option provides. Since the option has not yet expired your choices now are to:

1. Sell the option and realise the profit
2. Keep the option and hope for more upside (but remember that time decay is working against you).

These are just two of many strategies that are possible using index options. The range of expiry dates and exercise prices available makes it possible to structure a strategy to reflect any view you may have on the direction of the broader market.

Differences between equity options and index options

The table below summarises the main differences between exchange traded options over individual securities and index options.

	EXCHANGE TRADED OPTIONS	INDEX OPTIONS
Exercise style	American	European
Settlement	Deliverable	Cash settled
Last trading and expiry day	The Thursday before the last Friday in the expiry month	The third Thursday of the month
Underlying asset	ASX approved securities	ASX approved indices
Premium	Expressed in dollars and cents	Expressed in points
Exercise price	Expressed in dollars and cents	Expressed in points
Contract size	1,000 shares	The exercise price of the option multiplied by $ value

Pay-off diagrams

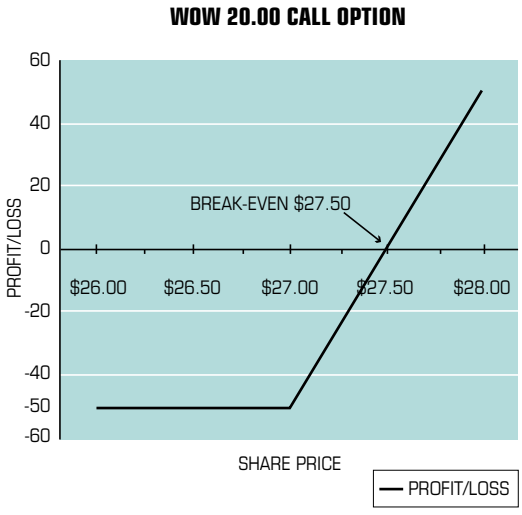
A pay-off or break-even diagram shows the potential profit or loss on the strategy at different stock prices at expiry. Pay-off diagrams can be drawn for any option or combination of options in the one class.

Visit the ASX website, **www.asx.com.au/options** (under "Options tools and calculators") to download any of the calculators and tools that will plot options profiles.

Call option taker

Using the example of buying a 3 month Woolworths Ltd (WOW) $27.00 call for 50 cents.

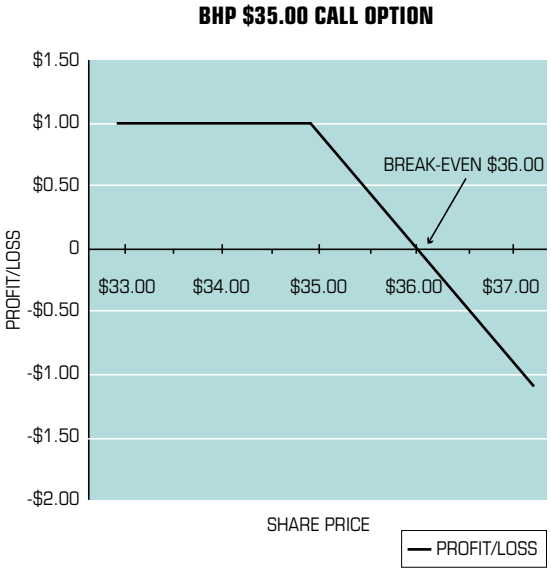
The break-even point for the call option taker is the exercise price of the option plus the premium paid. In this example it is $27.50 ($20.00 exercise price + 50 cent premium).



The diagram shows that while WOW is below $27.50 the call option taker has an unrealised loss. The most the call option taker can lose is the premium paid (50 cents). As the WOW share price rises above $27.00 the call option taker begins to profit. The maximum profit is unlimited as the higher the share price goes, the larger the taker's profit.

Call option writer

Using the example of selling a $35.00 call for $1.00.



The diagram shows that the call option writer has potential profit limited to the premium received ($1,000). If the option writer does not own the underlying shares the potential loss is unlimited. In this case, as the share price rises the writer will have to pay more to buy the shares at the market price if the option is exercised.

The break-even point for the call option writer is the exercise price of the option plus the premium received. This is the same as for the call option taker.

For call options the break-even point is the exercise price plus the premium.

For put options the break-even point is the exercise price less the premium.

Plus option taker

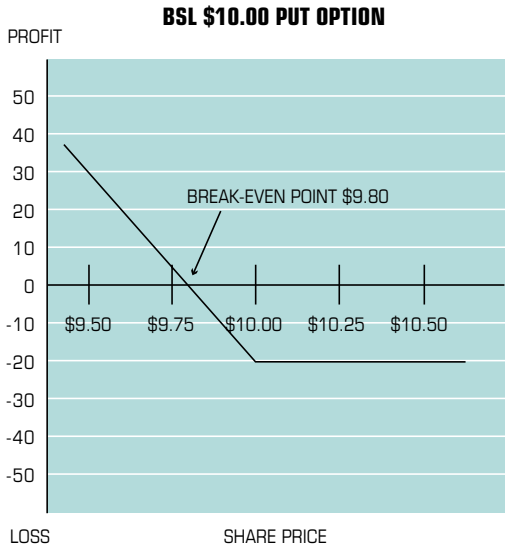
Using the example of buying a 3 month BlueScope Steel Ltd (BSL) $10.00 put for 20 cents.

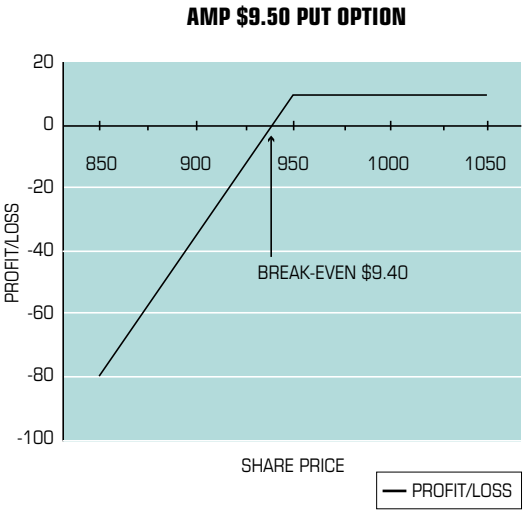
The diagram shows that the most the put option taker can lose is the premium paid. The further the share price falls below the break-even point of $9.80, the larger the investor's potential profit. The break-even point for the put option taker is the exercise price less the premium paid. The maximum profit is the exercise price less the premium paid.

Put option writer

Using the example of selling a 1 month AMP $9.50 put for 10 cents.

The diagram shows that the put option writer has profit potential limited to the premium received ($100). Once the share price falls below $9.50 the put writer's profits begin to erode. This becomes a loss after the share price falls below $9.40. The break-even price of $9.40 is the exercise price less the premium received, and the potential loss is limited only by a fall in the share price to zero.





These four pay-off diagrams are the basis for more advanced option strategies. By combining these positions, more elaborate and complex strategies can be created.

Summary

CALL OPTION TAKER	CALL OPTION WRITER
Characteristics	**Characteristics**
Pays premium	Receives premium
Right to exercise and buy the shares	Obligation to sell shares if exercised
Trades volatility	Trades time decay
Profits from price rising	Profits from price falling or remaining neutral
Limited losses, potentially unlimited gain	Potentially unlimited losses, limited gain
Can SELL before expiry to close out	Can buy back before expiry or before assignment to close out

PUT OPTION TAKER	PUT OPTION WRITER
Characteristics	**Characteristics**
Pays premium	Receives premium
Right to exercise and sell shares	Obligation to buy shares if exercised
Trades volatility	Trades time decay
Profits from price falling	Profits from price rising or remaining neutral
Limited losses, potentially unlimited gain	Potentially unlimited losses, limited gain
Can SELL before expiry to close out	Can buy back before expiry or before assignment to close out

In this booklet we discuss, in general terms, the risks associated with particular option strategies. It should be remembered that the risk associated with a particular strategy can change over time and in light of market circumstances. Furthermore if you vary the strategy, for example by adding or removing options from your initial position, this can have a dramatic impact on the risk profile of the total position. It could increase your risk, or reduce it. You should give serious consideration to these matters before varying your strategy, and also seek the advice of your broker.

Risks of options trading

Options are not suitable for all investors. In light of the risks associated with trading options, you should use them only if you are confident that you understand them and the risks. Before you invest, you should carefully assess your experience, investment objectives, financial resources and all other relevant considerations, and consult your broker.

Market risks

The market value of options is affected by a range of factors (see the section 'Option pricing fundamentals'). They may fall in price or become worthless on or before expiry. Changes in the price of the underlying may result in changes to the price of an option, but the change can sometimes be in a different direction or of a different magnitude to the change in the price of the underlying.

Options are a wasting asset

Options have an expiry date and therefore a limited life. An option's time value erodes over its life and this accelerates as an option nears expiry. It is important to assess whether the options selected have sufficient time to expiry for your view to be realised.

Effect of 'Leverage' or 'Gearing'

The initial outlay of capital may be small relative to the total contract value with the result that options transactions are 'leveraged' or 'geared'. A relatively small market movement may have a proportionately larger impact on the value of the contract. This may work against you as well as for you. The use of leverage can lead to large losses as well as large gains.

Options writers face potentially unlimited losses

Writing (selling) options may entail considerably greater risk than taking options. The premium received by the writer (seller) is fixed and limited, however the writer may incur losses greater than that amount. The writer who does not own the underlying shares or does not have offsetting positions potentially faces unlimited losses.

Additional margin calls

You may sustain a total loss of margin funds deposited with your broker in relation to your positions. Your liability in relation to a written option contract is not limited to the amount of the margin paid. If the market moves against your position or margins are increased, you may be called upon to pay substantial additional funds on short notice to maintain your position, or upon settlement. If you fail to comply with a request from your broker for additional funds within the time prescribed, they may close out your position and you will be liable for any loss that might result.

Liquidity and Pricing Relationships

Market conditions (for example, lack of liquidity) may increase the risk of loss by making it difficult to effect transactions or close out existing positions.

Normal pricing relationships may not exist in certain circumstances, for example, in periods of high buying or selling pressure, high market volatility or lack of liquidity in the underlying security.

Orderly market powers

ASX and ACH have broad powers under the ASX Market Rules to take action in the interests of maintaining fair and orderly markets or of providing services in a fair and effective way. These powers include the ability to suspend trading, impose position limits or exercise limits and terminate open contracts. In some circumstances, this may affect your positions. Similarly, regulatory authorities such as ASIC may give directions to ASX or ACH, for example to suspend dealings in products.

Trading disputes

You should be aware that all options transactions on ASX are subject to the rules, procedures, and practices of ASX and ACH. Under the ASX Market Rules, certain trading disputes between market participants (for example errors involving traded prices that do not bear a relationship to fair market or intrinsic value) may lead to ASX cancelling or amending a trade. In these situations the client's consent is not required for the cancellation of a trade.

Trading Facilities

As with all trading facilities and systems, there is the possibility of temporary disruption to, or failure of the systems used in ASX's Options Market, which may result in your order not being executed according to your instructions or not being executed at all. Your ability to recover certain losses may be subject to limits on liability imposed by the system provider, ASX, ACH or your broker.

You and your broker

This information relates to the relationship between you and your broker (or as they are officially called, ASX Participating Organisations) when trading and settling exchange traded options.

1. Your relationship with your broker

Brokers offer both trading and clearing services or they can specialise, with some parts of the trading and settlement process contracted to other brokers.

The different services a broker may offer in trading and settling options are as follows:

- Offer both trading and clearing services, called a "full service" broker.
- Offer only trading services. If so, the broker will execute transactions through the Integrated Trading System but will not provide clearing services.
- Offer only clearing services. If so, the broker will settle transactions but will not offer trading services.
- Offer purely advisory services. If so, the broker will not offer clearing or trading services but will only provide advice to clients. They will use another broker to perform these functions.

2. The paperwork: Client Agreement forms

If you are trading through a 'full service' broker (i.e. one which offers both trading and clearing services) you will only have to sign one Client Agreement form with that broker. If the broker does not offer both trading and clearing services then you may have to sign more than one Agreement.

A trading broker (which is not also a clearing broker) uses a clearing broker to clear its option trades. You don't have to use the trading broker's clearing broker.

The Client Agreement is a legal contract setting out the terms on which the broker(s) will act for you.

If you use an advice only broker, you must still sign a Client Agreement with a trading broker and a clearing broker.

It is important that you read the Client Agreement carefully before signing it and retaining a copy of the agreement.

ASX does not prescribe a set Client Agreement but requires minimum terms which the Client Agreement must contain. Brokers may have other terms provided they are not inconsistent with the minimum terms.

The involvement of Australian Clearing House (ACH)

It is important to understand that options registered with the Australian Clearing House Pty Ltd (ACH) are contracts between clearing brokers and ACH (on a principal to principal basis). ACH does not have any contractual relationship with you.

More about the role of the ACH is detailed below.

Fees and commissions

ASX does not prescribe the rate of brokerage which brokers may charge. Clients should discuss these rates and how they will be administered directly with their broker(s) prior to signing the Client Agreement(s). ASX and ACH have standard fees (e.g. for trading and exercise), which can be checked by calling ASX or your broker, or referring to **www.asx.com.au/options** (under Costs in the "Trading Information" section).

Contract notes and monthly reports

The trading broker is under a legal obligation to provide you with a contract note. In practice, the trading broker may arrange for the clearing broker to provide a contract note to you on behalf of the trading broker. A contract note must contain information about the trade and the client including (but not limited to):

- the client's details
- the option series traded
- the trade details
- brokerage and fees
- which broker traded
- which broker cleared the trade (if the trading broker is not also the clearer.)

You should ensure the details contained in each contract note are correct and immediately discuss any inaccuracies with your broker.

At the end of each month if you have open positions you will receive a statement listing your positions. Again, it is important that you carefully check these documents and immediately raise any inaccuracies with your broker.

Failing to pay your broker

One of the significant terms required in every Client Agreement with a clearing broker is their right to close out contracts opened for you, without further notice to you, if you fail to pay as agreed in the Client Agreement.

Accordingly, it is important that you understand the settlement and margin requirements set out in the Client Agreement(s) before commencing trading.

3. Instructing a broker to trade options

Your investment objectives

Trading brokers are required to understand their client's financial situation in order to assess whether a particular investment (such as options) is suitable for that particular client's situation. The trading broker's adviser will ask you certain questions relating to your financial position and your investment objectives when dealing with you for the first time. The adviser will rely on the information you provide when advising you.

ASX Accredited Derivatives Advisers

You can place an order through any adviser, however under the ASX Market Rules, only those individuals who are ASX Accredited Derivatives Advisers can advise retail investors about what orders to place.

What does "Opening" and "Closing" a transaction mean?

When you first buy (or sell) options it is called an opening transaction. If you then sell (or buy) options to cancel existing bought (or sold) open positions, it is called a closing transaction.

For example, if you have just opened an account with ABC Stockbroking Limited and instruct ABC Stockbroking to sell 10 one month ANZ Limited (ANZ) calls with a strike price of $30.00, this is called an opening transaction. If, after one week, you decide you do not wish to remain exposed to having to sell 10,000 ANZ underlying shares, you would instruct ABC Stockbroking to buy the 10 ANZ one month $30.00 call options as a closing transaction.

It is important that you tell your broker whether you are entering into an options transaction to open or to close.

Once the transaction has been registered, and is entered to close, the initial open contract is cancelled and you have no further rights or obligations arising from these ANZ call option contracts (on either the buy or sell sides).

If receiving investment or trading advice about options, you should ensure that the individual from whom you are receiving such advice is accredited.

Exercising options

If you wish to exercise rather than close out taken (bought) open contracts you will need to notify your broker of exactly which option contract(s) you want to exercise. The broker will advise you of the latest time it will accept and instruction to exercise contracts in order for them to be exercised that day (T).

Where an exercise instruction is given, ACH will randomly select a writer (seller) in that series of options and on the following day will notify that writer that their written (sold) positions has been exercised (i.e. T+1).

Settlement of underlying securities on exercise

Payment for, and the delivery of, underlying securities, on exercise of an open contract are undertaken by the clearing broker. The clearing broker has the legal obligation to provide the contract note for the settlement of the underlying securities following an exercise. The securities transaction resulting from exercise of an option takes place three business days after exercise (T+3).

Cash or collateral to cover margins

The broker's dealings with ACH are as principal, in other words ACH's relationship is with the buying and selling broker of an option contract, and not with the end buyer and seller of the contract. The broker is liable for meeting payment, settlement and margin obligations to ACH.

Brokers require option investors to provide money or property to enable the broker to manage the risks associated with the client's dealings in options. Client money and property must be dealt with in accordance with the Corporations Act, the ASX Market Rules, the ACH Clearing Rules and the Client Agreement.

The broker is generally obliged to hold money on trust, but this does not include money paid to reimburse the broker for payments it has made to ACH in respect of dealings for the client.

The broker may lodge CHESS securities held in the client's name with ACH as collateral for margin obligations relating to options trades for the client. Where this occurs, the securities are held by ACH as a "third party security". ACH is not entitled to use the security to cover the broker's obligations to ACH relating to dealings for other clients or the broker's own dealing. Margining is discussed in more detail on page 15.

4. Role of Market Makers

Market makers play an important role in the options market. They provide liquidity, and assist in the price discovery process, so that traders and investors are more easily able to price and value options. Market makers are not required to provide quotes in all series, or at all times, and as such there can be no guarantee that all series will have prices displayed.

Under ASX Market Rules, each market maker is assigned one or more securities in which they must meet certain obligations for certain percentages of time*. This involves quoting buy and sell prices for a certain number of series, and/or responding to requests from other market participants for prices.

Market makers can choose to have the following obligations:

a) make a market on a continuous basis only; or

b) make a market in response to quote requests only; or

c) make a market both on a continuous basis and in response to quote requests.

Continuous Markets

Market makers who choose to make a market on a continuous basis are obligated to provide orders continuously for certain percentages of time* in eighteen series per underlying security, encompassing three calls and three puts in any three of the next six expiry months. (3 series of calls and puts in 3 expiry months – 3 x 2 x 3 = 18 series). The criteria are based on the previous trading day's closing price of the underlying security and are selected from:

1. Those series at-the-money
2. The next three in-the-money
3. The next three out-of-the-money.

Each order must be for at least the minimum quantity, and at or within the maximum spread requirements.

Quote requests

Market makers who choose to make a market in response to quote requests must provide orders on request for certain percentages of the time* for all series out to nine months maturity, for the minimum quantity and within the maximum spread.

The maximum elapsed time before responding to a quote request or replacing continuous orders is 30 seconds.

The minimum duration of an order is 30 seconds. An order can be amended on condition that the minimum quantity and the maximum spread are maintained.

* The required percentage for meeting quote requests only or maintaining continuous markets only is 60%. Where the market maker has elected to make a market both on a continuous basis and respond to quote requests, their obligation is 50% of the relevant period. There is no break in options trading over lunch time, although performance of market makers in meeting their obligations is measured between 10.20am and 4.00pm and excludes the lunch period 1.00pm to 2.00pm.

Maximum spreads

Each security over which exchange traded options are traded has a category designated by ASX. The category is allocated by reference to the liquidity of the security.

The category of the security determines:

- the maximum spread (the difference between the bid and offer prices) the designated market maker(s) may quote when making a market
- the minimum number of contracts for which the market maker must quote a price. The minimum volume requirement is ten contracts for Category 1 securities and five contracts for Category 2 securities.**

** Please note that notwithstanding the maximum spreads set out for category 2 securities, in the case of continuous market makers, obligations must be met to the satisfaction of ASX on a best endeavours basis. Maximum spread tables are published in the ASX Market Rule Procedures.

MINIMUM VOLUMES

Category 1 Securities:	10 contracts
Category 2 Securities:	5 contracts

5. Australian Clearing House Pty Ltd (ACH)

ACH is a wholly owned subsidiary of ASX. It undertakes the registration and clearing of all options traded on ASX's Options Market. The points below are some of the key aspects of ACH.

Novation

Through a process called "novation" ACH becomes the counter-party to both the buying and selling brokers of an option contract. That is, ACH becomes the buyer for each sold option and the seller for each bought option. For example: ABC Stockbroking places an order to sell 10 one month ANZ $27.00 call options and XYZ Stockbroking agrees to buy them. On registration of the trade with ACH the original buy and sell trade (called a market contract) is "novated" and replaced by two new contracts (called open contracts) whereby ACH becomes the counterparty buyer against the selling broker and correspondingly, becomes the counterparty seller against the buying broker. This means that the buying and the selling brokers only deal with ACH in the settlement of the open contract and neither broker has to rely on the other to perform under the original market contract.

Adjustments to options series

In certain circumstances where the capital structure or value of the underlying securities over which options exist is changed, ASX may make adjustments to the contract specifications of a class of options.

Adjustments are discussed in detail on page 8 of this booklet.

Position and exercise limits

ASX reserves the right to limit the number of options in a series or class which may be registered with ACH and may also restrict the exercise of open contracts in a class. Both of these limits may be applied in relation to one or more accounts or accounts generally.

National Guarantee Fund

In certain circumstances you may have a claim against the National Guarantee Fund (NGF). The NGF is administered by the Securities Exchanges Guarantee Corporation Limited and is governed by the Corporations Act. The NGF provides you with some protection in the specific circumstances set out in the legislation:

1. if a stock option is exercised, the NGF guarantees completion of the resulting trades in certain circumstances; and

2. if you have entrusted property to your broker in the course of dealing in options, and the broker later becomes insolvent, you may claim on the NGF for any property which has not been returned to you or which has otherwise not been dealt with in accordance with the broker's obligations.

Further information on these potential NGF protections can be found at **www.segc.com.au**

Glossary of terms

Adjustment to options contract

adjustments are made when certain events occur that may affect the value of the underlying securities. Examples of adjustments include changing the number of shares per contract and/or the exercise price of options in the event of a new issue or a reorganisation of capital by the issuer of the underlying securities.

American style

type of option contract which allows the holder to exercise at any time up to and including the expiry day

Annualised return

the return or profit, expressed on an annual basis, the writer of the option contract receives for buying the shares and writing that particular option.

Assignment

the random allocation of an exercise obligation to a writer. This is carried out by ACH.

At-the-money

when the price of the underlying security equals the exercise price of the option.

Australian Clearing House

Australian Clearing House Pty Ltd (ACH), a wholly owned subsidiary of ASX.

Buy and write

the simultaneous purchase of shares and sale of an equivalent number of option contracts.

Call option

an option contract that entitles the taker (buyer) to buy a fixed number of the underlying securities (usually 1,000) at a stated price on or before a fixed expiry day.

CHESS

Clearing House Electronic Sub-register System which provides the central register for the clearing and settlement of CHESS approved financial products, the transfer of securities and the registration of transfers.

Class of options

all option contracts covering the same underlying security.

Clearing Participant

means a person that has been admitted as a participant of the clearing and settlement facility operated by ACH, in accordance with the ACH Clearing Rules.

Closing purchase

a transaction in which a party who has previously written (sold) an option liquidates the position as a writer by "taking" an option in the same series as the option previously written.

Closing out

a transaction in which a party who had previously taken (purchased) an option, liquidates the position as a taker by "writing" an option in the same series as the option previously taken or vice versa for a sold position.

Delta

the rate in change of option premium due to a change in price of the underlying securities.

Derivative

an instrument which derives its value from the value of an underlying instrument (such as shares, share price indices, fixed interest securities, commodities, currencies, etc). Warrants and options are types of derivatives.

Designated Trading Representative

the person authorised to execute options transactions on behalf of an ASX registered broker.

European style

type of option contract which allows the holder to exercise only on the expiry day

Exercise price

the amount of money which must be paid by the taker (in the case of a call option) or the writer (in the case of a put option) for the transfer of each of the underlying securities upon exercise of the option.

Expiry day

the date on which all unexercised options in a particular series expire.

Fair value

the theoretical value generated using an options pricing model.

Hedge

a transaction which reduces or offsets the risk of a current holding. For example, a put option may act as a hedge for a current holding in the underlying instrument.

Implied volatility

a measure of volatility implied by the current market price of an option.

In-the-money

and option with intrinsic value.

Integrated Trading System (ITS)

the screen trading mechanism for ASX listed products.

Intrinsic value

the difference between the market value of the underlying securities and the exercise price of the option. Usually it is not less than zero. It represents the advantage the taker has over the current market price if the option is exercised.

Long term option

an option with a term to expiry of two or three years from the date the series was first listed.

Margin

an amount calculated by ACH to cover the obligations arising from option contracts.

Market maker

options traders who provide quotes in options, assisting other traders and investors in pricing options.

Multiplier

is used when considering index options. The strike price and premium of an index option are usually expressed as points. A multiplier is then applied to give a figure in dollars and cents. For example, the multiplier may be $10 per point, meaning that to buy an index option with a premium of 100 points, an investor would pay $1,000.

Open interest

the number of outstanding contracts in a particular lass or series existing in the option market. Also called the "open position".

Opening purchase

a transaction in which a party becomes the taker of an option.

Opening sale

a transaction in which a party becomes the writer of an option.

Out-of-the-money

a call option if the market price of underlying securities is below the exercise price of the option; a put option is out-of-the-money if the market price of the underlying securities is above the exercise price of the options.

Premium

the amount payable by the taker to the writer for entering the option. It is determined through the trading process and represents current market value.

Put option

an option contract that entitles the taker (buyer) to sell a fixed number of underlying securities (usually 1,000) at a stated price on or before a fixed expiry day.

Random selection

the method by which an exercise of an option is allocated to a writer in that series of options.

Series of options

all contracts of the same class and type having the same expiry day and the same exercise price.

Spot month option

an option with a term to expiry of around four weeks from the date the series was first listed.

Taker

the buyer of an option contract.

Time value

the amount investors are willing to pay for the possibility that they could make a profit from their option position. It is influenced by time to expiry, dividends, interest rates, volatility and market expectations.

Underlying securities

the shares or other securities subject to purchase or sale upon exercise of the option.

Volatility

a measure of the expected amount of fluctuation in the price of the particular securities.

Writer

the seller of an option contract.

Option contract specifications

Name	Exchange traded equity options
Underlying security	Any share approved by ASX under Guidelines for Listing Equity Options
Security code	The first three characters will be the ASX code eg. BHP, the fourth and fifth character will designate the expiry month and series
Contract size	Usually 1,000 shares per contract. This may be adjusted for rights, bonus issues and other capital adjustment events
Tick size	$0.001 per share = $1.00 (contract size 1,000 shares)
Exercise style	Usually American, ie. exercisable on or before the expiry date
Exercise price	Varies for each stock
Type	Call and put options
Contract months	As detailed in the ASX expiry calendars
Expiry date	Thursday before last Friday of the settlement month. This may change due to public holidays
Trading hours	Normal trading 10.00am to 4.20pm (Sydney time). Late trading 4.20pm to 5.00pm and overseas trading in accordance with the ASX Market Rules
Settlement	Physical delivery of underlying security

Contract name	Index options
Underlying index	Various indices including the S&P/ASX200 (XJO)
Security code	The first three characters will be the ASX code, eg. XJO, the fourth and fifth character will designate the expiry month and series
Index multiplier	$10. Each index point is equal to $10
Tick size	Quoted as 1 index point
Exercise style	European, ie. exerciseable only on expiry day
Exercise interval	25 Index points
Type	Call and put options
Contract months	March, June, September, December
Last trading	Expiry day
Expiry day	12.00pm on the third Thursday of the contract month
Trading hours	6.00am to 5.00pm and 5.30pm to 8.00pm (Sydney time)
Settlement	Cash settled against the Opening Index Price Calculation (OPIC) as calculated on expiry day

For current option contract specifications, please refer to the ASX website at
www.asx.com.au/options

Further information

For ASX explanatory booklets on options, please phone 131 279, or download the booklets from the ASX website **www.asx.com.au/options**

Online Classes

Online options classes include interactive exercises that will aid your learning and a quiz at the end of each section to show your progress.

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