



**ASX**  
AUSTRALIAN STOCK EXCHANGE

# Warrants

Understanding trading and investment warrants

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# Updates **1**

## Warrants Explanatory Booklet

**This insert includes relevant updates for consideration by those investing in warrants.**

The following are updates due to the amendments to section 10 of the ASX Market Rules and Market Rule Procedures introduced on 20 October 2005.

### **Assessed Value Payment** UPDATE TO PAGE 30

Holders of deliverable warrants that do not exercise before expiry may be entitled to a cash payment. This payment is referred to as an "assessed value payment" (or AVP). Previously the AVP rule would require the issuer to pay a warrant holder a minimum of 90% of the warrant's intrinsic value at expiry. Under the amendment of the AVP rule introduced on 20 October 2005, warrant issuers may draft within the Terms of Issue of warrants an AVP payment based on the warrant's intrinsic value (if any) less reasonable costs (which may include such things as taxes and expenses). The disclosure document for a warrant will explain the calculation of the AVP for that warrant and when it will be paid.

### **Expiry Notification** UPDATE TO PAGE 30

Previously, warrant issuers were required to send each warrant holder a notice of impending expiry of the warrant between 20 and 30 days before the expiry date. This requirement has now been removed from the ASX Market Rules. Although warrant issuers are no longer mandated to provide expiry notifications to holders, they may continue to do so as part of their operations.

### **Deferred Purchase Agreement** ADDITION TO WARRANT FEATURES ON PAGE 8

Warrants may be structured as deferred purchase agreements ("DPA"). The value of DPA warrants may be linked to the performance of an asset or index ("reference asset") that may or may not be the delivery asset. For example, a reference asset may be a portfolio of debt and shares, where at maturity the delivery asset is BHP shares. Reference assets include a broad range of assets and indices such as commodities, futures contracts and the performance of investment strategies.

The following are updates due to the amendments to section 10 of the ASX Market Rules and Market Rule Procedures introduced on 4 September 2006.

### **Market Making and Liquidity** UPDATE TO PAGES 28-29

The ASX Market Rules are intended to promote a liquid market in which warrant holders can sell their warrants. The rules seek to do this by requiring the issuer of each warrant series to:

- ensure that the warrant series has an initial spread of holders that, in the opinion of ASX, is adequate and reasonable; or
- "make a market" in the warrant series on an ongoing basis, by ensuring that a reasonable bid and volume is maintained in the market for a prescribed period (currently 90% of the time between 10:15 am and the close of Normal Trading (normally 16:00 pm) on any Trading Day), except in certain "Permitted Circumstances" (outlined below).



# Updates **2**

## Warrants Explanatory Booklet

If a warrant issuer satisfies ASX that the initial issue of warrants generates a sufficient spread of holders, it is not required to make a market in that series. A sufficient spread of holders demonstrates a level of interest that should ensure that there is a liquid market for buyers and sellers of the warrant series.

In most circumstances the warrant issuer elects the latter alternative, that is, to make a market in the warrant series. This means that apart from Permitted Circumstances (outlined below), there should be a price quoted on the Integrated Trading System (ITS) at which warrant holders will be able to sell during most of the normal trading day.

The warrant issuer's market making obligation under the ASX Market Rules is to ensure that a reasonable bid and volume is maintained in the market for the relevant warrant series for the prescribed period. It is important to note that warrant issuers will normally display both bid and offer orders for most warrant series during normal trading hours.

A bid is considered reasonable for the purposes of the ASX Market Rules if it either:

- satisfies an objective "price-volume spread" test, under which:
  - the warrant price spread must not exceed a prescribed amount (or proportion of the bid price); and
  - the bid value must not be less than a prescribed amount; or
- is otherwise considered by ASX to be reasonable having regard to a number of qualitative factors including (among other factors) the market conditions in the underlying instrument (or the underlying hedge instrument), consistency of warrant pricing, the nature and make up of the underlying instrument and any corporate actions or adjustments that may be occurring in respect of that underlying instrument.

A warrant issuer is not required to maintain a reasonable bid in respect of a warrant series in certain circumstances, known as "Permitted Circumstances". These include (among other circumstances) when:

- The underlying instrument (or the underlying hedge instrument) is suspended from trading, has been placed in a trading halt or is otherwise unavailable for trading;
- The warrant series is placed in any of the ITS session states where bids and offers for that product are not automatically matched on the trading platform or is otherwise unavailable for trading;
- The theoretical value of the warrant series is below the relevant minimum price step of ITS;
- The warrant issuer would breach laws either in Australia or a relevant foreign jurisdiction by fulfilling its market-making obligations, and has advised ASX accordingly; or
- The warrant issuer or its market making agent experiences a continued interruption to its normal operating environment that prevents it from entering market making orders in ITS in a timely and accurate manner (for example, the malfunctioning of automated market making systems).

### **Stock Exchange Automated Trading System (SEATS) UPDATES TO PAGES 5, 28, 29, 38**

As of 4th September 2006, warrants will commence trading on the Integrated Trading System (ITS). Where reference is made to the SEATS trading system, ITS will now apply.

# Further sources of information

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## Explanatory booklets and other information is available on the ASX website – [asx.com.au/warrants](http://asx.com.au/warrants):

- free online class
- trading information and tools
- ASX trading codes and prices for warrants
- links to warrant issuers' websites (disclosure documents, pricing calculators)
- a range of free booklets: various warrant fact sheets  
taxation treatment on warrants (by Ernst and Young)

## Online Warrants Class

On the ASX website there is a comprehensive online class, 'Getting started in Warrants'. This allows you to proceed through the class in your own time and at a pace that suits you. The class includes interactive exercises to aid your learning, and a quiz at the end of each section to show your progress. At the conclusion of the class a final quiz tests your warrants knowledge and identifies additional reading that is tailored to complete your knowledge of the warrants market.

## Contact details

**Warrants toll free information line**  
131 ASX

**Email** [warrants@asx.com.au](mailto:warrants@asx.com.au)

**ASX Warrants**  
20 Bridge Street, Sydney NSW 2000

**Internet** [www.asx.com.au/warrants](http://www.asx.com.au/warrants)

## Recommended Reading

### *Investing in Warrants – the ASX Way*

The fourth addition to the series of the *ASX Way* books is *Investing in Warrants*. This book covers warrant basics through to strategies, such as building an investment portfolio, earning income and protecting the value of underlying interests. Now, investors can access a wide range of warrant structures which suit different types of investors and risk profiles.

From warrant basics to developing strategies, this book covers:

- The different instalment strategies
- Using instalments within self-managed superannuation funds
- How warrants are priced
- Index, currency and knock-out warrants
- The risks involved
- The tax considerations when investing in warrants.

Written by the expert Structured Products team from the Australian Stock Exchange, *Investing in Warrants* is the ideal guide for the warrant novice or for the experienced investor looking to brush up on the fundamentals of warrant investing. Straightforward and concise, this book will help provide investors with all the knowledge they need to *invest in warrants – The ASX Way*.

*Investing in Warrants – the ASX Way* is available at Dymocks and all quality book stores.

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Please send me the following fact sheets:

- Investment strategies using instalments
- Trading strategies using instalments

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Name

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Address

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Postcode

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# Introduction

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## **Warrants – A new investing alternative**

The 1990s saw a dynamic financial market become established in Australia offering concepts that were innovative for private investors. In the past decade characterised by its innovation, the rapidly growing warrants market was at the cutting edge. This was achieved by an increased variety of investing choices and opportunities for active traders and medium and long term investors. The growth in the use of warrants and the development of warrant concepts continue to create a new investing alternative for personal investors alongside traditional choices like shares, interest paying securities and investment trusts.

### **Warrants:**

- are financial products traded on ASX;
- include a right to buy or sell a share or some other asset;
- have a set life during which they exist – a time period;
- serve a particular purpose that depends on the type of warrant: for example, to pursue a short term trading opportunity; or to maximise the income potential or to maximise the capital gain that can be earned over a longer period.

Because different warrants serve different purposes, this makes it important to distinguish between them and appreciate exactly what they offer and how they can be used. Before you consider becoming involved in warrants you need to know the differences between call and put warrants, between different warrant types such as instalments and endowments, what index warrants do and how currency, commodity, portfolio and other warrants work.

You also need to understand the benefits and risks of trading or investing in warrants and the market generally, and what makes warrants different from the related investments on which they are based. All forms of investing have risks and within investment categories, like the warrant family, the different risks of participation should be appreciated in order to invest in an informed manner.

This booklet will provide you with a basic introduction to warrants that you can then work from.

John Wasiliev

# Before you begin

## What are warrants?

Warrants are financial instruments issued by banks, governments and other institutions and are traded on the Australian Stock Exchange (ASX) equities market. They are very broadly split into investment-style products and trading-style products.

Warrants are a form of derivative - that is, they derive their value from another 'thing' (underlying instrument). Some give holders the right to buy, or to sell the underlying instrument (eg. a share) to the warrant issuer for a particular price according to the terms of issue. Alternatively, others entitle holders to receive a cash payment relating to the value of the underlying instrument at a particular time (eg. index warrants).

Warrants may be issued over securities (such as shares or debentures), a basket of different securities, a share price index, debt, currencies, or commodities.

The range of financial instruments traded as warrants has evolved over time so that it is now difficult to define particular characteristics of all warrants. Warrants cover a wide spectrum of risk profiles, investment objectives and likely returns.

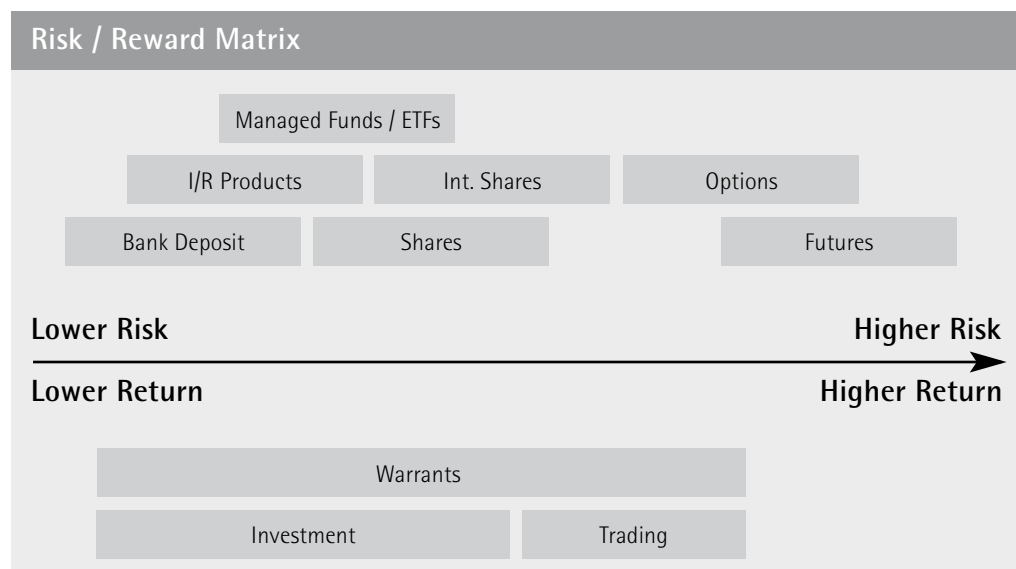
Some warrants have higher risk/return profiles than others that offer lower risk features such as capital guarantees.

## About this booklet

This booklet contains an outline of common features and a general description of most types of warrants. It is not an exhaustive or complete analysis of all warrant types and features.

The main objective is to provide you with general information about warrants and about some of the risks of trading or investing in warrants.

Before buying warrants, you should understand the terms and risks associated with the particular warrant series. You should read the disclosure document (called either a product disclosure statement or in some cases an offering circular) prepared by the issuer of the warrants and seek specific advice from your accredited derivatives adviser.



The booklet also contains various comments by John Wasiliev, a financial reporter. John has many years experience reporting on financial markets. In particular, John currently has a weekly warrant column in "The Australian Financial Review" which reports on the latest trends and products which are brought to the marketplace.

### **Important**

It is important that you understand:

- ASX grants permission for warrants to be traded on its market (called 'admission to trading status') on the application of warrant issuers. ASX does not guarantee the performance of warrant issuers nor does it vouch for the accuracy of the disclosure document.
- You must make your own credit assessment of the warrant issuer of a particular warrant series.
- Warrants have a limited life and cannot be traded after the relevant expiry date. The terms of a warrant series may be subject to adjustments or the warrants may expire early in particular circumstances. Depending upon the circumstances the price of most warrants will fall rapidly as they approach expiry.
- Warrants do not have standardised terms. The terms may vary considerably between different series (even between warrants of the same type) and different warrant issuers. You should seek information regarding the specific terms of issue for a series of warrants before you trade in a series.
- There are different risk and return profiles for different warrant series. Some warrants have features that make them more risky than others. You should seek specific advice about the risks and features of a warrant series from your accredited derivatives adviser.
- Some advisers may be paid commissions or other benefits by warrant issuers in relation to the sale of particular warrants. Your adviser is obliged to disclose to you any commissions or other benefits which may influence his/her recommendation.

### **Warrants and ETOs**

ASX also operates a derivatives market for exchange traded options (ETOs). To varying degrees (depending on the type), warrants have similarities to ETOs. Warrants and options are primarily financial products that allow you to gain exposure to the underlying instrument without necessarily owning that instrument.

Warrants and ETOs do not give direct control over the underlying instrument until exercise and unlike shares, will expire after a certain period of time. There are however some key differences between warrants and ETOs such as:

- The terms of ETOs are standardised and are set by ASX, whereas the terms of different warrant series are set by the issuer and can be quite diverse. This allows you to find a particular type of product that suits your investment needs, for example, an investor seeking capital growth and dividend income may select an instalment.
- Warrants are tailored to meet specific needs, therefore there are different types of warrants. Some of these types of warrants have little in common with ETOs, where there are only three types.
- Unlike ETOs, you cannot write warrants and there are no margin payments associated with warrants to cover the risk of financial loss due to adverse market movements.
- Warrants are traded on the ASX equities trading system – SEATS – whereas ETOs are traded on the ASX options trading system – DTF (Derivatives Trading Facility).
- Settlement of warrant trades occurs through CHES in the same manner as share transactions are processed. The Australian Clearing House Pty Ltd (ACH), which controls the clearing of ETOs has no involvement in settling warrant trades.

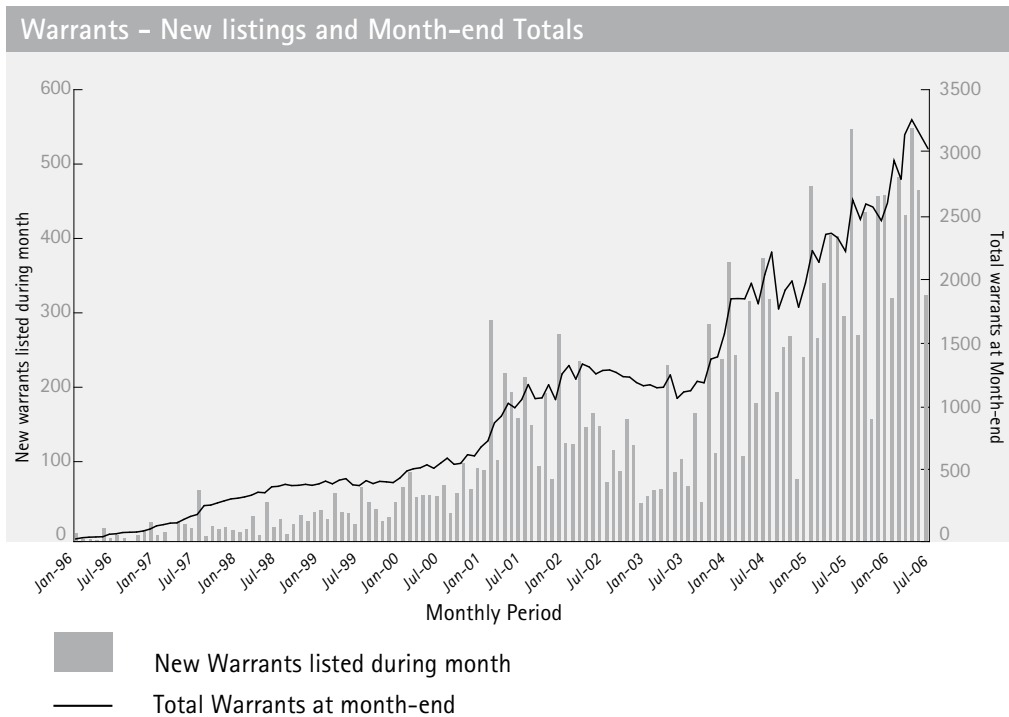
# The ASX warrants market

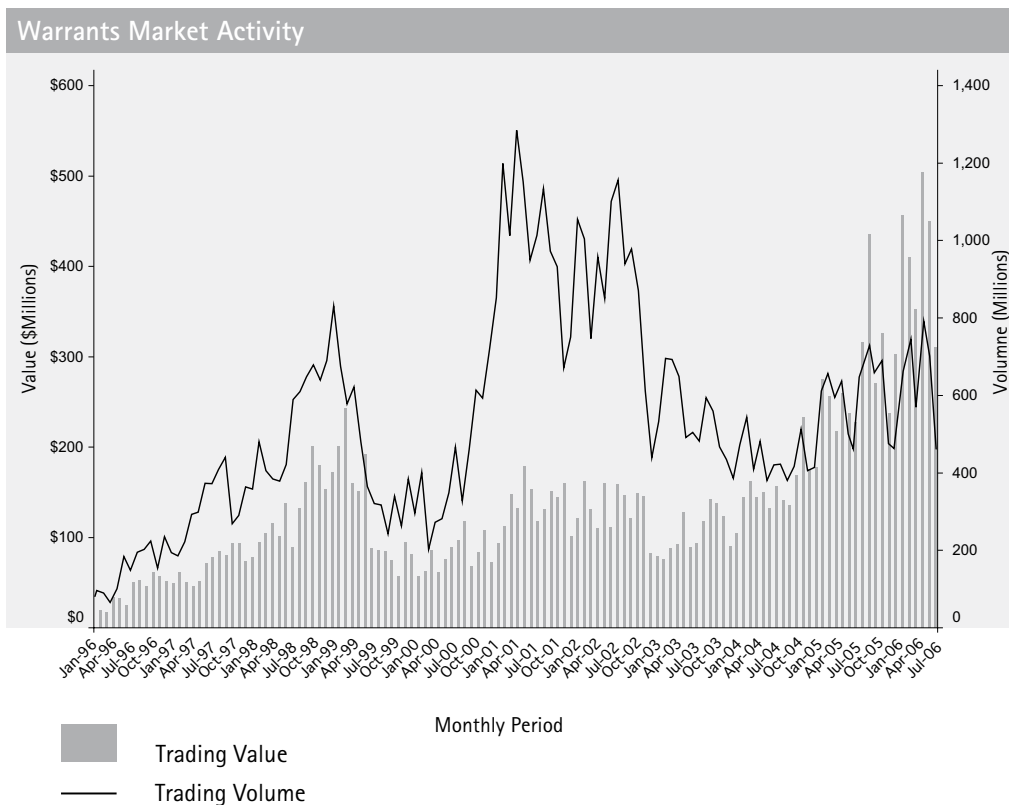
Warrants are traded in many key financial markets of the world. ASX has operated a warrant market since 1991.

Warrants have become an increasingly popular investment alternative in recent years. The first chart shows the increase in the number of warrants available. The second chart shows trading volume and value in recent years. The recent drop in trading activity has been associated with a general fall in equity market activity and a shift towards warrant products that tend to be less actively traded (e.g. instalments).

The market began by trading equity call warrants only. Others types have been introduced over time. There are now a number of different warrants available for trading or investment including instalments, structured investment products, trading warrants, knock-out warrants, commodity warrants and endowments. These (and others) are discussed later in this booklet.

As at 30 April 2005 there were 6 active warrant issuers and 2,200 warrant series available for trading or investment.





### Appreciate the relationships

Warrants are offered on a range of traditional and non traditional investment assets. Examples of traditional assets are shares in companies and units in investment trusts. There are also warrants on some fascinating non-traditional investment assets. They include specially constructed portfolios of shares, warrants on currencies and on local and international market indices, like the S&P™/ASX 200 Share Price Index, the U.S. Standard & Poors (S&P 500) Index and the Japanese Nikkei 225 Index.

Because you're not buying or selling the actual investments, but rather buying warrants that give you the choice of whether to buy or sell – which you may not take advantage of – warrants can allow an investing position to be established for a fraction of the cost of a transaction involving the actual assets.

In some instances, warrants prices can represent a small proportion of the value of the related investment: as little as 1-to-2 per cent or less for 'highly geared' or 'leveraged' warrants. In other cases, there may be only a small price differential between the warrant and the investment. Yet in both circumstances and all situations in between, warrants can offer a different investment result than a commitment to the related investments.

John Wasiliev

# Warrant features

Some features or characteristics form part of many warrants. Some of these are described below – some appear in all warrant types and some do not. As we state many times, warrants do not have standardised terms. The terms are specified by the warrant issuer within the constraints of the ASX Market Rules and the law. This means the terms may vary significantly between different warrant types, between different series of the same type of warrant and between different warrant issuers.

The terms and conditions of a particular warrant series are set out in a document prepared by the warrant issuer called a disclosure document (either a product disclosure statement (PDS) or an offering circular). To obtain a copy of a disclosure document, you should speak to your adviser or the warrant issuer. Some warrant issuers put their disclosure documents on their own web sites. All disclosure documents, issued post 1999, are available on the ASX website.

When reading the disclosure document, you should be aware that some issuers use different terminology for different types of warrants. Where this occurs, the disclosure document will generally contain a table to cross-reference the terms to known concepts.

## **Underlying instrument**

A warrant derives its value from some other 'thing' or instrument. It is generally the instrument which you have the right to buy or sell or against which a cash payment is made. The underlying instrument may be a security (such as a share in a company), a share price index, a commodity or a currency. Some warrants are over a 'portfolio' or 'basket' of securities. The basket may consist of securities in entities with similar activities, for example mining or manufacturing. Warrants over a basket of securities give exposure to the performance of a group of securities or a particular industry. If there is a corporate action, or similar event, the underlying instrument may be adjusted. The disclosure document will explain when this may occur.

## **A warrant derives its value from some other instrument.**

### **Call or put warrants**

Warrants can be either call warrants or put warrants. Call warrants benefit from an upwards price movement in the underlying instrument whereas put warrants benefit from a downward trend.

A deliverable call warrant generally gives you the right to buy the underlying instrument (eg a share) from the warrant issuer at a particular price on, or before, a particular date. A deliverable put warrant generally gives you the right to sell the underlying instrument to the warrant issuer at a particular price on, or before, a particular date. For cash settled calls and puts, the value of the warrant is paid to you in cash.

### **Exercise price (or strike price)**

This is the amount of money which must be paid by you (in the case of a call warrant) or by the warrant issuer to you (in the case of a put warrant) for the transfer of each of the underlying instrument(s) (not including any brokerage or other transfer costs).

In the case of cash settled warrants, the difference between the exercise price (sometimes referred to as the exercise level) and the value of the underlying instrument at expiry is paid on settlement.

The exercise price is generally fixed when the warrants are issued. However, the exercise price could be variable. For example, the exercise price of endowments and some instalments is not fixed. The exercise price of some warrants may also be in a foreign currency – eg. currency warrants and international equity warrants.

Some issuers charge for costs associated with the delivery of the underlying product, so the amount payable on exercise may be more than the stated exercise price.

The exercise price or the basis for calculating the exercise price will be specified in the disclosure document prepared by the warrant issuer.

Like the underlying instrument, the exercise price may be adjusted in certain circumstances. Again, the disclosure document should explain when this may occur.

Please note that in the case of instalments the exercise price is referred to as the loan amount, for tax purposes.

### **Expiry date**

The expiry date is the last date on which the warrant can be exercised. Trading in a warrant ceases on the expiry date. Under some circumstances warrants may be expired early if the warrant has been validly exercised and the issuer will be obliged to deliver or take delivery of the underlying instrument or make a cash payment according to the terms of the warrant series.

### **Exercise style**

Warrants can be either American style or European style exercise. American style means you can exercise the warrant at any time on or before the expiry date. European style means you can only exercise the warrant on the expiry date of the warrant. Occasionally warrants are a mixture of American and European, eg. they may be European up to a certain date and then American thereafter. The terms of the warrant series will set out how you may exercise the warrant. You should be familiar with the terms relating to exercise. A failure to follow the terms may mean the exercise of the warrant is not effective.

### **Deliverable or cash settled**

Deliverable warrants are settled in the first instance by a transfer of the underlying instrument, eg. equity warrants. Cash settled warrants are settled by a cash payment by the warrant issuer to you, eg. index warrants. Some deliverable warrants may also provide for cash settlement in certain circumstances.

In some cases a large number of warrants may need to be exercised to give rise to a delivery obligation, eg. international equity warrants. The terms of issue will identify any exercise conditions.

### **Issue size**

This is the number of warrants that may be issued in a particular warrant series. The warrant issuer may reserve the right to apply to ASX to have more warrants issued in the same series without notice to holders.

### **Conversion ratio**

The conversion ratio is the number of warrants that must be exercised to require the transfer of the underlying instrument. The terms of issue may require one warrant to be exercised to trigger delivery of one underlying instrument. Alternatively, a number of warrants may need to be exercised for the delivery of one underlying instrument.

#### **Example**

If you want to exercise a call warrant over BHP ordinary shares with a conversion ratio of 4, you are required to exercise 4 warrants to buy 1 underlying instrument, which in this case is 1 BHP share.

Don't forget that the conversion ratio is not the only term that must be satisfied to trigger a settlement obligation – refer to the disclosure document for other conditions relating to a valid exercise.

The conversion ratio will affect the price of the warrant on a per share basis (but not the leverage).

A higher conversion ratio means a lower warrant price. While trading prices are quoted on a per warrant basis, the exercise price is quoted on a per underlying instrument (or share) basis. It is therefore important to know the conversion ratio of a warrant series before investing.

The conversion ratio of a warrant may be affected following a corporate action by the underlying company, eg. as a result of a bonus issue or a capital reconstruction.

### **Covered warrants**

A warrant is said to be covered if the warrant issuer places the underlying instrument in a trust or similar custodial arrangement on behalf of the holder. To be called 'fully-covered', the warrant series must also meet particular criteria set out in the ASX Market Rules.

## Index multiplier

This is only relevant to index warrants. It is the figure used to determine the amount payable to you on exercise or expiry.

As a formula,

$$\begin{aligned} &\text{The intrinsic value of a call index} \\ &\text{warrant on exercise or expiry} \\ &= \\ &\text{the index multiplier} \\ &\times \\ &\text{(closing level of the index – the} \\ &\text{exercise level of the warrant)}. \end{aligned}$$

### Example

If the closing level of the index is 4,200 points and the exercise level of a call index warrant is 4,000 points then the warrant has an intrinsic value of 200 points. If the index multiplier is 1 cent then you are entitled to receive \$2.00 per warrant (being  $\$0.01 \times (4,200 - 4,000)$ ).

## Barrier levels

Some warrants have barrier features. A barrier level is a defined level that causes some event to occur. Some barriers cause the warrant to terminate before the original expiry date. Others may cause an adjustment to the exercise price and barrier level (and the warrant continues until expiry) but may require you to make an additional payment to the issuer. Other barriers simply cause the exercise price (or level) and barrier to be reset. The consequences of triggering a barrier level will be specified in the disclosure document for the warrant series. Barrier levels are nominated by the issuer before warrants are issued. The barrier can be above or below the exercise price (or level) of the warrant. Warrants may expire worthless if they are out-of-the-money when the barrier is triggered. If however, the warrants are in-the-money, then the issuer may be obliged to pay a cash amount to holders. The descriptions of index warrants and equity warrants in the **Types of warrants** section of this booklet include examples of warrants with barrier levels.

## Cap levels

Some warrants have their upside potential capped at a certain level. This is sometimes called the cap level.

Cap levels are different to barriers. Cap levels generally do not cause the warrant to terminate but will limit the upside profit potential of the warrant. A cap level is fixed by the issuer when the warrant is issued. If, on exercise or expiry, the value of the underlying instrument is above the cap level, settlement of the warrant is based on a return equal to the cap level (and not the value of the underlying instrument). You could be entitled to a cash payment or transfer of the underlying instrument at a value equal to the cap level. Cap levels are used in a number of different warrant types. In some warrants the cap level is an essential feature. In these warrants, the position of the cap relative to the current share price has a significant economic impact on how the warrant works. The description of capped warrants in the **Types of warrants** section of this booklet has examples of these warrants.

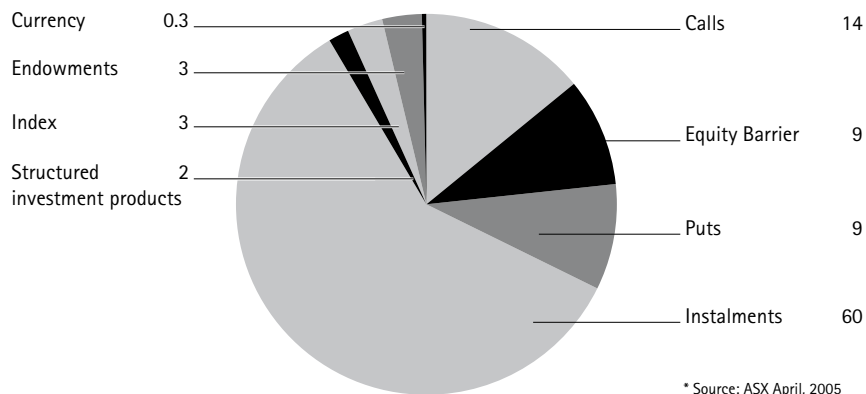
# Types of warrants

In broad terms, warrants can be viewed as being either trading-style or investment-style products. Some may fall into both categories. Trading-style warrants are frequently traded and relatively short dated. They have a higher risk/return profile compared to the investment-style warrants. Index warrants, currency warrants and equity warrants usually fall within this category. Investment-style warrants have other features to attract investors. These warrants tend to be longer dated and are less frequently traded. They have a lower risk/return profile and often have a higher initial outlay compared to trading-style warrants. Endowments and structured investment products are investment-style products. Instalments bridge the gap between trading and investment-style products as some investors hold instalments for trading purposes and some hold them for longer term investment purposes.

Before buying warrants, you should understand the features, benefits and risks of the warrant series you are considering. It is encouraged that you read the disclosure document prepared by the warrant issuer and seek advice from an accredited derivatives adviser. Disclosure documents are available from the warrant issuer and can also be downloaded from the ASX website ([www.asx.com.au](http://www.asx.com.au)).

Set out below is a general overview of some different types of warrants. It does not describe all warrants on the market. Some warrants may have different features or a combination of the features described. Therefore, you should not assume that these descriptions will reflect particular warrants you may consider buying. From time to time we may add further information about new warrant types or features to the ASX website at [www.asx.com.au/warrants](http://www.asx.com.au/warrants).

**Types of warrants on ASX by percentage**



## INSTALMENTS

Instalments allows holders to gain direct exposure to underlying shares by making an initial payment (first instalment) and delaying the final payment (final instalment) to a later date (expiry date). In simple terms, instalments are a loan to buy shares, without the obligation to repay the loan nor the risk of receiving margin calls. The unique feature that sets instalments apart from other types of warrants is that you are entitled to dividends or distributions and franking credits paid by the underlying instrument during the life of the instalment. It is important to note that in some circumstances holders, although entitled to a dividend, may not actually receive that dividend in cash. For example, special dividends may, subject to the terms of issue, be used to reduce the loan amount rather than paid as cash to the holder. Likewise, holders of 'Self Funding Instalments' are entitled to a dividend although they will not receive it as cash as they will instead be directing it be used to reduce the loan amount (see below for details). Some instalments also pass on voting entitlements of the underlying instrument.

Instalments can have a variety of gearing levels. When considered from a gearing perspective, instalments can generally be divided into two categories; 'regular geared' and 'high geared' instalments. At the time of issue, a 'regular geared' instalment will be geared at between 40% and 65%, i.e., for a 50% geared instalment the loan amount would be 50% of the share price. The instalment price will reflect the difference between the share price and loan amount plus funding cost (interest and borrowing fees). At the time of issue, a 'high geared' instalment will have a gearing level between 65% and 110%. As a result of the gearing level the instalment price will reflect a significantly higher funding cost compared to regular geared instalments.

By their nature, instalments are considered to have some characteristics of call warrants, giving holders the right to exercise the instalment to receive the underlying instrument. Instalments can be either European or American exercise style and they usually have a life of between 12 months and 15 years. Instalments are deemed to be a covered warrant meaning that the underlying instrument is held in a trust arrangement for your benefit by a trustee (generally the issuer). If you decide to exercise the instalment and repay the loan amount the underlying instrument will be transferred from the trust to you.

If you decide you do not wish to exercise the instalment, some instalments give you an option to put the underlying instrument back to the issuer and receive a cash payment. Because an instalment is in essence a loan to buy the underlying instrument, the interest component of the payments may allow you to claim the interest as a tax deduction. Many warrant issuers obtain ATO product tax rulings which detail the tax benefits of their instalment series.

### Example

<b>Warrant code</b>	CBAIMM
<b>Underlying instrument</b>	Commonwealth Bank ordinary shares
<b>Warrant type</b>	Instalment
<b>Expiry date</b>	28 September 2006
<b>Exercise price</b>	\$21.00
<b>Exercise style</b>	American
<b>Conversion ratio</b>	1
<b>Settlement</b>	Physical delivery

If CBA's share price was around \$35.00 at the time of issue of the instalment then you would have paid about \$16.60 for the instalment (about half the share price at the time plus funding cost which consists of prepaid interest and fees). If you want to hold the CBA share outright, you can exercise the instalment by paying \$21.00 at any time on or before 28 September 2006 to receive one CBA share per instalment.

The relatively conservative gearing level of instalments means that there tends to be a close relationship between movements in instalment prices and movements in the underlying share or other instrument.

As investors have different needs and financial objectives, innovation has led to the development of different types of instalments. A particular type of instalment may appeal to one's investment objectives compared to another. Therefore it is important to find the most appropriate instalment structure for your needs and objectives. Below is a description of some of these variations on an 'ordinary instalment' structure and an explanation of the unique features associated with each.

## Rolling instalments

Rolling instalments are a variation on the ordinary instalment structure. They have a much longer life (up to 15 years). On a periodic basis (12, 18 or 24 months) the instalment will undergo a reset of the loan amount. The reset period is identified upon the issue date and is outlined in the disclosure document and the ASX website. The instalment is structured so that the interest and borrowing fees are prepaid only up to the next reset date. During a reset period the issuer will ask the holder to prepay the next period's interest and fees up to the next period, if they wish to continue to maintain exposure. At this time the issuer may also adjust the exercise price (often called the "loan amount" of the instalment) with the objective of maintaining a desired gearing level during the life of the instalment (for example, the exercise price may be adjusted to keep it between 40% and 60% of the current market price of the underlying instrument). The issuer may either;

1. Reduce the exercise price (loan amount). In this case, holders will be asked to make an additional cash payment in order to reduce their loan and prepay their funding costs up until the next reset period (12, 18 or 24 months) if they wish to maintain exposure.
2. Increase the exercise price (loan amount). In this case the issuer may make a payment to holders equal to the amount of the increase less funding costs until the next reset period (this may either be in cash or in the form of a reinvestment in additional instalments).
3. Retain the exercise price (loan amount) unchanged. In this case the holder will be asked to make a payment to the issuer for the prepayment of funding costs up until the next reset period, if they wish to maintain exposure.

On the annual reset date you may choose to exercise some or all of the instalments and take delivery of the underlying securities, cash out the instalment, roll into the following year (by agreeing to pay any additional amounts necessary) or do nothing. If you do nothing you are deemed to have accepted the new exercise price and will automatically roll into the following year. If there is an amount due on a series on the 'reset date', and you don't pay this amount, the issuer may terminate some (or all) of your instalments and use the proceeds to meet the amount due. Conceptually, these instalments can

be explained as a series of consecutive ordinary instalments that run back to back with the exercise price being reset on a periodic basis.

During the period surrounding each 'reset date', investors should take care to consider the effect of a change in the exercise price on the value of the rolling instalment. Information on an upcoming reset can be obtained from the warrant issuer or from ASX.

There tends to be a close relationship between movements in instalment warrant prices and movements in the underlying share or other instrument.

## Self Funding Instalments

Self Funding Instalments ("SFI") are another variation on the (ordinary) instalment structure. Like other instalments, you make a partial upfront payment and the issuer loans you the remaining amount. Once you have made your initial payment, generally, there are no additional payments required during the investment term (unless you do not provide your TFN (tax file number) or ABN). SFI's are regular geared, with an investment term between five and ten years.

Holders are entitled to dividends (including franking credits), however the cash component of a dividend will be used to reduce the loan amount rather than being paid in cash to the holder. The loan amount for a SFI will generally increase once every 12 months, as funding costs are added to the total loan amount. Hence, over the life of the SFI, the loan amount will periodically decrease due to the payment of dividends from the underlying instrument, and increase by the amount of funding costs. Ideally the loan amount will progressively reduce over the life of the SFI if the regular dividend payments exceed interest and borrowing charges.

As a result of the dividends being treated differently as compared to other instalments, ASX differentiates SFI's by using the letter 'S' instead of 'I' as the fourth letter in the warrant code.

There may be some tax considerations as holders are entitled to dividends (including franking credits) and make interest payments. As not all instalments have the same structure or features, you should talk to your tax adviser and contact the warrant issuer for an ATO product ruling.

#### Example

<b>Warrant code</b>	ANZSWA
<b>Underlying instrument</b>	ANZ Bank Limited ordinary shares
<b>Warrant type</b>	Self funding instalment
<b>Expiry date</b>	30 June 2009
<b>Exercise price (loan amount)</b>	\$9.50 (16 February 2004)
<b>Exercise price (loan amount)</b>	\$9.154 (31 March 2005)
<b>Exercise style</b>	European
<b>Conversion ratio</b>	1
<b>Current price</b>	\$12.10

In this example, ANZSWA was issued in February 2004 with a loan amount of \$9.50. Over time dividends have been paid which have been used to reduce the loan amount. In addition prepaid interest has been added to the loan amount periodically (generally on 30 June) to reflect the ongoing funding cost of the loan. Taking into account the dividend payments and funding cost, the loan amount has decreased over a 12 month basis from \$9.50 to \$9.154, reflecting a positively geared investment. The franking credits continue to be passed to the holder of the instalment.

#### ENDOWMENTS

Endowments are long term call warrants typically with a 10 year life. They are over an ASX quoted security or basket of securities. Endowments are promoted as investment products to be bought by investors and held until expiry.

The issue price of an endowment is between 30 and 65 percent of the market value of the underlying security at the time of issue. The exercise price (called the "outstanding amount" of the endowment) is initially the remaining sum plus other costs.

The outstanding amount varies over the life of the warrant. In this respect endowment warrants differ from most warrants as they do not have a fixed exercise price.

The outstanding amount is reduced by any dividends that are paid in relation to the underlying security. In some instances other payments may also reduce the outstanding amount. However, an interest rate is also applied and the outstanding amount is increased by these interest amounts.

At expiry, if you exercise the warrant and pay the balance of the outstanding amount (if any) the issuer will transfer the underlying securities to you. Ideally the reductions applied against the outstanding amount exceed the interest incurred over the life of the warrant, and the outstanding amount will have decreased. It could reduce to zero prior to or at expiry. If this occurs you may only have to pay a nominal exercise price such as one cent.

An investor in endowments is taking a long term view on the underlying company's dividend policy versus interest rates with the hope that the dividends will outweigh the interest payments and the outstanding amount will reduce over time.

The issuers of endowments can provide you with details of the outstanding amount and the expiry dates of particular endowment warrant series.

#### Example

<b>Warrant code</b>	CBAECE
<b>Underlying instrument</b>	Commonwealth Bank of Australia ordinary shares
<b>Warrant type</b>	Endowment
<b>Expiry date</b>	18 August 2006
<b>Outstanding amount when first issued – 14 February 1996</b>	\$9.95
<b>Outstanding amount as at 31 March 2005</b>	\$2.617
<b>Conversion ratio</b>	1
<b>Exercise style</b>	American

## STRUCTURED INVESTMENT PRODUCTS

Structured investment products are tailored, or packaged, to meet certain financial goals of investors. Typically, these products provide investors with capital protection, income generation and/or the opportunity to generate capital growth.

The products listed below focus on capital protection at maturity and are designed for long-term investors, who are also looking to generate a steady stream of income (via yield) and/or achieve capital growth.

### Alternative Listed Protection Securities (ALPS)

ALPS stand for Alternative Listed Protection Securities. They combine income generation and capital protection in one product. ALPS are issued for a term of between 6 and 7 years, providing a capital guarantee of 100% on the issue price (if held to maturity) plus a maximum starting yield (for example 12% p.a.) paid semi-annually. The yield is directly linked to the performance of a 'Reference Basket' of ASX listed shares. The yield remains at the starting level unless a knock-out event occurs.

On the issue date, the initial prices of a basket of ASX listed companies selected from the top 200 ASX listed companies by market capitalisation are determined. A knock-out event occurs if any one of the companies within the basket falls below a predetermined amount over the term. In this case, the yield will be reduced by a pre-determined amount (for example one-seventh of yield) for the remainder of the investment term.

#### Example

<b>Warrant code</b>	APSSM2
<b>Underlying instrument</b>	Basket of 64 Australian companies
<b>Warrant type</b>	Structured Investment Product
<b>Issue price</b>	\$10.00
<b>Expiry date</b>	29 September 2011
<b>Starting yield</b>	12.00% pa
<b>Capital protection</b>	Yes, 100% if held to maturity
<b>Exercise style</b>	European

## Yield Income Enhanced Listed Deferred Securities (YIELDS)

YIELDS stands for Yield Income Enhanced Listed Deferred Securities. YIELDS are issued by Citigroup and give you a 100% capital guaranteed on the issue price (if held to maturity). They provide exposure to global equities with the potential for a quarterly income payment and capital growth. YIELDS2, the most recent issue has a targeted income payment of 12%\* p.a. The potential return is achieved by generating a dividend yield while writing call options over the underlying instrument.

#### Example

<b>Warrant code</b>	YLDSO2
<b>Underlying instrument</b>	Shares within the Global titans 50 index
<b>Warrant type</b>	Structured Investment Product
<b>Issue price</b>	\$10.00
<b>Expiry date</b>	6 December 2010
<b>Target yield</b>	12.00% pa
<b>Capital protection</b>	Yes, 100% if held to maturity
<b>Exercise style</b>	European

### Capital Plus

Capital Plus are issued over a basket of securities quoted on ASX. Capital Plus also offer a 100% capital guarantee on the issue price (if held to maturity). The issue price of each Capital Plus series has varied, either being issued at \$1,000 or \$1 per warrant. Generally the investment exposure has been up to 5 years from the issue date. While the Capital Plus does not offer an income stream, the holder will receive an investment bonus if held to maturity. Any performance above the issue price at maturity will be geared at a pre-determined level. For example if the issue price of a Capital Plus series is \$1,000 with a gearing level bonus of 10% and it matures at \$1,500. The holder will receive the original \$1,000 back plus \$500 (\$500 times 110%).

## EQUITY WARRANTS

Equity call and put warrants are issued over securities (in some cases securities quoted on an Exchange other than ASX). The exercise price is usually set reasonably close to the value of the security at the time of issue. The expiry date is usually anything from about three to twelve months from the date of issue (average nine months). Equity warrants can be American or European exercise style and, if exercised, are settled in the first instance by delivery of the underlying security. Equity warrants are highly traded, particularly when they are short dated.

### Example

<b>Warrant code</b>	AMPWMH
<b>Underlying Instrument</b>	AMP Ltd ordinary shares
<b>Warrant type</b>	Equity call warrant
<b>Expiry date</b>	28 July 2005
<b>Exercise price</b>	\$7.50
<b>Exercise style</b>	European
<b>Conversion ratio</b>	3
<b>Settlement</b>	Physical delivery

This is a call warrant over AMP Ltd ordinary shares. It is a European style warrant with an expiry date of 28 July 2005 and an exercise price of \$7.50. The holder of three AMPWMH warrants has the right to buy one AMP share for \$7.50 on 28 July 2005.

### International equity warrants

International equity warrants are offered over securities quoted on an overseas exchange. Hence, although similar to an equity warrant, the structure raises additional issues that you should consider. You should speak to your accredited adviser about the additional complexities of these warrants. For example:

- Time zone differences between ASX's market and the overseas market – i.e. the home market for the underlying securities may not be open for trading at the same time as ASX's market is open for trading in the warrants. Note however the securities may be quoted on more than one exchange and there could be trading hours overlapping with ASX.
- Delivery of the underlying securities – the settlement, ownership and custodial arrangements in the overseas jurisdiction

will differ from arrangements in relation to ASX quoted securities. You may need to make arrangements to hold the securities overseas.

- ASX supervision – ASX does not supervise or regulate trading in relation to the underlying securities. This is primarily the responsibility of regulatory bodies within the jurisdiction of the underlying securities. As a result company announcements and historical trading data will not be available from ASX, although disclosure documents will identify other places where this information can be accessed.
- Restrictions on exercise – additional conditions may be placed on exercise, for example, requiring a minimum (large) number of securities to be delivered before the warrants can be validly exercised.

### Equity knock-out (barrier) warrants

Equity knock-out (barrier) warrants are equity warrants with a barrier feature that causes the warrant to terminate before the original expiry date. ASX differentiates knock-out warrants from other trading-style warrants through the ASX six letter warrant code. ASX prescribe all knock-out warrants with the fourth letter as 'X' compared to 'W' for other trading-style warrants.

### Example

<b>Warrant code</b>	NWSXSE
<b>Underlying Instrument</b>	News Corp Limited ordinary shares
<b>Warrant type</b>	Equity barrier call warrant
<b>Expiry date</b>	28 July 2005
<b>Exercise price</b>	\$20.47
<b>Barrier Level</b>	\$20.47
<b>Exercise style</b>	European
<b>Conversion ratio</b>	1
<b>Settlement</b>	Physical delivery

This is a knock-out call warrant over News Corp Ltd shares. It is a European style warrant that will expire on 28 July 2005 and an exercise price of \$20.47. The holder of one NWSXSF warrant has the right to buy one NWS share for \$20.47 at the expiry date. The warrant will terminate before the original expiry date if the market price (as defined in the terms of issue) trades at or below \$20.47 prior to expiry. In the event that the barrier is hit the warrant will expire prematurely with the warrant value as zero.

Index warrants are based on a share price index and may be settled in cash.

#### INDEX WARRANTS

Index warrants are linked to the performance of a share price index such as the S&P™/ASX 200 Share Price Index or a foreign index. The exercise level (rather than exercise price) is expressed in index points. These warrants are cash settled on exercise or expiry. Generally speaking, index warrants are highly traded and short dated (average 3 months).

##### Example

<b>Warrant code</b>	XJOWSE
<b>Underlying instrument</b>	S&P/ASX™200 Share Price Index
<b>Warrant type</b>	Index call warrant
<b>Expiry date</b>	16 June 2005
<b>Exercise level</b>	4,100 points
<b>Index multiplier</b>	\$0.005 (1 index point = half a cent)
<b>Exercise style</b>	European
<b>Settlement</b>	Cash Payment

If the closing level of the S&P/ASX 200 Share Price Index is at 4,200 points on the expiry date, then you will be entitled to receive a cash payment equal to \$0.50 per warrant. This is calculated as the (closing level of the index – exercise level) x index multiplier i.e. (4,200 – 4,100) x \$0.005 = \$0.50 per warrant.

#### Knock-out (Barrier) index warrants

Some index warrants are issued as knock-out warrants which contain a barrier feature. Similar to equity knock-out warrants, if the index level hits or pass through the barrier level, the warrant will expire prematurely with the warrant value as zero. See **Equity knock-out warrants** example for more information.

#### International index warrants

Index warrants may also be issued over foreign indices, which represent movements on overseas exchanges. These warrants can have index multipliers in either Australian dollars or the foreign currency (with the foreign amount converted back to Australian dollars at the time of settlement). You should speak to your accredited derivatives adviser about the unique features of international index warrants.

#### Innovation

Index warrants were successful new innovations for the warrants market in 1998. In late 1998 and early 1999 this concept was extended to warrants on the US S&P 500 Composite Stock Price Index and the Japanese Nikkei 225 Index and to barrier and dual barrier index warrants. NASDAQ 100 Index warrants were offered for the first time in 2003. Currency warrants and capped warrants continued the trend towards innovative products.

John Wasiliev

<b>Example</b>	
<b>Warrant code</b>	XSPWOK
<b>Underlying instrument</b>	S&P 500 Index
<b>Warrant type</b>	Index Call warrant
<b>Expiry date</b>	17 June 2005
<b>Exercise level</b>	1,250 points
<b>Index multiplier</b>	US\$0.005
<b>Exercise style</b>	European
<b>Settlement</b>	Cash payment

If the closing level of the S&P 500 Index is 1,400 points on the expiry date, then you will be entitled to receive a cash payment equal to US\$0.75 per warrant. This is calculated as the (closing level of the index - exercise level) x index multiplier i.e. (1,400 - 1,250) x US\$0.005 = US\$0.75 per warrant.

## Capped warrants

limit the upside profit potential for warrant holders and give some other benefit in return.

### CAPPED WARRANTS

Capped warrants are marketed under many names even though their structures may be quite similar. Capped calls, blocs, COS, DYN0, Disco are some of these names.

These warrants limit the upside profit potential for warrant holders and give some other benefit in return. They also have a low exercise price relative to the price of the underlying instrument and are usually European in exercise style.

Where the value of the underlying instrument is less than the cap level on expiry, you may exercise and call for delivery of the underlying instrument. If however, the market value of the underlying instrument is equal to or greater than the cap level on expiry then you may be entitled to receive a return equal to the cap level.

#### Example 1 – Cap level above the current market price

<b>Warrant code</b>	ABCXPB
<b>Underlying instrument</b>	ABC Limited ordinary shares
<b>Warrant type</b>	Capped call warrant
<b>Expiry date</b>	26 October 2006
<b>Cap level</b>	\$1.40
<b>Market price at time of issue</b>	\$1.20
<b>Exercise price</b>	\$0.01
<b>Conversion ratio</b>	1
<b>Exercise style</b>	European
<b>Settlement</b>	Physical delivery or cash

In this example the cap level was above the ABC share price at the time of issue. If ABC was greater than or equal to \$1.40 on the expiry date, you would receive a cash payment of \$1.40. If ABC was less than \$1.40 on the expiry date you could take

delivery of ABC shares by exercising the warrant. This would give you a discounted share purchase relative to the share price of ABC at the time the warrant is purchased. The expectation of a holder of this type of capped warrant is to make a discounted acquisition of the underlying instrument.

#### Example 2 – Cap level below the current market price

<b>Warrant code</b>	ABCXPA
<b>Underlying instrument</b>	ABC Limited ordinary shares
<b>Warrant type</b>	Capped call warrant
<b>Expiry date</b>	26 October 2006
<b>Cap level</b>	\$1.00
<b>Market price at time of issue</b>	\$1.20
<b>Exercise price</b>	\$0.01
<b>Conversion ratio</b>	1
<b>Exercise style</b>	European
<b>Settlement</b>	Physical delivery or cash

In this example the cap level was below the ABC share price at the time of issue. If ABC was greater than or equal to \$1.00 on the expiry date, you would receive a payment of \$1.00. If ABC was less than \$1.00 on the expiry date you could exercise the warrant and take delivery of ABC shares for an effective purchase price of less than \$1.00. In the event that you are paid the capped amount of \$1.00, the return received can exceed the return obtained on cash deposits (such as bank accounts or cash management trusts). The expectation of a holder of this type of capped warrant is to receive the capped payment in cash (i.e. an income generating strategy).

#### PREMIUM INCOME (PIE) WARRANTS

Another type of capped warrant offers "premium income" as the benefit in return for giving up some profit potential. These warrants contain some of the capped warrant features mentioned above as well as some features of instalment warrants. They are issued over a parcel of shares so the warrants have a high face value. Warrant holders pay most of the value of the parcel up-front and have a right to purchase the parcel for a low exercise price relative to the face value. The parcel of shares is held on trust for the warrant holders and they

receive any dividends and franking credits associated with the underlying securities. In addition, holders will receive a further distribution called premium income which is payable by the issuer twice a year and ranges from 2% to over 6%.

Like other capped warrants, the upside profit potential is capped. If on exercise, the share price is equal to or less than the cap level, you are entitled to receive the parcel of shares. However, if the share price is greater than the cap level then, on exercise, you are entitled to receive a reduced number of shares equal to the capped value of the basket. You may also exercise a put option and require the issuer to purchase the parcel and pay you cash.

At the time of writing there were no PIE warrants on issue.

## Currency warrants give holders exposure to movements in the exchange rate between two different currencies.

#### CURRENCY WARRANTS

Holders of currency warrants may exchange an amount of foreign currency for Australian dollars on or before the expiry date. The value of the warrant rises and falls in line with movements in the exchange rate. For example, holders of AUD/USD call warrants benefit from an increase in the AUD/USD exchange rate and holders of AUD/USD put warrants benefit from a decrease in the AUD/USD exchange rate.

#### Example

<b>Warrant code</b>	AXUWMI
<b>Underlying instrument</b>	\$A10
<b>Warrant type</b>	Call warrant
<b>Expiry date</b>	23 June 2005
<b>Exercise level</b>	\$US8.00
<b>Exercise style</b>	European
<b>Settlement</b>	Physical delivery or cash

In this example, you pay \$US8.00 and receive \$A10.00 at expiry.

## COMMODITY WARRANTS

Commodity warrants may be call or put warrants where the underlying instrument is a commodity such as gold, silver or platinum. Although they have many similarities with equity call and put warrants, the different nature of the underlying gives rise to a number of additional issues that you should consider. For example:

- If exercised for delivery, holders should consider the different forms of delivery that may be available. This may include the location at which delivery may occur. Delivery of a commodity may also give rise to additional costs such as those associated with transportation and storage.
- Various commodities are traded continuously around the world, hence it is important to recognise the benchmark measure of that commodity being used for the purposes of valuing that index. For example, if cash settled, it may be important to understand the method for pricing the specified grade of the designated commodity, the currency it is priced in, and the time at which it is to be valued.

### Example

<b>Warrant code</b>	ZAUWBA
<b>Underlying Instrument</b>	One troy ounce of fine gold (99.99% purity)
<b>Warrant type</b>	Low exercise price call warrant
<b>Expiry date</b>	31 December 2013
<b>Exercise price</b>	\$0.50 per 100 PMGs
<b>Exercise style</b>	American-style
<b>Conversion ratio</b>	100
<b>Settlement method</b>	Physical delivery or cash settlement (fees may apply)

The Perth Mint Gold Quoted Product ("PMG") was the first commodity warrant quoted on ASX. The PMG gold warrant was issued by Gold Corporation (a wholly owned subsidiary of the Western Australian State Government) and provides investors with a facility to trade physical gold on the ASX. It is structured as a long-dated, non-leveraged call warrant. The minimum exercise parcel is 100 warrants, which

entitles the holder to take delivery of 1 troy ounce of fine gold (99.99% purity). As the exercise price is 50 cents per 100 warrants, the market price of the PMG gold warrant has been structured so that it tracks the international over-the-counter spot price of gold and will be based on the market value of the gold backing of each warrant (1/100th of a troy ounce).

Additional exercise and delivery fees may also be payable at the time of exercise, depending on the form of settlement that is specified (i.e. investors may take physical delivery in a number of different forms including some of the Perth Mint's bar or coin products, or alternatively they can nominate cash settlement). An annual management fee is payable to the issuer on 31 December each year. At this time the issuer will deduct the appropriate number of warrants from your total holding. Throughout the year, the time value of the annual management fee will be included in the warrant price (refer to the relevant section of the disclosure document for more details).

This type of warrant is sometimes referred to as an 'all or nothing' warrant. In this particular type of warrant, if a trigger event occurs prior to expiry you receive a fixed cash payment. If a trigger event doesn't occur the pay out is zero. The trigger level may be a specified index level or share price and is normally set 'out-of-the-money'. At the time of writing there were no warrants of this type on issue.

# Benefits of warrants

## LEVERAGE

Most warrants offer some degree of leverage. This can range from negligible leverage to a high level of leverage, depending on the type of warrant. Some warrants, such as structured investment products effectively have no leverage and generally speaking, investment-style warrants offer less leverage than trading-style warrants. Leverage means that small percentage changes in one variable are levered up into larger percentage changes in another variable. For example, given a 5% change in the underlying share price, the market value of a warrant might increase by 20%.

Example	XYZ Shares	XYZ Warrants
16/06/2005	\$13.68	\$0.47
30/06/2005	\$14.44	\$0.68
Absolute profit	\$0.76	\$0.21
Percent return	5.6%	44.7%

In the example shown here, on 16 June 2005 the shares of XYZ Limited were trading at \$13.68 and the XYZ warrant were \$0.47.

By 30 June 2005, the warrants in the table were trading at \$0.68 and the shares were trading at \$14.44 giving you a 44.7% return from the warrant (not annualised) compared with a 5.6% return on the shares.

It is important to recognise that leverage is a 'double edged sword'. In addition to magnifying your gains, a warrant can also magnify the percentage of your losses where the value of the underlying instrument moves against the warrant position. This is because an adverse movement in the underlying instrument will also result in a greater percentage decrease in the value of your warrant, i.e. leverage works in both ways.

## Understanding leverage

Leverage is a major issue in warrants trading. The leverage calculation is fairly straightforward and can be done using easily available information. It indicates the sort of result you might expect from warrants.

To obtain a leverage figure, you divide the current warrant price into the current price of the shares and then multiply this by the warrant delta, obtained either from the warrant issuer or your broker. Say shares on which a particular call warrant is based are trading at \$10, the warrant is priced at 75c and the delta is 45 per cent. Using the above method gives you an effective leverage of 6 times. If the reciprocal of this is then converted into a percentage – 16.7 per cent – then provided the market goes up, 16.7 per cent of your money invested in the particular warrant should give you roughly the same result as 100 per cent invested in shares.

Compare this to another warrant priced at \$1 where the delta is 50 per cent. The same calculation gives you a gearing of 5 times, or 20 per cent.

Of course the risk with warrants is the other side of the equation: an adverse price movement will cause the warrant price to move by the same leverage in the opposite direction, causing a much larger loss relative to the money you have invested in warrants. Another important factor to consider is that the warrant price may not always behave exactly as expected. Market factors can come into play.

While it is not perfect, leverage is one way of assessing value between different warrants as well as how warrants shape up against other investments.

John Wasiliev

## SPECULATION

A speculator is a trader who is prepared to bear more risk in return for an expected higher return. If a speculator believes that the value of a particular asset will rise in the future they could purchase the asset now in anticipation. An alternative would be to buy a deliverable call warrant over the same asset. The difference between these and other alternatives is the cost of investment.

Purchasing a leveraged warrant costs less than purchasing the underlying asset. There is however the risk that the warrant will be worthless at the expiry date. This may be more common when using trading-style warrants.

## INVESTMENT

Some warrants are structured as longer term investment-style products, for example instalments. The benefits of investing in these types of products might be capital growth, income, capital protection or a combination depending on the nature of the product. For example:

### Income

Holders of instalments are entitled to the full dividends and franking credits. This income stream is accelerated as the holder only pays a fraction of the share price upfront. If the share price is \$10 and pays a 50c dividend, this would give holders a 5% yield, while an instalment worth \$5 would entitle the instalment holder to the same 50c dividend generating a 10% yield.

### Unlock wealth – cash extraction

Holders of an existing share portfolio can convert the shares into instalments allowing them to unlock the wealth to invest elsewhere, while deferring Capital Gains Tax (CGT). This allows you to further leverage your exposure to the share or spread the risk and build a broader asset base. If the share price is \$10, a holder could convert them into an instalment worth \$5, unlocking \$5 in cash. This cash can then be reinvested to buy more of the same shares, instalments or other investments.

## PORTFOLIO PROTECTION – HEDGING

Equity and index put warrants allow you to protect the value of your portfolio against falls in the market or in particular shares. Put warrants allow you to lock in a selling price for the underlying instrument. Protecting your position in this way is called hedging. A hedge is a transaction which reduces or offsets the risk of a current holding.

## LIMITATION OF LOSS

If the value of the underlying instrument is less than the exercise price of the warrant at expiry then a call warrant will expire worthless. Your maximum loss\* is the amount paid for the warrant. While you can lose your entire investment in the warrants, you have to compare that loss to the size of the exposure the warrant holding gave you, and what an equivalent exposure in the underlying instrument would have cost.

### Example

If you buy 1,000 ANZ call warrants which have a current market price of \$0.50 per warrant, then the maximum amount you can lose is \$500 (i.e. \$0.50 x 1000)\*.

However, these warrants may give you exposure to \$10,000 (say) of ANZ shares, so a similar exposure in the shares would cost you \$10,000. If the share price dropped significantly you could lose far more than the \$500 you invested in the warrants.

(\*excluding transaction costs when you purchase the warrant)

## MARKET EXPOSURE

Some warrants, such as index and basket warrants, offer you the opportunity to profit from movements in the market or in a sector without necessarily owning a large portfolio, which effectively tracks the market or sector. International index warrants, international equity warrants and currency warrants allow you to gain exposure to overseas and other markets. Some structured investment products may also give you exposure to overseas underlying assets, such as shares, indices and debt.

## TAILORED TO MEET SPECIFIC REQUIREMENTS

Warrant issuers have flexibility in structuring warrants which allows a warrant series to be tailored to the investment needs of a particular kind of investor. For example, index warrants may appeal to investors looking to profit from moves in a particular index over a short period of time, while endowment warrants may appeal to investors looking for long term exposure.

## TAX EFFECTIVENESS

Some products, such as instalments and endowments, offer tax effective benefits to investors. The disclosure document will contain information on tax considerations.

## **An opportunity to pursue a view**

When you buy investments like shares, you do so with the over-riding expectation the price will go up. There are investment-style warrants – instalment, endowment, and structured investment products – where the same strong positive price-related expectation is the main reason for buying.

On the other hand, your expectation when you buy a warrant for trading purposes can be the same or you may think the price is more likely to retreat. And depending on how strongly you think the price movement might be – in whatever direction and over what time period you expect your view to be proved correct – a particular warrant can be chosen from the range on offer that will best suit your opinion.

This is one of the most important characteristics of warrants: their specific purpose of allowing a personal view about certain investments over a specified time to be pursued. The time may be very short, a day, a few days, weeks or months in the case of warrants that serve a trading purpose. Or there are warrants that are designed as investments as they can be bought with a time horizon measured in years. Yet because warrants are traded on the market, it is possible to change a view either after it has delivered a desired result; or if for some reason, a strategy no longer seems appropriate.

John Wasiliev



# Risk with warrants

There are certain risks involved in investing and trading warrants. This section outlines some of the general risks associated with most warrants, but it does not deal with all aspects of risks associated with warrants. Different warrant series will have specific risks and different risk profiles. You should only invest in warrants if you understand the nature of the products (specifically your rights and obligations) and the extent of your exposure to risk. Before you invest you should carefully assess your experience, investment objectives, financial resources and other relevant considerations and discuss these with your accredited derivatives adviser. You should not rely on the booklet as a complete explanation of the risks of investing in warrants.

## **Issuer risk – ASX is not a guarantor**

While ASX provides the platform for warrants to be traded, neither ASX nor its subsidiaries in any way guarantee the performance of the warrant issuer or the warrants issued.

Each warrant is a contract between the warrant issuer and you. You are therefore exposed to the risk that the issuer (or its guarantor, where relevant) will not perform its obligations under the warrant. You must make your own assessment of the credit risk associated with dealing with the warrant issuer.

Warrant issuers are not covered by margins or other forms of security lodged with ASX, ACH, or any other party. The risks associated with issuing warrants are managed entirely by the warrant issuer. Covered warrants allow the issuer to reduce this risk by placing the underlying instrument in a cover arrangement to meet its obligations under the warrant.

To help you evaluate the ability of an issuer to meet its obligations, the disclosure document contains information on the financial situation of the issuer and guarantor (if applicable). Some issuers are listed on ASX and therefore provide this information to the market on a regular basis.

## **General market risks**

The market price of warrants is affected by the same risks that affect all stock market investments such as movements in domestic and international markets, the present and anticipated economic environment, investor sentiment, interest rates, exchange rates and volatility (see the later discussion for the impact of volatility on warrant prices). Principally if the direction of the underlying instrument does not fulfil your expectations, the warrant will not perform and lead to limited losses compared to holding the underlying instrument.

## **Limited life**

Warrants have an expiry date and therefore a limited life. On expiry warrants cease trading and can no longer be exercised. It is possible a warrant will expire without your expectations being realised. You should make an assessment whether the warrants you have selected have sufficient time to expiry for your market views to be realised. The different types of warrants offer you the choice to select the most appropriate warrant for your investment time horizon. Such as, a trading-style warrant may suit a short term view while an investment-style warrant may suit to medium to long term view.

Also, the value associated to the life of the warrant (such as funding cost or time value) will decay. Upon expiry, the value remaining will be the intrinsic value. If the warrant is not sold or exercised prior to expiry and has intrinsic value, the issuer is required to provide the holder an AVP (see the Trading and settlement section).

## **Leverage risk**

As well as being a benefit, leverage is also a risk of warrants. This concept is discussed in the '**Benefits of warrants**' section.

## **Currency risk**

International equity warrants and index warrants may give rise to foreign currency risk. In the case of index warrants this

currency exposure may arise where the index multiplier is denominated in foreign currency. Likewise, international equity warrants may give rise to currency risk.

### **Liquidity risk**

This is the risk that you may not be able to sell your warrants for a reasonable price in the market. This could be because there are insufficient orders to buy your warrants, or the price at which others are prepared to buy them is very low. In some cases a lack of liquidity in a warrant series may be due to a lack of liquidity in the underlying instrument. Refer to discussion in the section Trading and settlement – Market making and liquidity.

### **Suspension from trading**

ASX may suspend or remove a warrant series from trading, for example, if the warrant issuer is unwilling, unable or fails to comply with the ASX Market Rules. ASX may also suspend trading in warrants in the interests of maintaining a fair and orderly market and to protect investors. In almost all circumstances, a warrant will automatically be suspended if the underlying share is suspended.

### **Early termination or expiry**

In certain circumstances a warrant may terminate or lapse before the expiry date. An example would be where an extraordinary event occurs or some barrier levels are triggered. Barrier levels are discussed in the **Warrant features** section of this booklet.

Issuers reserve the right to nominate extraordinary events which may result in the early expiry of the warrant series with the consent of the ASX. These events may vary depending on the type of warrant. Examples of the possible extraordinary events include:

- the suspension of trading in the warrant (except if it is caused by the issuer);
- the suspension of trading in the underlying securities;
- the de-listing of the underlying company;
- compulsory acquisition of the underlying securities following a successful take-over bid.

What actually happens when an extraordinary event occurs depends on the type of warrant in question and the terms of issue for that series. The expiry date may be brought forward or the warrants may simply lapse with a payment in certain circumstances.

Extraordinary events should be taken into consideration when assessing the merits of a warrant.

### **National Guarantee Fund not a guarantor in all cases**

The National Guarantee Fund (NGF) is a pool of assets that is available to meet valid claims arising from dealings with brokers in certain circumstances. Under certain circumstances you may be able to claim against the NGF in relation to secondary trading in warrants on the stock market conducted by ASX. Claims can in no way relate to the primary issue of the warrants or the settlement obligations of the issuer arising from the exercise or lapse of the warrant.



## Disciplines and strategies

The trading nature of many warrants makes it essential to develop disciplines and strategies in order to capitalise on opportunities and manage the risks of investing. Given the most important fundamental is what happens to the price of the investment on which the warrant is based, a logical strategy is trying to predict which direction this will go and how powerfully the price move is likely to be over a period of time.

Establishing a system to predict related investment price movement must be part of any serious medium term warrant strategy. A system may be fundamentally driven or based on technical analysis, or a combination of both. The bottom line is that it will help determine which warrants to buy. In warrant-speak, this trading approach is described as a directional strategy. It is a straightforward strategy for new entrants and the aim is trying for a maximum profit based on a directional view. But the directional view must also include a view on time. You will buy a different warrant if you expect investment action to take place next week as distinct from some time over the next three to six months. You might be prepared to take more premium decay risk in a more immediate transaction. Decay is always greater the closer a warrant moves towards expiry. Warrant premiums decay slower the more time there is before the warrant

expires.

An alternative strategy is to trade on views of whether warrants are cheap or expensive. This is a short term "quick profits" strategy for the dedicated, informed and well resourced market participant.

The strategy is generally described as volatility trading as it focuses not so much on broad directional trends but on the volatile price vibrations that warrants can display. When the price of a related investment (like shares) becomes volatile, rising sharply or falling dramatically, a gap can develop in the relationship between the investment and the warrant. The warrants can trade in a more volatile or a less volatile fashion than the shares, by displaying extreme or unexpected price behaviour.

If a warrant price becomes more volatile, say a call warrant rises more sharply on a relative basis when a share price rallies or remains strong and independent of any price retreat, it becomes more expensive. Warrants become cheap if the price doesn't move in line with the related investment or even moves in the opposite direction than expected.

John Wasiliev

# Warrant issuers and the Disclosure Document

## Who issues warrants?

Warrants may only be issued by institutions that meet the eligibility criteria set out in the ASX Market Rules. In general terms, institutions eligible to issue warrants must:

- be subject to the Banking Act; or
- be a government; or
- have an Australian Financial Services Licence (AFSL) (or overseas equivalent), an investment grade credit rating, and sufficient net tangible assets; or
- have a guarantor that meets any of the above categories; or
- issue fully covered warrants.

In addition, other institutions which are not objected to by ASX and the Australian Securities and Investments Commission (ASIC) may also issue warrants.

A list of all warrants and warrant issuers is available on the ASX internet site. Go to [www.asx.com.au/warrants](http://www.asx.com.au/warrants) and look under the heading 'News and Statistics'.

## Disclosure Documents

Warrant issuers are required to produce a disclosure document for warrant series. A disclosure document sets out information for investors to assess the risks, rights and obligations associated with the warrant and the warrant issuer's capacity to fulfil its obligations. A disclosure document must be given to all persons offered or invited to subscribe for the warrants.

**A list of all warrants and warrant issuers is available on the ASX internet site. Go to [www.asx.com.au/warrants](http://www.asx.com.au/warrants)**

The disclosure document will contain the terms of issue of a warrant series. The terms of issue are the contractual rights and obligations of both the issuer and warrant holder. In addition to the terms, the issuer may have other obligations, for example, under the ASX Market Rules.

You are encouraged to read the relevant disclosure document and terms of issue document before investing in a particular warrant series. Disclosure documents are available on the ASX web site ([asx.com.au/warrants](http://asx.com.au/warrants)) when you look up a warrant price.

## Important

While ASX considers a proposed warrant series as part of an application for admission to trading status, ASX does not warrant the accuracy or truth of the contents of the disclosure document. Admission to trading status should not be taken in any way as an indication of the merits of the particular warrants or issuer.

Neither ASX, its subsidiaries, and the National Guarantee Fund in no way guarantee the performance of the warrant issuer. You must independently assess the credit worthiness of the warrant issuer.

# Trading and settlement

## SECONDARY TRADING OF WARRANTS

Warrants are traded on the ASX equities trading system, SEATS, and are subject to its dealing rules.

### Warrant codes

All warrants have a six-letter code. For example, warrants with the code BHPWMA are issued by Macquarie Bank Ltd over the ordinary shares of BHP Billiton Ltd.

- The first three letters BHP indicate the underlying instrument
- The fourth letter is either W, I, E, S or X depending on the type of warrant. W = equity, index and currency warrants, I = instalments, E = endowments, S = structured investment products and self funding instalments and X = all other types, such as knock-out warrants. Sometimes the fourth letter will be temporarily replaced with **D** if the warrant is trading on a deferred settlement basis
- The fifth letter M indicates the warrant issuer (Macquarie Bank Ltd). Each issuer has a unique letter which refers to them
- The last letter A is the market code for the warrant series (these are sequentially allocated letters – generally, equity, index or currency call warrants are sequentially allocated letters A-O and equity, index or currency put warrants are allocated letters P-Z). ASX may also use numbers between 1 and 9 to indicate a warrant series.

### Market making and liquidity

ASX Market Rules require each warrant series to have an adequate and reasonable spread of holders. This requirement is intended to ensure there is a liquid market for warrants.

In most cases the warrant issuer satisfies this requirement by providing an undertaking to ASX that it will maintain a bid on a continuous basis during the life of the

warrant. At the time of writing only two warrant series have been quoted without the undertaking on the basis that they have demonstrated a sufficient spread of holders. This means that apart from circumstances outlined later, there generally should be a price quoted at which you as a warrant holder will be able to sell at during normal trading hours.

The only situation where a warrant issuer would not be required to provide an undertaking to maintain markets in their warrants would be if the issuer could demonstrate that the initial issue of warrants generated a sufficient spread of holders. A sufficient spread of holders demonstrates a level of interest that should ensure that there is a liquid market for buyers and sellers of the warrant series.

The market making undertaking is to display at least one bid order (i.e. a one-way market) throughout the trading day. ASX will use its best endeavours to ensure that warrant issuers provide such quotes. Market-making orders should be amended or replaced as they are "matched-out" by trades (a trade has occurred) in a reasonable timeframe. It should be noted that this is merely a minimum requirement to fulfill the market-making obligation. Warrant issuers will normally display both bid and offer orders for most warrant series during normal trading hours.

ASX does not prescribe a maximum or minimum spread (the difference between an issuer's bid and offer prices), nor what volumes an issuer must offer to buy or sell. These parameters are set by each warrant issuer and are largely determined by the volatility of the underlying instrument and the competitive environment in which the warrant issuer operates.

Market making applies to warrants during normal trading hours, starting after the opening phase at approximately 10.09 am Sydney time and ending at approximately 4.00 pm Sydney time.

There are limited circumstances in which issuers would not breach the market making



You are required to settle your warrant transaction within the normal settlement period for a share transaction and you will receive regular statements of your warrant holdings in the same manner as share holdings. You will receive a Holder Identification Number (HIN) if you are broker-sponsored or a Shareholder Reference Number (SRN) if you are issuer-sponsored.

If the warrant has an intrinsic value on expiry, warrant issuers are generally required to pay you a cash payment of at least 90% of the intrinsic value if you don't exercise.

### **Warrant settlement – exercise or expiry**

A warrant disclosure document will explain the requirements for a valid or effective exercise of the warrant. Generally, you will be required to lodge an exercise notice on or before a certain time. You must ensure the requirements for exercise are met to ensure the warrants are validly exercised. A failure to validly exercise (or an ineffective exercise) may mean that you are not able to insist on transfer of the underlying instrument. It should be noted that in the case of international equity warrants, transfer of the underlying instrument is likely to occur in an overseas jurisdiction. For further information, see the **Types of warrants** section of the booklet about international equity warrants.

### **When no exercise has occurred**

If you hold deliverable warrants but do not exercise them before expiry you may be entitled to a cash payment, often called an "assessed value payment" (or AVP). If the warrant has an intrinsic value on expiry, warrant issuers are generally required to pay you a cash payment of at least 90% of the intrinsic value. Again the disclosure document will explain the circumstances in which this payment will be made and how the payment will be calculated.

### **Issuer fails to meet its obligations**

When a deliverable warrant is exercised the terms of issue will provide for delivery of the underlying instrument and payment of the exercise price. If a warrant issuer does not meet its settlement obligations within 20 business days following valid (or effective) exercise, you may ask for a liquidated damages payment. Alternatively, you could pursue other legal remedies against the issuer.

### **Adjustments**

The disclosure document may contain terms providing for adjustment to the exercise rights of warrants where there is a change to the underlying instrument. Where the underlying instrument is an equity security, adjustments generally occur where there is a corporate action such as a reduction in capital, a rights issue or reconstruction in the underlying security. In the case of index warrants, adjustments often relate to the modification or discontinuance of the index. When an adjustment occurs, the underlying price, the exercise price and other variables could be changed.

# Warrant pricing

It is important to have some understanding of how the market prices of warrants are determined. There is no simple answer to this question and a complete explanation is far beyond the scope of this booklet.

Warrant pricing is a subset of general option or derivative pricing and involves the use of complex mathematical techniques to build pricing models. These pricing models have been developed over the past 30 years. The Nobel prize winning pioneering work was published by Fischer Black, a mathematician, and Myron Scholes, an economist, in 1973.

Warrants prices are influenced by:

- the price or level of the underlying instrument
- the exercise price of the warrant
- the expiry date or the time left to expiry
- the volatility of the underlying instrument
- interest rates
- dividends

The table below shows how the variable factors affect warrant prices.

## Price or level of the underlying instrument

This is perhaps the most obvious of the pricing determinants and it is also the most important. However, a common misunderstanding is to assume that the price of the underlying is the only determinant of warrant value. It is quite possible in some situations for a share price to go up and yet the price of a corresponding equity call warrant to remain steady (or even fall in value). This could occur if one or more of the other five factors above had changed and outweighed the effect of the increasing share price. In practice, it is often changes in volatility or an impending dividend payment which causes this effect.

## Delta

The rate of change of a warrant price with respect to a change in the price of the underlying instrument is called the delta of a warrant. Theoretical values for call warrant deltas range from 0 to 1 and put warrant deltas from 0 to -1.

Factors in pricing	Change in variable	Change in call warrant price	Change in put warrant price
Exercise Price	Increase	↓	↑
Underlying Share Price	Increase	↑	↓
Time to Expiry	Decrease	↓	↓
Volatility	Increase	↑	↑
Interest Rates	Increase	↑	↓
Dividend Expectations	Increase	↓	↑

A delta of 1 means that for every 1 cent change in a share price, the warrant price also changes by 1 cent. This would be the case if the underlying share price was \$10 and the exercise price of a call warrant was \$5, i.e., the warrant is so far 'in-the-money' it should approximately move 1 for 1 with the share price.

A delta of 0 means that for every 1 cent change in a share price, the warrant price does not change. This would be the case if the underlying share price was \$5 and the exercise price of a call warrant was \$10, i.e., the warrant is so far 'out-of-the-money' that the warrant price should theoretically not move if there is a 1 cent rise in the share price. Most equity call and put warrants and index warrants are issued with an exercise price (exercise level) in close proximity to the current share price (or index level) which gives them a delta of around 0.5, i.e., the warrant is 'at-the-money' and the warrant price should theoretically have moved 0.5 cents for a 1 cent share price movement.

The delta of a warrant is affected by the conversion ratio, for example, a warrant with a conversion ratio of 2 will have a theoretical delta range 0 to 0.5 for a call and 0 to -0.5 for a put.

However, you should not think of fractional warrants as providing more leveraged returns or being more highly geared. They are not. When you are comparing the leverage benefits of one warrant with those of another, you should compare like with like and take into account the fact that one warrant may have a conversion ratio greater than the other.

To make things more complicated, the delta of a warrant is not a constant but also changes with the changing share price. This is called a warrants Gamma but this is beyond the scope of this booklet.

**It is common for equity warrants to be issued with an exercise price close to the price of the underlying instrument at the time of issue.**

### **Exercise price and expiry date**

The higher the exercise price is relative to the price of the underlying instrument at the time of issue, the lower the price of an equity call warrant will be. Also, the further away the expiry date is, the more opportunity there is for the price of the underlying instrument to rise above the exercise price and so, all other things being equal, longer dated warrants are more expensive.

It is common for equity warrants to be issued with an exercise price close to the price of the underlying instrument at the time of issue. You should always consider the time to expiry of all warrants as some warrants have expiry dates of 3 months (or less) while others are long term such as 15 years.

### **Volatility of the underlying instrument**

Volatility is a measure of the amount of movement observed in the price or level of the underlying instrument. Historic volatility is a statistical measurement that can be applied to a historical sequence of prices or levels. An instrument whose price or level has varied dramatically in the last couple of months would have a higher historical volatility measure than one whose price or level has remained relatively constant in that time. Option and warrant pricing has to take into account a trader's expectation of volatility from the time they enter the trade until the expiry of the option or warrant. Historical volatility may provide a guide to future volatility, but the market's expectations of future volatility may differ considerably from what has transpired in the past. The volatility at which a trader (or the market) is prepared to buy or sell options or warrants at any point in time, is often referred to as the implied volatility of those options or warrants.

All other things being equal, the more volatile the underlying instrument, the higher the theoretical price of the warrant. This is because the underlying price has a greater probability of moving above (for a call) the exercise price of the warrant which makes the warrant more valuable.

## The volatility concept

One of the most important warrant concepts is volatility. However, it is a concept that can bewilder because the term can mean different things. When volatility is a measure of the historic price fluctuations of related investments, like shares or an index, it is described as historic volatility. It can help illustrate price behaviour over different time periods, which may be months or years.

In models used to price warrant fair values, historic volatility helps to determine prices. Once warrants are trading, another measure called implied volatility is calculated working back from the actual warrant price. Implied volatility is important for traders seeking to assess whether certain warrants are cheap or expensive and then trading on this information.

John Wasiliev

## Interest rates

Interest rates also affect warrant pricing. For example, if you buy a call warrant you are able to defer the payment of the exercise price until expiry. This saves you the funding costs compared to buying the underlying instrument directly. When interest rates are high, there is a bigger saving, and therefore you will have to pay more for the call warrant and less for puts.

Also, the issuer has to fund its underlying instrument hedge position. When interest rates are high, this is more expensive and so the issuer has to sell the warrants at a higher price.

## Dividends

This price determinant is particularly relevant when looking at warrants whose underlying instruments pay dividends to the holders of those instruments.

The effect of dividend payments varies depending on the type of warrant, and any entitlement of the warrant holder to

receive dividends paid on the underlying instrument. Even in the case of warrants where holders are not entitled to receive dividends paid on the underlying instrument, the warrant price may still be influenced by changes in dividend expectations.

Call warrant prices fall and put warrant prices rise when a dividend is above market expectation. It is also relevant to consider whether the warrant is American or European. You should ask your accredited derivatives adviser about the impact of dividends.

## Exchange rates

Exchange rate movements can affect the pricing of certain warrant types (even when the underlying instrument is not a currency warrant). These include international equity warrants, international index warrants and currency warrants.

## Other influences on price

For some warrant types, the theoretical option value is less important in determining price than other specific factors. For instance, the price of an instalment warrant is closely related to the present value of the loan component of the instalment.

Other non quantifiable factors such as supply and demand, investor sentiment, and general market expectations can also influence the market value of all warrants (just like they do in any market). A warrant issuer may be able to influence the warrant price (because for example, it holds a large percentage of the warrants on issue, and makes a market in the warrant series).

## The importance of supply and demand

Like shares or any other investments, an important influence on warrant price volatility is the supply and demand of warrants. If a warrant issuer has plenty of warrants for sale to meet any trader or investor demand based on expectations of a change in the price of the related investment, the price changes of warrants can be smooth and controlled.

Some issuers will reduce prices of warrants – thereby lowering implied volatility – in order to get them moving. Warrant issuers will often expand the issue size of popular warrants if there is strong demand. It can be useful to follow new supply and situations of limited supply to see how these influences are shaping the market. If warrants are however in short supply or demand is such that traders are selling to each other at increasing prices – lifting the volatility – it can become a different ball game.

Warrant issuers have an obligation to ensure there are markets in their warrants. These prices are usually determined by warrant pricing models. When trading in the market you may trade with the issuer, or perhaps just another investor taking the other side of your trade. Issuers typically provide indicative prices to stock brokers at which they will trade in their own warrants (relative to a range of prices in the underlying share). This is called a pricing matrix. You should ask your broker if they think they can get the issuer to improve the best price shown in the screen before trading.

However if market activity has taken prices beyond what issuers are willing to pay, the risk for traders who become involved in progressively volatile trading, is being caught with only one way to go when the buying merry-go-round stops.

Before buying any warrant it is a smart idea to ask your broker to have a look at the warrant issuer's matrix and compare this to the current price activity. What the broker will probably look for is whether the matrix projections are being borne out by market activity. Matrix prices are based on theoretical valuations of warrants but they are also (or should be) a guide to what the issuer thinks its warrants are worth as well as the prices its appointed market maker is likely to pay should you wish to sell.

But there are other things that can be derived from the matrix. For example, if a warrant price change for a given share price change in a matrix is out of whack with what is actually happening in the market and the warrant seems overvalued it could signal a warning for some traders. The warrant may be potentially overvalued because the issuer is somehow not involved in the market. Perhaps they have stopped selling warrants and are letting the current holders trade among themselves. Or the issuer may have sold all its available warrants and the same scenario is occurring: all trading is happening among current holders. The hazard for new and less experienced traders is that the price being asked for the warrant may be unpredictably volatile.

John Wasiliev

### **Time value and intrinsic value**

The price determinants discussed above give a theoretical value for a warrant. This may be the basis for the market value that an adviser quotes you. It may also take into account other non quantifiable factors. The market value of a warrant price can be divided into two components – intrinsic value and time value.

The intrinsic value of a warrant is the difference between the exercise price of the warrant and the market price of the underlying instrument at any given time. If this number is less than zero, the warrant is said to have no intrinsic value.

**As a rule of thumb, a warrant will lose  $\frac{1}{3}$  of its time value during the first half of any given time period and  $\frac{2}{3}$  during the second half.**

The time value is the remaining value that has been attributed to the warrant by the market, ie. the market price minus the intrinsic value of the warrant. Time value takes into account all the factors discussed above and represents the possibility that the market may move so that the warrant is in-the-money. Obviously, the closer you get to the expiry date, the less likely it becomes that the market will move in your favour and so time value drops. This is called time decay, and it does not happen at a linear or even rate. As a rule of thumb, a warrant will lose  $\frac{1}{3}$  of its time value during the first half of any given time period and  $\frac{2}{3}$  during the second half. For some warrants, eg, instalments, the (funding cost) time value makes up a much smaller component of total value than for other warrants such as equity warrants.

# Where to start

## Accredited derivatives advisers

ASX requires that an adviser must be accredited before making recommendations or giving advice in relation to options, warrants or any other derivatives products traded on ASX. The accreditation requirement is designed to enable advisers to give quality advice and service on ASX derivatives products. In the case of products that are not classed as derivatives and provide no leverage to investors, such as structured investment products, accreditation is not required.

There are two levels of accreditation:

Level One Accreditation is required in order to advise on:

- warrants
- buying options to open a position
- selling options to close a position
- covered call strategy

Level Two Accreditation is required in order to advise on:

- writing options
- multilegged option strategies
- Low Exercise Price Options (LEPOs)

In order to be accredited at either Level One or Level Two, an adviser must meet certain criteria. This includes passing the relevant ASX exam, with a minimum mark of 80%. Accreditation is only available to employees of Participant Organisations (brokers).

If you require assistance in finding an accredited adviser, a partial list can be found at [www.asx.com.au](http://www.asx.com.au). It contains names and contact information for individual advisers, as well as the type of service provided and research offered.

The criteria you use in selecting an adviser will vary according to your needs and level of trading experience. Note that options and warrants can be traded through full service, or 'advisory' brokers, as well as discount, or 'no advice', brokers. If a broker offers an execution-only service, without providing advice, accreditation may not be required for their representatives.

You can place an order for warrants with any broker, however you should only receive advice from an accredited derivatives adviser.

You should understand the details for the particular warrant series you wish to invest in. We strongly recommend you read the disclosure document and the terms of issue of the warrant series to find out about your rights and obligations in relation to the warrant series. Your broker should be able to provide you with a summary of specifications for all warrants currently available for trading. Alternatively, you can download a list of warrant series from [www.asx.com.au/warrants](http://www.asx.com.au/warrants).

## Warrant client agreement form

Before you trade your first warrant via a particular broker you will be required to sign a Warrant Client Agreement Form saying you have received and read a copy of this booklet.

You can place an order for warrants with any broker, however you should only receive advice from an accredited derivatives adviser.

**Incentive payments**

Warrant issuers may have arrangements in place whereby financial or other incentives are provided to brokers in relation to the sale of that issuer's warrants. Brokers are required to disclose to you any commission, fee or other benefit which may influence their investment recommendation. You should be aware of this and feel free to ask your broker whether incentive payments are being made by the warrant issuer to the broker.

**Subscribing for warrants**

You may also be able to apply for warrants to be issued to you by the issuer by completing an application form attached to the disclosure document (the primary issue). It is common for investors to subscribe for investment-style warrants in this way, whereas trading-style warrants will generally be bought on the secondary market.

# Glossary of terms

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**ACH** This stands for Australian Clearing House Pty Ltd ABN 48 001 314 503 which is the clearing and settlement facility for ASX's Options market.

**American style** Type of exercise style which allows the holder to exercise the warrant at anytime up to and including the expiry date.

**CHESS** This stands for Clearing House Electronic Sub register System and means the system established and operated by ASTC for the clearing and settlement of CHESS approved securities, the transfer of securities and the registration of transfers.

**Delta** The rate of change of a warrant price with respect to a change in the price of the underlying instrument.

**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.

**Disclosure document** The document prepared by the warrant issuer which is dispatched to prospective subscribers of a warrant series. Disclosure documents are also known as either a product disclosure statement (PDS) or an offering circular.

**European style** Type of exercise style which allows the holder to exercise the warrant only on expiry day.

**Exchange traded options (or ETOs)** Options which are bought and sold in the options market operated by ASX.

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

**In-the-money** When the exercise price is below (call) or above (put) the price of the underlying instrument.

**Issue Price** The amount a person pays to subscribe for a warrant. May also be called 'premium'.

**Out-of-the-money** When the exercise price is above (call) or below (put) the market price of the underlying instrument.

**Primary issue** The issue of the warrants by the warrant issuer to subscribers in the primary market.

**Secondary market** The trading of warrants on SEATS after the primary issue.

**Terms of issue** The rights, conditions and obligations of the warrant issuer and the warrant holder. These terms are contained in the disclosure document.

**Volatility** A measure of the amount of movement observed in the level of the underlying instrument over a period of time.

**Warrant code** A six letter code assigned to a warrant by ASX to identify it on SEATS.

**Warrant issuer** The institution that issues the warrant.

**Warrant series** All warrants with the same terms of issue and underlying instrument and having the same warrant issuer, exercise price, expiry date and settlement procedure. Each warrant series has a separate warrant code.



**ASX**  
AUSTRALIAN STOCK EXCHANGE

Warrants toll free information line: 131 ASX Internet: [www.asx.com.au/warrants](http://www.asx.com.au/warrants)