



Guide to Equity Options for non SMSF Superannuation Trustees

January 2010

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Introduction

This booklet provides an introduction to some fundamental risk management concepts that will assist you in fulfilling your obligations as a Trustee of a superannuation fund that invests in Australian shares. This booklet is not designed for trustees of Self Managed Super Funds (SMSFs).

Superannuation funds that hold assets in Australian shares are exposed to share market risk. Equity options are one of the tools that can be used to manage that risk. This booklet explains the ways in which equity options can be used to protect assets invested in shares and to enhance the returns of a share portfolio. This will help you understand how investment managers should use options and enable you to better evaluate your investment manager's performance.

Options and derivative instruments are sometimes avoided due to a belief that they are tools suitable only for speculative purposes. They are financial instruments that can be used to construct virtually any risk-reward profile.

Some investors use derivatives to reduce the risk of a share portfolio, while others use them to take on increased risk in the hope of increased rewards. As such, options are appropriate both for conservative investors looking for protection from market volatility and for aggressive investors looking for leveraged returns. Conservative investors can also increase their returns by using low risk option strategies.

This booklet will show you how Trustees (and any contracted investment advisor) can use equity options traded on the Australian Securities Exchange (ASX) to:

- **Generate additional income for a portfolio**
- **Lower the volatility of a share portfolio**
- **Protect the value of an existing share holding.**

What are equity options?

Equity options are dynamic and flexible risk management tools that are traded as standardised contracts on ASX.

As implied by its name an 'option' gives you the right to choose your preferred course of action within certain boundaries. Specifically, the purchase of an option confers the right, but not the obligation, either to buy or to sell a stock at a pre-determined price on or before a specified date. All options have an expiry date so if you choose to 'exercise' your option, it must be done before the expiry date.

There are two types of options: calls and puts. In general terms, the purchase of a call option gives you the right to buy shares at a pre-determined price at any time during the life of the option. The purchase of a put option gives you the right to sell shares at a pre-determined price at any time during the life of the option.

The seller (or 'writer') of the put or call option is paid a price ('premium') for the option, but in return has the obligation to fulfil the requirements of the contract if called upon by the buyer to do so.

Options are available over individual shares and also over some of the S&P/ASX indices.

For a more detailed description of ASX equity options please refer to the ASX booklet *Understanding Options Trading*, a copy of which can be obtained by phoning 131 279 or downloaded from <http://www.asx.com.au/products/pdf/UnderstandingOptions.pdf>

Why use equity options?

Equity options have the unique ability to modify the risk-return characteristics of a share portfolio. Investment managers and other investment professionals use options to manage risk in share portfolios by increasing or reducing their exposure to a particular share (or to the index) for a limited period of time.

Options give investors the ability to tailor the exact risk-return profile that they wish to adopt for an anticipated move in the share price. This flexibility offered by options is an extremely useful feature when managing share portfolios.

The main reasons investors use options are to:

- Generate additional income
- Reduce the volatility of a portfolio
- Protect the value of an existing shareholding
- Achieve leveraged exposure to share price movements

Only the first three of these benefits are relevant to superannuation funds. Under the provisions of the Superannuation Industry (Supervision) Act 1993 ('SIS Act'), superannuation funds are prohibited from using derivatives for speculative purposes.

Enhancing risk adjusted returns

Superannuation funds usually define their investment objectives with the help of asset consultants and then rely upon investment managers to implement investment strategies to provide the maximum possible returns for the minimum possible level of risk.

Skilful usage of options in the management of a share portfolio can either increase the returns, or decrease the risk (volatility), or both at the same time.

Gains to be made from enhancing the risk adjusted returns for a superannuation fund are small but significant.

For example, consider a medium size superannuation fund with assets of \$100million. An increase in annual returns of only 0.1% (or 10 basis points) for a constant level of risk will produce an extra \$100,000 each year which will be available to enhance member benefits.

Options strategies

Options can reduce the risk of a share portfolio. Three risk reduction strategies that also have the potential to increase returns are discussed below.

"We have used exchange traded options for many years as part of managing the risk of our domestic equity portfolios. A structured framework, including sensible prudential limits, serves to control risk. Using options reduces our transaction costs and market impact when buying stock and using disciplined option strategies has contributed to the excellent performance of our funds over many years. Options are a tool that should be in the toolbox of every fund manager in Australia."
John Gethin-Jones, former General Manager, Global Equities, Queensland Investment Corporation.

1. Generating additional income for a portfolio

When a superannuation fund holds part of its assets in Australian shares either directly or through an investment manager it may be able to generate additional income for the portfolio by selling (or 'writing') call options. This is known as a covered call strategy or a buy write strategy.

The option premium received for sale of the options generates income and increases the returns to the portfolio. This strategy turns an asset (the shares) into an income-producing asset. It is a way of making your shares work harder for you while you hold them.

A study by the Securities Industry Research Centre for Asia-Pacific (SIRCA) examined the performance of a buy write options strategy. This study examined the strategy of generating additional income by selling call options over a share portfolio that reflected the S&P/ASX 200 Index.

The SIRCA study analysed data over a 15 year period (1987 to 2002) and concluded that implementation of the buy write strategy produced higher returns with lower risk (volatility) than the index portfolio. That is, if a superannuation fund holds an equities portfolio, it may be able to simultaneously increase returns and reduce risk by using the buy write strategy.

| Results of SIRCA Study | Share Portfolio (S&P/ASX 200 Accumulation Index) | Buy Write Strategy (writing covered calls over the share portfolio) |
|--------------------------------------|---|--|
| Returns | 9.6% | 11.8% |
| Risk (standard deviation of returns) | 12.3% | 11.6% |

The main risk of this strategy is that the share price increases strongly during the life of the option and since upside potential is capped, the portfolio misses out on share price gains that it otherwise could have made. For this reason, the buy write strategy is best employed during periods when the market is expected to move sideways or modestly upwards. During such periods writing call options can be a very profitable strategy.

2. Lowering the volatility of a portfolio

The buy write strategy also serves to reduce the volatility of a portfolio. This is because the sale of call options does two things. It effectively caps the upside potential of shares in the event that the share price rises strongly during the life of the option. It also produces income that at least partially offsets any loss if the share price falls. The net effect is that the volatility of the portfolio is reduced because the extremes of both upside and downside performance are constrained.

In order to assist investment managers track the performance of a passive buy write strategy, the ASX provides the S&P/ASX Buy Write Index™. This index is based on the assumption that a share portfolio is purchased that reflects the S&P/ASX 200 Accumulation Index, and that a call option is written over that index each quarter and held to expiry. More information is available at http://www.asx.com.au/products/indices/types/buy_write/index.htm

3. Protecting the value of an existing shareholding

When a fund holds shares, the amount at risk is the current market price of the share. Put options can be used to protect the value of an existing shareholding against possible falls in share prices.

The purchase of a put option guarantees the sale price of the underlying shares for the life of the option. Individual equity options can be used to protect the value of a specific shareholding, while index put options can be used to protect a portfolio against a downturn in the broader market.

If the expected fall in the share price or index level takes place, the increase in value of the put option will offset the decrease in the value of the underlying shares. If on the other hand the expected fall in the share price or index level does not eventuate, the fund still benefits from any increase in the value of the portfolio. The premium paid for the put options can be considered as the cost of providing protection for the share portfolio.

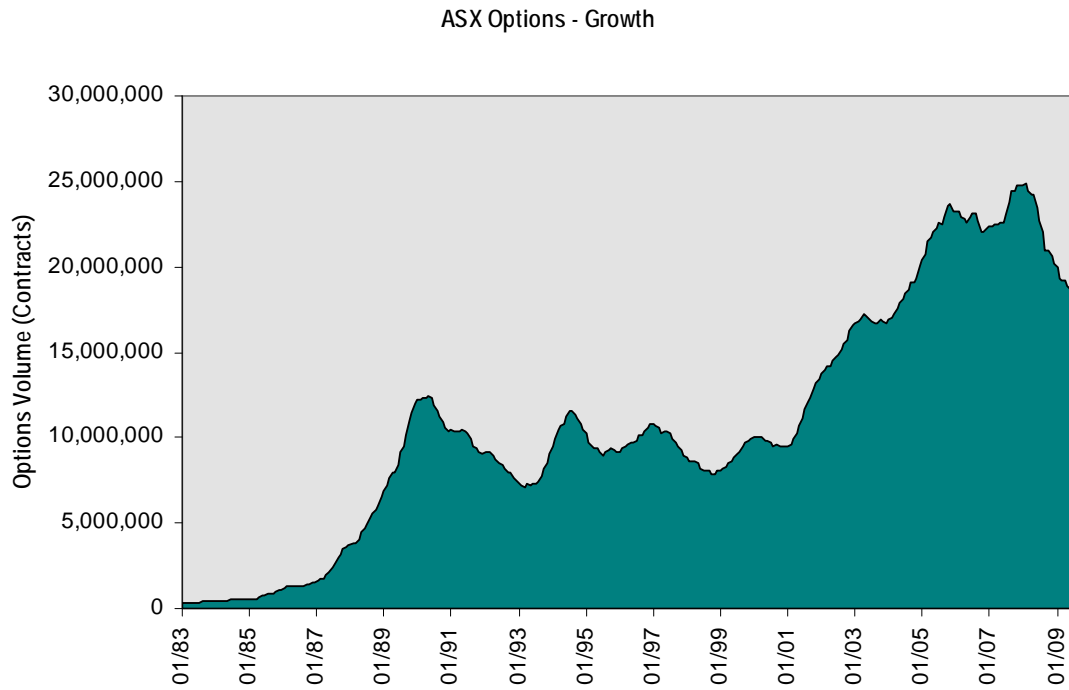
It is not cost effective to have protection in place twelve months of the year. This strategy is generally appropriate for shorter periods when the investment manager has some doubt as to whether the stock will clear the next hurdle unscathed. In these situations the put options can provide a 'safety net' for a limited period of time.

"Return and Risk of Buy-Write Strategies using Index Options: Australian Evidence", SIRCA, February 2004. Copies of this paper can be downloaded at http://www.asx.com.au/products/indices/types/buy_write/index.htm

Facts about the ASX equity options market

The ASX options market began in 1976 and has been screen traded since 1997. As of September 2009 there were options listed over approximately 100 'blue chip' ASX listed companies as well as over two share market indices.

The graph below shows the growth in options volumes since 1983.



Volumes have risen strongly in recent years and have approximately doubled since 1999. In 2008/09, the notional value of options traded on ASX was approximately \$370 billion.

The ASX options market is regulated by the Australian Securities and Investments Commission (ASIC). The Australian Clearing House (ACH) operates the clearing and settlement facility, and through the process of novation interposes itself between the buying and selling brokers to remove broker-to-broker credit risk and minimise settlement risk.

ASX information resources

- ASX Risk Assist: ASX offers a free program of education, training and assistance to institutional market participants. ASX has in-house experts who are available to give training and support as needed to superannuation funds and fund managers who request assistance in learning more about equity options or in utilising options in the management of their share portfolios. To find out more about this free program, phone ASX on 131 279.
- ASX Fund Manager Handbook: available free by phoning 131 279
- ASX website: contains details of face-to-face courses and comprehensive information about options: <http://www.asx.com.au/products/futures/equities/index.htm>
- ASX online courses: free introductory options courses are available online at http://www.asx.com.au/products/options/education/online_courses.htm

Managing risks

There are many risks when investing in equities. They fall into the following broad categories:

- Investment risk – such as market risk (e.g. direction) or currency exposure
- Operational risk – such as employee fraud, reporting errors and systems requirements
- Counterparty risk – such as credit risk from an 'over the counter' trade

There are significant differences in the risk profile of options, as opposed to investments in the underlying securities. These include the effects of volatility and time decay on option values. Trustees need to ensure that they are aware of and understand these effects on option values as they cause options to behave differently to the underlying asset classes.

APRA requirements for the use of options

The Risk Management Statement (RMS) prepared by a Trustee must state the purpose of the use of derivatives. APRA suggests that the purpose could include the following:

- To hedge: to protect an asset of the fund, or the portfolio, against, or minimise liability from, a fluctuation in market values
- To reduce the transaction cost of achieving required exposure
- To obtain prices that may not be available in the equity market
- To control the impact on portfolio valuations of market movements caused by significant transactions
- To assist in the achievement of the best execution of security transactions
- To reduce volatility
- To adjust asset exposures within the parameters set in an investment strategy

APRA has stated that it is important that before using options, investment managers ensure that they have the knowledge, skills and physical execution capabilities to adequately measure, monitor and limit their derivatives exposures at all times.

Options must not be used for speculation within a superannuation fund. Speculation is defined by APRA as investment activity resulting in one or more of the following:

- The net exposure of the fund to an asset class (e.g. Australian equities) being outside the limits set out in the fund's investment strategy. 'Net exposure' is exposure taking into account both physical and derivative exposure
- The risk for the whole portfolio being outside that which the Trustees considered appropriate when they developed and approved the fund's investment strategy
- The fund holding uncovered derivatives
- The fund's portfolio being 'geared up' through derivatives to circumvent the limitations imposed by Sections 67, 95 and 97 of the Superannuation Industry (Supervision) Act 1993 ('SIS Act') on borrowings

Examples of common option strategies and APRA's comments on these strategies are included on page 8.

Conclusion

Equity options are uniquely suited to managing risk in a share portfolio. Conservative investors use options to increase the returns on their share portfolios and to provide protection from market volatility.

Some low risk option strategies allow you to simultaneously increase the returns and lower the risk of a share portfolio. Studies have shown that covered call writing (or buy write) is one such strategy.

Options are a tool that should be in the toolbox of every investor in Australia.

Skilful usage of options can allow a fund manager to enhance the risk-adjusted returns for a superannuation fund. Compounded over time these increased returns at a lower level of risk can provide a significant boost to the retirement incomes of members.

For superannuation funds and fund managers who would like to become more proficient in the use of options, ASX offers a free program of education, training and assistance.

ASX also has other resources available online.

APRA has stated that use of options by superannuation funds may be appropriate and prudent in certain situations so long as they are not used for leverage (gearing) or speculation. If superannuation funds or their fund managers use options, Trustees must understand the specific risks involved.

Common options strategies and APRA's comments

The following are examples of situations in which superannuation funds might use options. These scenarios have been referred to APRA and are listed here together with APRA's comments. It is assumed that the Trustees and investment manager have met all the necessary legal and compliance prerequisites.

1. Purchase of call options in the expectation of a market rise

An investment manager buys call options in the expectation of a market rise. The objective is to generate returns through attempting to purchase stock, at some determined future date, at prices lower than those available in the market at the time.

APRA – "Purchase of call options should always be in accordance with the underlying investment strategy, as well as asset allocation and other security limits. These should be able to be justified in the context of member profile as well as the 'prudent person' test applicable to Trustees, which should eschew speculation. At all times the effective exposure must remain within relevant limits.

The primary purpose and effect of any use of derivatives in this manner is benefiting from a directional movement in the underlying security. At no time should the expected returns be based on changes in volatility.

At no time should the portfolio have a material exposure to options; the bulk of exposure should be from physical securities. This applies at the asset class level as well.

APRA has in the past seen evidence of wrong judgements being recouped through more aggressive option exposures. While such an approach would be unacceptable in any regulated entity, it is particularly so in respect of superannuation where member benefits would be at risk."

2. Share buy write strategy

An investment manager enters into a buy write strategy over a particular stock in the portfolio i.e. purchases shares and sells slightly out-of-the-money call options. In doing this they do not expect the stock price to rise appreciably and the objective is to enhance the yield of that investment in a period of relatively stable prices for the particular stock. Further, the option premium cushions the share price from some downside risk, reducing the risk of the stock position.

APRA – "This is acceptable provided it is in accordance with the investment strategy and Risk Management Statement for derivatives. The investment manager has capped its potential profit in exchange for a premium. While mathematically this may reduce the volatility of portfolio returns, it is not considered hedging of the downside risk (as this exposure remains).

Clearly, it must be ensured that there is adherence to the investment strategy and asset allocation limits at all times (i.e. exercise of the options should not leave the fund underexposed). There must be consideration of the impact of the cumulative exercise of different individual security options."

3. Index buy write strategy

APRA – "This is conceptually the same as applying the buy write strategy to an individual security. Clearly, it must be ensured that there is adherence to the investment strategy and asset allocation limits at all times (i.e. exercise of the options should not leave the fund underexposed)."

4. Purchase of put options against existing exposures

An investment manager purchases a put option to protect against any downward movement in (a) the price of a particular stock, or (b) the level of an index. The object of this strategy is to limit any losses from a downward price movement.

APRA – "This is acceptable and constitutes hedging of positions."

5. Establishing a collar on existing positions

An investment manager establishes a collar by simultaneously selling an out-of-the-money call and purchasing an out-of-the-money put of the same maturity over underlying stock already held, thus limiting both upside opportunity and downside risk. This strategy could be instigated in respect either of an individual stock or an index of a diversified equity portfolio.

APRA – "As this is a combination of a buy write strategy with a downside hedge this is acceptable. Premium has been accepted in exchange for surrendering upside potential, and this can then be used to purchase downside protection – potentially self-funding insurance."

6. Selling put options with an exercise price that the investment manager considers an appropriate entry point for the stock

An investment manager sells put options over stock that he wishes to acquire at a certain price. By selling an out-of-the-money put option they effectively place a limit order in the market to buy stock if it falls to their strike price. While the put position is open, the manager pays daily margins.

APRA – “Subject to the investment strategy and Risk Management Statement for derivatives, this is an acceptable strategy as the investment manager is collecting a premium for committing to an intended course of action. This also assumes the purchase of the stock would keep the fund within appropriate limits. The fund must be capable of meeting the obligation to purchase if the share dropped to the point where the option was exercised. This is irrespective of the size of the daily margins (although cash margins can clearly be included when determining whether there is cover for the transactions in question).”

7. Selling index call options in anticipation of a market fall, while observing a limit of 5% greater than the total value of the fund. All necessary margins are held.

APRA – “This is not acceptable. As already outlined, the strategy of selling call options against a covered position is considered acceptable, however the strategy outlined permits exposure to exceed that of the fund. Any activity which allows the effective exposure to exceed the total size of the fund is considered unacceptable leverage. Under Superannuation Circular I.D.7 derivatives may not be used to gear the fund and hence synthetically avoid the Superannuation Industry (Supervision) Act 1993 (SIS Act) prohibition on borrowing.”

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