OPTION WRITING IN THE AUSTRALIAN OPTIONS MARKET

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For the first time in this country, an Options Market has been established in Sydney for the purpose of providing an organised market for the trading of put and call options. Initially dealings will be in call options only on a select list of widely-held and actively-traded stocks. The aim is to establish a marketplace with depth and continuity, in which options can be traded on much the same basis as listed company options to take up fully paid or contributing shares.

The basic function of stock options is to permit the transfer of risks and opportunities between investors. For example, the owner of a share who sells (writes) a call, transfers to the buyer (taker) for a premium, the opportunity to make a profit if the share should rise in price.

The risk of loss to the writer of the call due to a decline in price, is reduced by the amount of the premium. Conversely, the buyer of the call while having the opportunity to make a profit, limits his downside risk to the premium paid on the call; although the resulting loss could be total and occur within a relatively short time.

In general, an investor's participation in, and use of, an options market will be determined by his attitude toward risk and his financial resources, tax status, and other factors.

In the traditional option market, the three elements of an option contract, maturity, exercise price and premium were all variable and negotiated between buyer and seller. In addition, the contractual conditions tied the buyer and seller together until either the buyer exercised his option or it expired. The writer had no control over the timing of the buyer and had to hold the shares until the option expired or was exercised.

In the new Australian Options Market, two of the three elements, exercise price and maturity have been standardised, leaving only the premium to be negotiated.

Standard exercise prices are set at arbitrary intervals near the current market price of the shares, maturity dates have been limited to the last Monday of March, June, September and December.

The negotiation of premium is done on the floor of the Exchange in much the same way that equity shares are traded. In addition, the contractual link between buyer and seller has been broken so that each may now act independently. Thus, a buyer may sell his option on the floor of the Exchange, at a time of his choosing, just as a writer may “close out” his written obligation by “buying in” his option contract.

The option writer must be ready at any time, during the life of the option, to deliver the necessary shares of the underlying security. However, an option taker would normally exercise his option only if the market price had risen above the exercise price plus the premium on the shares, and there is little or no “time premium” left in the option.

The writer may deliver the securities he is holding, buy the securities in the market to deliver, or exercise another option of the same class to satisfy the delivery. The action an option writer takes will depend on his overall strategy, tax considerations, and his current market judgment.

Although the writer is obligated to the option buyer until expiration, he may, at any time prior to being allocated an exercise notice, cancel his obligation by buying an option, identical to the one he has sold, in a closing purchase transaction.

He will naturally incur a loss, if he buys an option for a premium higher than he had sold, or conversely will realise a profit, if he buys for a premium lower than he had sold. A writer should always keep in mind this alternative for liquidating a covered option position. In discussing an option writing program it is necessary to make some basic assumptions about the overall objectives of the writer, whether he be an individual or an institution.

To create a fairly general situation, we will assume that the investment objectives of this portfolio are to conserve assets and at the same time, maximize the rate of return on those assets consistent with the desired level of risk.

Assuming also that the level of risk desired here is consistent with an equity portfolio of major Australian industrial and mining companies, and that the investor is satisfied with the present rate of return of the portfolio. In addition, he is satisfied that his judgment is sufficiently good to make additions and deletions to his portfolio from time to time.

It is important to establish these assumptions because they clarify the downside risk of the portfolio.
An option writing program performs one of two functions; either it decreases the downside risk of a portfolio, or it increases the yield of the portfolio, but it cannot do both at the same time. By selecting the right option, either of these two objectives can be achieved.

Assuming that the writing program will be on an established portfolio, using however, the current market price of the underlying security as the cost basis for the purposes of calculating return on investment, it is worthwhile examining closely how such a portfolio would be managed.

Having accepted the downside risk of the portfolio, a second consideration for the covered writer is the upside limitation. As we said initially, options transfer risks and opportunities between investors. In the case of a covered writing program, the option writer is transferring a portion of his opportunity for capital appreciation in return for a known premium. Thus, while he foregoes a possible large upside movement in his equity portfolio, he knows in advance exactly what income (premium plus dividends) he can expect over a given period of time.

In a covered writing program, the maximum profit is limited to the proceeds derived from the sale of the option, less the difference between the cost price of the shares and the exercise price of the option. It is this predetermined profit, at acceptable levels that is attractive to individual and institutional option writers.

One other risk of an option writing program is to enter into an equity position, basing the decision on the prospect of a large option premium, and not on fundamental stock selection techniques. If primary consideration is given to the level of premium and secondary consideration is given to stock selection, the program is in danger of failing, not because of the fundamental option strategy, but because losses sustained in the stock position probably can not be made up in the option program. In this case it is likely that the option program will bear the blame for failure, when in reality it actually reduced the loss of faulty stock selection. A good rule to follow is:

"Never write an option, unless you are willing to hold the stock."

One of the methods of evaluating the profit potential of the sale of an option is to calculate the rate of return (R.O.I.) to a writer, and then adjust that to an annual basis. In effect, this is the annual rate the buyer pays to control the underlying shares, and is the price demanded by the writer, to bear the risk of holding these shares.

In the conventional market this R.O.I. is calculated by the following formula:

\[
\text{ROI} = \frac{\text{Net proceeds from sale of option}}{\text{Total investment cost}} \times 100
\]

for the period covered by the option. If the option term is 3 months, then the annual rate of return is the above formula multiplied by 12/3 or four times as great. A six months option would have an annual multiplier of 12/6 and so on. The formula for the conventional option market was fairly simple because options were generally written “at the market”, i.e. the cost basis (purchase cost) was in fact the exercise price and the term of the options was generally three, six or nine months.

However, in the new Australian Option Market, exercise prices are standardised, as are the maturity months. Thus it is possible to write an option with an exercise price that is not the cost basis, and the term of option will be counted in “days to expiry” rather than in an even number of months.

Now the calculation becomes a bit more complicated and we must consider the option and stock position separately up to and including the expiry date. A profit and loss statement for each one will be calculated and a net profit calculated. A rate of return can then be calculated.

In evaluating various options for possible sale, this method assumes that the writer can duplicate his original situation over and over so that comparisons can be made on the same basis, in this case 365 days. It should be noted that when evaluating an option with less than 90 days to expiry, the multiplier 365/90 must be used, because as a practical matter, there is no way to have more than 4 expiries per year. If the options market had options expiring every month, then the multiplier could be as high as 365/30. However, for theoretical comparison purposes the multiplier should accurately reflect the actual time for expiry. A decision can then be made using the maxmultiplier of 365/90. In the following examples, the ROI is calculated for the period under option and the number of days listed for comparative analysis.

The option price table shown below was taken at random from a very active stock, whose options are listed on the Chicago Board Options Exchange.

It has been adjusted to reflect the facts of the Australian Option Market, and shows an option with three expiry months, March – June – September, each with their respective days to expiry. This option class has three exercise prices, the 350’s-400’s and 450’s and reflects option prices with a share price at $3.81/share. Thus the March 300 sells for 94c/share or $940/1000 share contract.
OPTIONS PRICE TABLE

<table>
<thead>
<tr>
<th>Expiration Month</th>
<th>Share Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mar</td>
<td>86</td>
</tr>
<tr>
<td>Jun</td>
<td>177</td>
</tr>
<tr>
<td>Sep</td>
<td>268</td>
</tr>
</tbody>
</table>

Option Position

<table>
<thead>
<tr>
<th>Repurchase Price</th>
<th>750 (2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sale Price</td>
<td>500</td>
</tr>
<tr>
<td>(LOSS)</td>
<td>250 (250)</td>
</tr>
</tbody>
</table>

Stock Position

<table>
<thead>
<tr>
<th>Sale or final price</th>
<th>4750</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost price</td>
<td>3810</td>
</tr>
<tr>
<td>PROFIT</td>
<td>940</td>
</tr>
<tr>
<td>NET PROFIT</td>
<td>690</td>
</tr>
</tbody>
</table>

ROI = \( \frac{690}{3310} \times 365 \times \frac{177}{177} \)
= 43% per annum (3)

(1) Since the option proceeds are immediately available to the writer, this amount can be considered to reduce the net investment.

(2) At expiry, the Jun 400 will have an intrinsic value of 75c/share with the share price at 4.75.

(3) Had the stock remained unchanged, the ROI calculation would have reflected only the sale of the option or,

\[ \text{ROI} = \frac{500}{3310} \times \frac{365}{177} \]
= 31.1%

The higher ROI in our example reflects the movement of stock from $3.81 to $4.00 or 19c and illustrates one of the reasons why it is advantageous to sell “out of the money” options (those where the exercise price is above the share price). In these cases the sale of the option does not limit the profit realized on stock movements from the purchase price up to the exercise price. However, the writer does not participate in any price appreciation above the exercise price, as long as he remains a covered writer.
CASE II: Jun 350 option – 177 days to expiry
Stock unchanged at expiry, options are exercised.

NET INVESTMENT
Cost Basis @ $3.81/share 3810
Proceeds from sale of Jun 350 750
Net Investment 3060

PROFIT POTENTIAL AT EXPIRY
Option Position
Sale Price @ .75c share 750
Option is exercised, no repurchase (1)

Stock Position
Cost Basis @ 3.81/share 3810
Sale at exercise price 3.50 3500
(LOSS) 310 (310)
NET PROFIT 440
ROI = \( \frac{440 \times 100}{3060} = 14.4\% \times \frac{365}{177} \)
= 29.6% per annum

(1) It should be noted here that had the options been repurchased (“closed out”) instead of allowing them to be exercised, the net result would have been the same since the option would have an intrinsic value of 31c (3.81 - 3.50) at expiry. This reduces the option profit but at the same time, it eliminates the stock position loss.

The problem of undesirable exercises can be met in two ways. As indicated above, options can be repurchased prior to expiry. This is normally done at a point where the option is carrying very little time value, that is the difference between the intrinsic value and the market value is relatively small. Options generally will not be exercised by holders when there is a large time value because it would be cheaper to buy the stock in the open market. Thus, exercises will normally occur in the last few weeks prior to expiry when the time value of the option is declining rapidly toward zero.

However, assume that for one reason or another, there was an unexpected exercise of the option. In this case, if the writer did not want to deliver the shares pledged to the performance of his written contract, he may enter the share market, purchase new shares and deliver these against the exercise. In the above CASE II, the investor will use the $3500 exercise price paid by the exercisor, plus $310 of his total option proceeds of $750 to purchase the shares. This leaves the $440 as net profit.

CASE III: Jun 300 option – 177 days to expiry
Stock declines 25% to 2.86, options expire unexercised.

NET INVESTMENT
Cost Basis @ $3.81/share 3810
Proceeds from sale of Jun 300 @ 110 1100
Net Investment 2710

PROFIT POTENTIAL AT EXPIRY
Option Position
Sale Price @ 110c 1100
No repurchase –

Stock Position
Cost Basis @ 3.81/share 3810
Final Price @ 2.86 2860
(LOSS) (950) (950)
NET PROFIT 150
ROI = \( \frac{150 \times 100}{2710} = 5.54\% \times \frac{365}{177} \)
= 11.4%

In this case the option writing program actually produced a small profit even though there was a substantial decline in the equity portion of the account. This case illustrates the use of the “deep in the money” option as partial protection for a declining equity position. If we did not consider the loss in the stock position, i.e. the writer was willing to hold the shares regardless of price, the annual ROI would have been a very large 83.7%.

Conclusion
It can be seen from the above examples that an
option writing program can be of great benefit to the holder of an equity portfolio.

As we have seen in CASE I, where the investor is bullish, it is most advantageous for him to write an "out of the money" option because he will participate in some portion of the share advance. If he is neutral he will probably write "at the money" options, (those where the share price is close to the exercise price). When he is bearish, he will probably use the "on the money" options as partial protection to his position or to produce a very good ROI in the event the share position is disregarded. These three cases also illustrated the need to make the investment decision first and then make the option decision.

It should be re-emphasized that options are a very versatile investment tool, and that their use can be tailored to fit almost every investor's needs. They cannot make bad investment decisions good, but they can decrease the risk of those decisions or they can increase the overall yield of these investments.

**NEGOTIATED BROKERAGE RATES**

At a luncheon meeting of the N.S.W. Division of the Institute on Wednesday, April 21, 1976, Mr. J.C. JOHNSTON, C.B.E., Senior Partner of J.B.Were and Son and Chairman of the Australian Associated Stock Exchanges, made the following points concerning NEGOTIATED BROKERAGE RATES:—

The introduction of negotiated brokerage rates in the United States and the provisions of the Trade Practices Act here in Australia have given rise to speculation as to whether negotiated brokerage rates will come to Australia.

It is easy for people outside the broking industry to take a facile view that we should have negotiated brokerage rates in Australia, but there are a great many aspects of the question which need to be understood before jumping to such a conclusion.

Even in America the long-term effects of the move away from fixed rates are not clear. I imagine that during the last few months when the volume of business in Wall Street has been so enormous the brokerage houses have been able to take it in their stride, but when I was in New York last September, and turnovers were very low, most of the brokerage firms were very worried about the outlook for the industry. It seemed to be accepted that many firms would be forced out of business and that there would have to be a severe reduction in the scope of research activities and other investment services. Some firms had already cut out all research work and no longer offered their clients any investment advice.

However, the greatest concern was that the inevitable severe reduction in the number of firms which would be able to continue to operate would mean that the breadth of the market and the competitiveness within the market would suffer to the ultimate detriment of the investing public. I was surprised also to find that it was not only the brokerage houses which had their troubles under the new system, but the trust departments of the big banks and the investment counselling and management firms, all of whom are in a fiduciary position in relation to their clients, were worried by the possibility that they could find themselves the subject of legal action for the recovery of damages because a client took the view that they had not got the best deal for him. The great problem is — What is the best deal? Presumably, it is the best net price after brokerage, but should they take into account that one broker offered much better service than another broker who was prepared to deal for a lower commission? Some of them, I was told, actually had their legal advisers sitting in their dealing rooms to advise them whether they were safe to do a certain deal or not.

The position in America so far is quite inconclusive. One thing that is clear, however, is that it is the big investors who have been able to negotiate lower brokerage rates; the private investor is still paying at least as much brokerage as he did before 1st May last. However, whatever may be the position in America, it is very dangerous to assume