



The Montréal Exchange is pleased to introduce Mr. **Richard N Croft** as a contributor to the New Options publication. Mr. Croft is President **R. N. Croft Financial Group Inc.** - Investment Counselors / Portfolio Managers (www.croftgroup.com) and a recognized expert in the Canadian options community.

Implied Trading Range

What implied volatility is really telling us.

There is much you can learn from the options market. Whether or not you ever actually trade an option. What options do, is define the risk in the underlying markets. And in the current environment, risk is on everyone's mind.

The price you pay to buy an option, or what you receive when you sell an option, is referred to as the option's premium. The value of that premium is calculated using a complex mathematical formula that includes such things; as the current stock price, the strike price of the option, the risk free rate of interest, dividends payable (if any), time to expiration and volatility. Plug all these factors into a computer, and the computer prints out the options so called theoretical fair value. In other words, the computer tells you what it thinks the option should be worth given those inputs.

When you get right down to it then, the formula is only as good as the inputs. Garbage in, garbage out. More to the point, of all the factors being plugged into the formula, the only one that must be estimated is volatility. All the other factors are known.

Therefore, an option "fair value" is really the market's best guess as to its price based on some measure of volatility. Which by the way, is the term used by option traders to define risk. More volatility, more risk.

Because volatility is so critical to the option's price, many prefer to let the market simply define the volatility. Since we know all the other factors, and since the trader also knows the market price for the option, why not plug all those factors into the formula and ask it to solve for volatility. What volatility is being implied by the current price of the underlying security.

Still a little hazy? Not surprisingly, implied volatility is no better than "fair value" as an investment tool. If I say to you, the options on Biovail Corporation are implying a 47% volatility over the next thirty days, what does that mean? An investment tool is of no use, unless you understand what it is telling you.

The goal then, is to translate implied volatility into terminology you can actually understand and use. The idea is to calculate an implied trading range for the underlying stock. And the way to approach that is with an option strategy known as the straddle. A straddle involves the simultaneous purchase (or sale) of a call and a put, with the same strike price and expiration date, on the same underlying security.

Here's an example. Biovail Corporation Corp (symbol BVF) closed last Friday at \$53.15. A typical straddle would include the purchase (or sale) of the Biovail Corporation 55 calls and 55 puts. When the Biovail





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Corporation April 55 calls were trading at \$5.75, the Biovail Corporation April 55 puts were trading at \$7.00. If you bought the call and the put, the total cost would be \$12.75 per share.

The straddle then, is a play on volatility. Having paid the \$12.75 per share to buy the call and the put, you are now indifferent about whether Biovail Corporation rises or falls. If it rises the call will profit, if it falls, the put will profit. What you really want, as a buyer, is to have Biovail Corporation move far enough to overcome the cost of buying both the call and the put.

In this example, the straddle is profitable if Biovail Corporation closes on April 18th (the last trading day for the April 2003 options) above \$67.75 (\$55 strike price plus \$12.75 premium paid = \$67.75). On the downside, you would profit if Biovail Corporation is trading below \$42.25 per share (\$55 strike price less \$12.75 premium paid = \$42.25).

The implied trading range for Biovail Corporation between now and the third week in April is \$42.25 on the downside to \$67.75 on the upside. At least that's the trading range the options market believes to be reasonable for that stock over the five months. That's what 47% implied volatility means. Knowing the implied trading range is important, because it is an unbiased consensus view of the market. It is the market defining what it sees as the risk in Biovail Corporation over the next five months.

Now here's a question; do you think that, over the next five months, Biovail Corporation is likely to trade above \$67.75 or below \$42.25? If you think the stock will likely trade outside those boundaries, then you are really saying that the options on Biovail Corporation are understating future volatility. Or put another way, the options on Biovail Corporation are cheap, and for you, buying the straddle would make sense.

Interestingly, over the past two years, options on stocks have been for the most part, understating future

volatility. Meaning that investors buying straddles on individual stocks have, on average, been winners.

On the other hand, options on broad based indices (i.e. the Dow, S&P 500 index, S&P/TSX 60 Index) have for the most part, been overstating future volatility. Investors who have been writing index calls and puts, have on average, done better than index option buyers.

Implied trading range can help investors make better trading decisions, because it draws data from an unbiased source; the trading public. You may believe that the implied trading range is overstating or understating future risk. That's fine! After all, having an opinion that is different from the consensus view, is what drives one to make a trade in the first place.

Beyond that, long-term investors can use the implied trading range to assess the risk in a particular stock. What would be the impact if the stock breaches the downside target? That can go a long way to helping you decide how much to invest, over what period.

The implied trading range can also help you monitor a position over time. If the stock breaches its short term implied trading range, for example, you may want to re-think your position.

Question of the Month

Can I Use Options in my RRSP?

There are currently two strategies that can be used in registered accounts: buying calls or selling covered calls. The Montreal Exchange is currently in talks with regulatory authorities to include other low-risk strategies in registered accounts.

If you have a question about options, please send it to options@m-x.ca. Your question may be published in the next issue of this newsletter.



Advantages to Selling Options

Investors who sell options to cover their holdings benefit from a number of advantages:

- Selling covered calls reduces the risk of a portfolio by 30% to 50% (according to different studies).
- Selling covered calls will theoretically maintain the same returns as would be gotten with an uncovered portfolio but with much less risk. Furthermore, many studies have found that selling covered calls actually increases your returns while reducing your risk.
- Covered calls allow you to sell your stocks as they rise – they instill a proper discipline and remove much of the emotions that lead people into losses. Too often, investors become greedy, never wanting to sell their shares because they may still go up. Paper profits are not real profits until you sell your shares.

- Covered calls allow you to make money in any market without having to guess on a stock's direction.
- Covered calls allow you to reevaluate your share holdings on a periodic basis.
- The options premium received when selling options is considered to be a capital gain in the year the option is sold. Capital gains are taxed at a much lower rate than bond coupon payments or dividends. Covered calls are therefore an excellent, tax-efficient way to take in revenue for investors who usually hold bonds or preferred shares for revenue.

Please consult our strategy sheets on how to sell [covered calls](#) or [secured puts](#) in your portfolio.



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