LEARNING THE LANGUAGE OF OPTIONS – A REFRESHER COURSE – PART 2

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INVESTORS and professionals alike have been fascinated by options and drawn to them for decades. The reason for this deep level of appeal is because of the focused involvement that you can exert in the market through using them. Just as a blow torch concentrates a small flame to cut through the toughest metal, options can be similarly used to help investors deliver a concentrated return in any market environment.

There are six quantifiable components that make up the value of an option. These are:

1. The underlying stock price
2. Time to expiry
3. Strike Price
4. Volatility of the underlying stock
5. Dividend amount for the underlying stock
6. Interest rate (risk free)

We look at each in turn below.

Underlying stock price

The option is a derivative of the underlying stock and is linked to movements in the underlying stock price. Movement in the share price is the element that affects the price of the option the most. The bigger the movement in the underlying share price the more it will impact on the price of the option. An upward move in the share price will cause call options to increase in value and put options to decrease in value, while a downward move in the share price will cause call options to decrease in value and put options to increase in value, all things being equal.

Time to expiry

All options have a fixed expiry date. All things being equal, the more time before expiry an option has the higher the option price will be. The value attributable to an option as a result of the time remaining until expiry of that option is known as time value. Time value declines over time which is known as option time decay. The rate of time decay is more pronounced as the option approaches expiry.

Strike price

The strike price (also known as exercise price) is the price at which the stock may be bought or sold. The level of the strike price impacts greatly on the price of an option. A strike price that is in the money will have the highest level of value, followed by at the money options, with out of the money options having the least amount of value. The further in the money an option is the higher its price will be and the further out of the money an option is the lower will be its price.

Volatility of the underlying stock

The volatility of the underlying stock has a significant impact on the price of an option. The more volatile the underlying stock, the greater the value of the option. Volatility in the price of the stock means that there will be a greater chance of a large move occurring in the option, so option buyers will be prepared to pay a higher premium and option sellers will demand a higher premium.

Dividends

If a stock is not paying a dividend then this will not factor into the price of an option at all. However, if a stock is paying a dividend during the life of the option then it will have the effect of lowering the price of a call option and increasing the price of a put option. The larger the dividend being paid the lower will be the price of the call option and the higher the dividend being paid the higher the price of the put option. The reason that this occurs is because option holders are not entitled to receive dividends so options are priced as if the dividend amount were stripped from the share price. Effectively options factor in dividends to their price so that the day after a stock goes ex-dividend, if it falls by the amount of the dividend as you would expect, there shouldn't be a material change in the price of the option.

Risk-free interest rate

The higher the interest rate (usually refers to the 90 day bank bill rate) the higher the premium and the lower the interest rate the lower will be the premium, although the increases and decreases are negligible. This element has the least impact on the price of an option.

Investor sentiment – The non-quantifiable influence on the price of an option

The previous six elements that influence the price of an option are all quantifiable. In other words, their impact can all be measured and put into a formula to calculate the fair value of an option.

The actual value of an option is, however, ultimately determined as a result of market interaction between buyers and sellers. Investor sentiment as shown in the demand and supply of the options themselves can also affect the price of options.

Next week we outline some other key concepts that are unique to options.