

### Gaining Leverage with Options

Long options offer traders an exceptional amount of leverage for directional trades, especially for short-term time horizons.

Option purchases (buying a call or buying a put) are often cited as attractive trading strategies for directional trades because of the limited loss associated with being an option holder. The premium paid for the option is the total amount that can be lost in the trade. Similarly, the profit potential for option holders is enormous if the underlying market makes a big move higher (in the case of calls) or lower (in the case of puts).

What is often overlooked, however, is another property of these trades that can make them look even more attractive: Leverage. **Under many circumstances, long option positions can produce a much greater rate-of-return on margin money than can outright spot trades**

Too often traders focus only on the break-even and profit/loss associated with an option on its expiration day. Options change in value constantly as the underlying market trades, and there are many opportunities to exit option trades profitably long before expiration. **This is where the leveraging power of long options really shines**

Except for very in-the-money options (those that have a large intrinsic value), option values do not change 1-for-1 as the underlying market changes in value. If the underlying spot price moves higher by .0100, all call options will likely gain in value, but for most of those options, it will be some amount less than .0100. Similarly, put options gain in value as the market falls, but for most options, it happens at a slower rate than the drop in the spot price.

The rate at which the option changes in price relative to how the spot changes in prices is called the delta of the option. Deep in-the-money options have a delta close to 1.0 (for calls) and -1.0 (for puts) and make and lose money very much as a spot position would. Similarly, options which are very far out-of-the-money have small deltas and the spot market needs to make a significant move in order for these options to show much change in value.

At-the-money options have a delta of approximately .50 or 50% (for puts -50%). This means that if the spot market moves .0100, the option value will change half as fast, or about .0050. Since options can often cost less in cash than the amount of a spot margin, these trades can produce a rate-of-return much greater than spot trading. This is especially true for slightly out-of-the-money options.

**Example**

*The spot market is trading at 1.1000. At 10% volatility, 30-day 1.2000 call options are worth .0051.*

If the contract size is 100,000 and the margin rate is 2%, then a spot margin will be  $.02 * 100,000 * 1.100 = \$2,200$ . The at-the-money call option costs  $.0051 * 100,000 = \$510$ .

If, one week later, the spot market has moved up to 1.1300, the call option (only 23-days now) will be worth .0170. A long spot trade will have made  $.0200 * 100,000 = \$2,000$  and a long call option trade will have made  $.0170 - .0051 = .0119$  or \$1,190.

At first glance, it seems the spot trade is the better choice: \$2,000 vs. \$1,190. Upon calculating rates-of-return, however, the option trade is far superior because of its leverage.

To earn the \$2,000 in the spot trade, the account was margined \$2,200. The rate-of-return is  $2000/2200 = 91\%$ . Over 7 days, that's pretty good. The option trade, however, earns \$1,190 with a cash outlay of only \$510 for a rate-of-return of  $1190/510 = 233\%$ , more than 2.5 times better than the spot trade.

Another way to look at the leverage that this trade offers is to calculate an equivalent effect on the account. At \$510 each, one could buy 4 options (total = \$2040) for approximately the same amount of money as one spot margin. Those 4 options would have produced  $4 * \$1,190 = \$4760$  in profit vs. the \$2,000 seen in the spot trade.

Note that these examples assume that volatility levels stay the same throughout the life of the trade. If volatility increases, the rate-of-return is actually better than that shown. If volatility decreases, the rate-of-return will not be as strong. Also, different strikes and different time horizons will affect the results, sometimes dramatically.

