By Diana Klemme

Options for Managers

Options are a valid tool for managing risk, especially in volatile markets

Highly volatile futures attract risk-management strategies that would not warrant much attention in quiet markets. Often the strategies include exchange-traded options on futures. Many firms already use options to create pricing flexibility for their customers, through minimum or maximum price contracts. But far fewer use options to manage their own merchandising risks. One strategy advisers or brokers often recommend for volatile markets is buying put or call options as business 'insurance' against major adverse price moves. Some advisers suggest writing options to collect premiums. But are these strategies valid for grain elevators, feed mills, or end users or a ploy to generate commissions for brokers? Agribusinesses face many market risks and costs in dramatic bull markets:

- Interest cost margining short futures hedges
- Unexpected (and often untimely) adverse basis moves
- Credit exposure and default risk on open purchase contracts
- Risks associated with contract misunderstandings or disputes
- Error risk or price slippage on futures orders in volatile markets

Options are a valid tool for managing risk, especially in volatile markets. The challenge is to understand the cost and the risk profile of any option strategy and weigh those against the risk you want to offset or protect against. Option strategies don't automatically "insure" you against anything, however, and some strategies actually increase your exposure! One dictionary defines insurance as: "coverage by a contract binding a party to indemnify another against specified loss in return for premiums paid."

Options on futures don't really meet that definition, although buying options does meet another dictionary definition of insurance: "a protective measure." For this article, "buying options" may connote the second type of insurance.

Owning call options in a bull market may offset some of these potential risks. One challenge is determining how much option "coverage" is appropriate, but there is no simple answer. Consider the size of your risk position, what losses you might face, and how much revenue you need to offset that. For example, if you have 100,000 bushels of corn ownership and open purchases, you might decide you face potential costs or risks of $5,000 for each 50¢ rise in futures. Next, consider what strike price and what quantity of call options to buy to minimize that exposure. Buying options costs money, however, and your upfront cost should be considered nonrecoverable.

Buying 8 call options, 40,000 bushels worth, is more "insurance" than this position justifies. It would cost $6,000 upfront, a hefty 6 cents/bushel on the entire 100,000 bushels in this example and the manager had only forecast a potential $5,000 of risk to "insure" against. On the other hand, buying only 2 calls (10,000

Assume a cash/contract risk position of long 100,000 bushels:

		Buy 2 calls	Buy 4 calls	Buy 8 calls
		10,000 Bu.	20,000 Bu.	40,000 Bu.
Premium cost per bu.	15¢/bu	=$1,500	=$3,000	=$6,000
Cost per risk position bu. (on 100K bu.)		1.5¢	3¢	6¢
Assume futures rise		Gross Revenue if you liquidate the options:		
If Option value/bu. =	60¢	$6,000	$12,000	$24,000
If Option value/bu. =	40¢	$4,000	$8,000	$16,000
If Option value/bu. =	20¢	$2,000	$4,000	$8,000
Assume futures drop sharply				
Option value/bu. =	0	0	0	0

bushels) would cost $1,500 total, or 1.5¢/bushel on the 100,000 bushel cash risk position. Assuming futures rise 40¢ to 60¢, these calls would then have intrinsic value of $4,000 to $6,000, close to the revenue this merchandiser desired, reduced by the $1,500 paid to buy the coverage. Buying 2 calls at 15¢ apiece could be reasonable in this situation. An alternative would be to pick an out-of-the-money strike price with a lower premium per bushel, and buy a larger quantity. Higher strike price call options would return less total revenue on small rallies than the lower strike price, but will return higher total revenue on dramatic rallies if you own more of them.

Options offer a lot of flexibility for firms to manage business risks associated with futures volatility, but don't downplay the initial cost. Adding 3¢ to 5¢ to most firms' variable operating costs is difficult to justify. There is such a thing as too much insurance.

Firms that face business exposure from falling futures prices can buy put options instead of call options. This could be appropriate for feed manufacturers, for example, that have sizable priced sales at high prices and are concerned about buyers defaulting on the contracts. Or endusers that have their feed needs bought might buy put options to help protect against sharp futures declines Any net gain from the puts would lower their feed cost.

What about writing options? That's where the money is!

Writing options is comparable to selling insurance policies; the writer collect premiums but assumes risk in return. Some brokers push firms to write options, saying "That's where the *real* money is." That's correct in principle, but nobody gives you money for nothing. Writing options can *raise* your overall business risk in many situations.

> ***"Using options as a way to manage risk could be compared to using a laser scalpel instead of a chest cutter to operate on a patient."***

But when futures volatility rises sharply, option premiums may be large enough to justify writing options in connection with other futures or option strategies or even as a surrogate "hedge."

The elevator manager who buys call options for some "insurance" could write a higher strike price option at the same time. In this case the elevator doesn't add to their risk position by writing options, but reduces the value of the coverage they own. Essentially it caps the potential returns of the combined strategy. For example, if our manager buys the 2 call options for 15¢ each, there probably isn't much to be gained by writing call options at a higher strike price; the premium would be lower than 15¢, perhaps substantially lower. That's not much apparent return for capping your potential gains. But in the soybean market of 2004, volatility is so high that call options $1.00 or more out of the money sometimes can earn 30¢/bushel or more. Buying a lower strike price call and selling an out of the money call creates a form of capped insurance that can serve as a reasonably conservative strategy.

Writing options in lieu of selling futures is not a true hedgee; approach it cautiously. Writing an "at the money" soybean call with a premium of 60¢ against purchases or inventory ownership offers some, but not complete, protection.

Long cash + short 9.00 call (collect 60¢) with futures at 9.00

If futures decline more than 60¢, to below $8.40, the elevator still owns the cash soybeans, has 60¢ in hand, but no short futures position, and is long in a falling market. If futures rise sharply, the short call rises in value against the elevator. The manager collected

60¢ and although the short call will rise in value against our merchandiser, the call position won't "lose" more than a short futures hedge would have lost.

Brokers sometimes suggest buying call options combined with writing out of money put options as "a cheap way to get long." That is correct in that the call option is one way to be long. If futures decline sharply, the short put could be exercised against you, creating a long futures position in your account. So you are "long" either way, but is that the position you want to hold? For any end user who must "buy" and fix a price for feed at some time, it's just a question of price and time. This strategy is an acceptable alternative for users. Elevators do not need to nor have to assume price risk, and the strategy would have few valid uses.

Yellow flags about writing options:

• You must margin any net short option positions.

• If volatility rises, the option position can move against you even if futures don't change.

• Time value is highest for "at the money" options; writing out of the money options carries the risk you end up with an "at the money" short position that is expensive to exit.

Tax considerations:

Internal Revenue Service (IRS) regulations spell out what constitutes a "hedge" use of futures and options where gains can be considered "ordinary" income and losses be deductible. Regulations allow that if a futures or options transaction is discovered that does not meet IRS hedge-treatment guidelines, everything in that account — all gains/losses — may be accorded capital gains treatment. Keep detailed written records of cash positions, risk being managed, costs and returns. Use a separate brokerage account to segregate such trades from day-to-day hedging activity. Prepare a corporate resolution authorizing such trading and stating the business purpose. ■