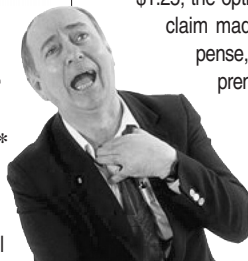


"This collar feels a little too tight" by Philip J. Baratz, C.T.A.*



Once again, I am handicapped by the fact that this article will not be read by anyone outside my office for at least the next month. Oil prices traded above \$46 per barrel this morning, and the market prognosticators are wondering where the top will be—\$50, \$60, \$75? The fear that has gripped the market is seemingly unbearable—but that's today. For all I know (and for all I hope), prices may have fallen back towards \$30 per barrel by the time this column is read. Might they? Maybe. Will they? Probably not. Will heating oil prices hit \$2.00 per gallon this winter, or might they collapse down to \$.50 per gallon? About 6 months ago, or so it seems, we left the comfortable reality of supply and demand determining oil prices. Now we take note of supply and demand, but spend a lot more time looking at what MIGHT BE with supply (pipeline attacks, refinery problems, withdrawals from the SPR, etc.), and what MIGHT BE with demand (China, terrorist impacts, economic turndowns and resurgences, etc.)

What used to move the oil markets by 1 or 2 cents per gallon is now moving prices by 5 or 10 cents. As anyone offering a pricing program (fixed or capped) to their customers can easily tell you, this has been one of the hardest years ever in order to hedge your programs. The trouble, which might surprise some, was not so much in the "when" part of the equation: ratable, steady as she goes, without emotion or panic—all have worked well this year. No, the real problem was in the "how much"—as in, "how much does this cost?" I can't really imagine anyone who is happy with the wild swings that prices have been taking, but one of the (many) residual effects of the big swings (volatility) is that it—in this years' case, dramatically—increases the costs of protection, more specifically, the option premiums for those looking to protect against adverse price (or volume) risks.

Price protection (in the form of options—both call options and puts options) that used to cost 5-7 cents per gallon can easily cost almost twice as much this year. Option "Implied Volatilities" (one of the many measures that help determine an options' cost) are in the 40% range, just a few seasons removed from being <20%. Although I do not like to harp too much on the technical details of trading, a doubling in volatility means that "the belief" is that prices are likely to swing twice as much in the coming year as they were "believed" to be able to swing just a few years ago. The changes in rack prices that we see, almost daily, make this assumption very believable.

But now to the topic of my article.... As costs of options (protection) have steadily increased, many in the industry (myself included) have been searching for ways to cut down on these high costs. Briefly, an options' premium is made up of five factors: 1) estimate of price at a later date; 2) deductible to the "strike price"; 3) cost of money—"interest rates"; 4) time value—time until expiration; and 5) **Implied Volatility**—the swings in the market.

With volatility through the roof, the only real way to cut down on the cost of an option—given that you can't change either where oil prices are or what the calendar is telling you about today's date—was to increase the deductible. In other words, if you were looking to buy a "call option"—one which protects you against an increase in oil prices, you might buy a \$1.25 call option, instead of buying a \$1.20 call option. The benefit? The \$1.25 call costs less. The downside? If prices are at or above \$1.25 per gallon (at expiration time) the \$1.25 call option will return to you five cents per gallon less than the \$1.20 call. So, that is the question: how do you balance the "Strike Price" (i.e. \$1.20 or \$1.25) with the option premium (the cost paid for the better, or lesser, protection)? This question is not new, or unique to this year, but is being looked at a lot more closely as the costs for all options have increased—dramatically.

Since all options have a market for both buyers and sellers, the SELLER of the option collects the (in this year, very expensive) premium paid, in return for a

promise to pay out in the event that prices surpass the strike price. So, in the case of owning a \$1.25 call option, the seller of the option would pay to the owner of the option the difference (at settlement) between \$1.25, and wherever the market settled—provided that it settled above \$1.25. If the market settled at, or below, \$1.25, the option would expire worthless (akin to an insurance policy with no claim made), and the owner of the call option would have, as an expense, the premium paid, and the seller of the option would keep the premium received, and not owe any money.

Here is where it starts to get a little more difficult. Since most oil dealers are only fearful of one price direction—higher—the "typical" option purchase by an oil dealer is either (a) the purchase of "Calls" which pay out in the event that prices rise (above the Strike Price), or (b) the purchase of fixed wetbarrels from their supplier(s), along with the purchase of "Puts" which pay out in the event that prices fall (below the strike price). In both of these scenarios, the dealer has protected himself or herself against prices spiking higher, while allowing participation (lowering costs) in the event that prices fall. That is the simple standard approach to hedging for oil dealers. There are many, many nuances and ways to customize your hedges, but that is not for this article.

The problem that we have been seeing for the better part of the past five months is that, as mentioned earlier, the costs of the options (insurance) has jumped up this year, due to a myriad of reasons. So, the simple approach of buying calls, or buying wetbarrels with puts has gotten really expensive. That fact, coupled with the fact that prices jumped faster that most dealers were prepared for, has left many struggling and scrambling for a way to "control the seemingly uncontrollable".

One way to control costs, being promoted by some, has been to put on a "Collar". Here is the logic: If you need to cap your costs at, say \$1.25 per gallon, BUT that premium (for a \$1.25 call option) is way more expensive than you want to pay, you would SELL A PUT at the same time as you were buying the call. By selling the put (let's say at a strike price of \$1.05 per gallon), you would collect the premium, and use that cash to help pay for the \$1.25 call option—cutting down on the out of pocket cost. After all, you NEED to have a \$1.25 call in order to meet your promise to your customers, and to make your margins. Also, who wouldn't want to own oil at \$1.05 per gallon—especially when it is at \$1.20 right now?

Let's pause, and explain.... By selling the \$1.05 put option, you will be paying out the difference between \$1.05 per gallon, and wherever prices are, in the event that they fall below \$1.05. So, if prices were to fall to, say \$.75 per gallon, you might be able to buy oil at \$.75, but you would also have to pay out—to the owner of the put option—\$.30 per gallon, effectively raising your cost back to \$1.05.

It might look very appealing to sell a put option to finance the purchase of a call option, but it changes the rules of the game. As an oil dealer, especially one who has sold a price cap to their customers, you root for prices to drop, as that will usually increase your profit margins, and make it easier for your customers to pay their bills. If, however, you have sold this put option, you have placed a concrete FLOOR under yourself, and you will not be able to pay less than that floor. So, if prices fall too much—which is usually good for all—it will hurt your bottom line.

The fact is that a collar can be a very beneficial item, in the event that a customer wants to know that while they won't pay more than "x", they also may not pay less than "y". We have several clients who actually offer their end-use customers (generally commercial, not residential, but the same logic applies) a collar. The plan there is that the company can offer a lower ceiling (due to the lower out of pocket expense for the ceiling), IF the customer is willing to agree that his price would not fall below a certain level—so the range, the "collar", is accepted by the final purchaser of the oil. However, in the case of the dealer (reseller) the end-use customer, the homeowner, just understands that he has a ceiling, and that if prices move lower, his cost of oil will drop. If part of the hedge to enable the dealer to offer the program involves the selling of puts to finance the calls, the economics can suddenly change in a volatile environment—and it is probably pretty easy to call the current environment volatile, wouldn't you say?

"There's no free lunch". If your father didn't tell you that, your grandfather did. Oil hedging is about math. For each step that is taken to lower hedging costs, risks increase. For each step taken to decrease hedging risks, costs increase. There is not secret potion, or formula—unless you KNOW where prices are going. Because if you think you know where prices are going to be in six months from now, I'd like to show you this really nice bridge that's for sale in Brooklyn.

Plan, plot and be methodical. Control your margins. Don't let the markets control them.

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