

## PORTFOLIO STRATEGY

# Overwriting options

*Oppenheimer Capital's Eugene Brody and Ethan Etzioni are true contrarians — they sell calls in bull markets and puts in bear markets.*

**O**ppenheimer Capital's option management division, with responsibility for some \$3 billion, is the largest manager of options programs for institutional investors. The division has several products — including tactical asset allocation — but its most popular offering is an options-overwriting program.

The underlying portfolios of a client's equity managers are never affected; Oppenheimer sells options on market indexes, acting, in essence, as manager of a separate asset class. Audited statements show that the program, launched in 1977, has added an average of 120 basis points to clients' annual equity returns. Until this year, for the most part, the group wrote only calls, but this year — in time for a bear market — it has been aggressively writing puts as well.

In early October, Associate Editor Stephen E. Clark interviewed Eugene Brody, a managing director of Oppenheimer Capital and director of the option management division, and Ethan Etzioni, Oppenheimer Capital senior vice president, to learn more about how their strategy works and how it has been refined in recent years.

**Institutional Investor: Is market forecasting involved in your decision whether to write calls or puts?**

**Etzioni:** No. What we're trying to do with options valuation is similar to what an insurance company does in calculating its liabilities. For example, an insurer will look at an auto policy and calculate that one in 100 policies will have an accident with \$10,000 in claims, and that one in ten will have an accident with \$1,000 in claims. To calculate the premium, they simply do a weighted average and then discount that figure to the present. We're



*Oppenheimer's Etzioni (left) and Brody: They don't forecast market turns; they just look for overvaluations*

doing exactly the same thing. We're not wasting any energy trying to guess where the market's going to go. We're just trying to calculate the actuarial value of the liability associated with that option and compare that with the market premium.

**Brody:** The fact that we're selling calls or selling puts is not a market prediction. All we're saying is that the price of the option is right. If it's a bull market and I tell people I'm selling calls, you know what they're going to say? "That idiot is selling calls into this market. How could he be so dumb? Doesn't he know the market's going up?" They think I'm wrong. That's why they're paying those prices for the calls I'm selling. I don't want to argue with them. I'll collect a premium. He's making his bet, and I'm making mine.

In a way, we like to think we're the

house and they're the bettors. We like to think we have a statistical advantage. They're the emotional buyers; we're the pragmatic sellers.

**So you sell options only when you think demand has made them overvalued?**

**Brody:** Right, and that's the hardest part. Writing options is all a matter of discipline. With us, price counts. We can't make a perfect calculation on the right price. But we must wait for those periods of overvaluation. We may get them only once or twice a year. We know we're going to get them at some point, even though it may not seem so at the time when you're sitting there day in and day out not doing anything.

**You write calls against market indexes. But your clients' underlying portfolios are actively managed, diversified stock portfolios.**

**Brody:** Up until 1984 there were no index calls, and we were writing calls on individual stocks. There are many advantages to writing index calls. We've done it exclusively since 1984. That was a change for us. But the basic idea of not selling calls unless they're overvalued, selling only when there's good demand and then being diversified, has never changed. That was [the policy] from day one. What has changed is the refinement in the model, the refinement in volatility estimates, things of that nature. But the basic idea of what we look for has not changed.

**You base much of the decision to sell options on your proprietary valuation model. What's unique about yours?**

**Etzioni:** First of all, as with most models, we've tried to calculate the historical patterns of volatility. We've done lots of

studies showing that extreme volatilities tend not to persist; they regress toward a normal level.

But we believe just to take the long-term historical volatility and inject that into the future is not good forecasting. So we have a weighted valuation technique that properly goes backward in time but weights the recent past more heavily. We think this is an optimal way for estimating volatility, because it correctly balances getting a good historical sample with giving more weight to the more recent data — though you don't want to base your data on the volatility you've had over the last three days or something crazy like that, either.

**Brody:** You have to factor in this regression to the mean, because you know it's going to come back to that level. For example, right now volatility's high because the market's been coming down. We know that volatility in down markets is higher than volatility in up markets. This is factored into our calculation.

**The most widely used and known options-pricing model, the Black-Scholes model, uses Treasury-bill rates for its valuation calculation. You don't. Why?**

**Etzioni:** We use a higher interest rate. Black-Scholes was developed under the assumption that the stock position that is hedged with calls is risk-free. But it's not risk-free, because Black-Scholes assumes the stock-price changes are very small. Actually, at times they can be quite large and sudden. Therefore it's appropriate to use a higher interest rate to compensate for the risk.

There's a third factor we calculate differently from other options-valuation models, and that's the return distribution. We've found there's a symmetry to stock market returns — basically the market goes up and up and up steadily, and then it heads down quickly. We've incorporated that into our options-valuation model.

**Do you always follow your valuation model?**

**Etzioni:** We'll never sell an option that's not overvalued. The element of judgment really comes from how long we think options will be overvalued. Let's say the fair volatility is 17 percent and implied volatility is 21 percent of the option at its present price, then the option is overvalued. So the question is, how fast do we sell?

**Brody:** In other words, we don't know how long those good prices are going to last. So we want to diversify our positions. We don't know whether we'll be

**“I  
In a way, we like  
to think we're the house  
and they're the bettors.”**

able to sell calls every day for a month or whether the attractive prices are going to disappear in five days. We diversify by price and by time. It's a matter of how aggressive we want to be. If we get fully written at a 21 percent implied volatility and the option's price level goes to 25, becoming more overvalued, there's no more ammunition left until we have an expiration. The bulk of our positions will expire in the next 30 to 60 days. So if in fact we get committed too rapidly, within 30 days we'll have an expiration, and we'll be able to rewrite.

**Do you ever close your positions early, before the expiration of the option?**

**Brody:** No. First of all, we want to keep transaction costs to a minimum. That's one reason. More important, closing a call position, for example, before expiration would imply that we had an opinion that the market would go even higher. We've had situations in which we've sold calls for 3 or 4, seen them go to 10 and expire worthless. But it's not as though we don't take losses on some options we write.

**What's the worst hit you've taken?**

**Brody:** We've had only one really bad period, and that was in 1982. In early August the market declined and calls became very overvalued, so we sold them. This was unusual, because calls usually see their premiums increase after the markets have gone up, not down. When the market turned back up later that August, we suffered losses. What happened was that we hadn't realized the impact of the newly authorized expansion of the number of stocks with puts. Investors were getting more bearish as the market went down and were overpaying for puts to such an extent that arbitrageurs were shorting stocks, selling puts and overpaying for calls to protect themselves. That's why we now track the volume, or demand, of puts relative to calls so we know where the overvaluations are coming from. I consider that our single biggest mistake in fourteen years, and I still think about it.

**Is there a limit to how much you can write effectively?**

**Brody:** We used to think the limit was \$200 million. Now we have about \$3 billion. We don't know the limit now, as the market keeps getting bigger. When we're selling, it means that calls are overvalued. Demand is very high and there aren't enough sellers. In the periods in which we sell calls, liquidity is really not a constraint.

**Why did you decide to move into writing puts?**

**Brody:** When there were individual options it was too risky; it was too hard to get diversification. And for a long time there were puts on only 25 stocks. When index options started, we got very interested. Particularly when we saw from time to time how not only demand for puts, but also the prices increased dramatically. We like the idea of writing puts because even though put-writing is more risky — since volatility is higher in down markets — they have more dramatic overvaluations than the calls. We've done put-writing for five years, but last year we had only two small clients that let us write puts. Just this year, though, we got substantial commitments.

Selling puts is a difficult concept for clients to understand. It's newer to them. It's a question of education, and they have to stew on it.

**A market panic like the recent one amounts to a worst-case scenario for a put writer, doesn't it?**

**Etzioni:** We've aggressively written puts into this decline. The market just hasn't dropped far enough to hurt us because the puts written are 8 to 15 percent out of the money. The people who are buying puts are saying the probability of an 1987-like crash is one in ten; we're saying the probability is one in 1,000. That's the difference. I'm not saying it can't happen, I'm just saying it's highly unlikely. If a crash does occur, we'll take a loss. But if we manage to collect our premiums a few more times before the crash, we'll still be ahead.

**Brody:** You could create a scenario that could be bad for us. I don't know if we'd be put out of business. We'll have collected all these premiums; they're in the bank. So any losses that we take because the puts are in the money would probably be covered by that pool.

Let's look at options overwriting this way. It's all a question of premiums. Let's say you own a vacation home, and some guy offers you \$1,000 to rent it for a week. You say, no, I like my vacation home. My week in my vacation home is worth more to me than that. Then he offers you \$10,000 for a week. Well, you take it. Then you take a trip to Europe and pocket the difference. ♣