

The Jones Family, Incorporated

The Scene: Early evening in an ordinary family room in Manhattan. Modern furniture, with old copies of *The Wall Street Journal* and the *Financial Times* scattered around. Autographed photos of Alan Greenspan and George Soros are prominently displayed. A picture window reveals a distant view of lights on the Hudson River. John Jones sits at a computer terminal, glumly sipping a glass of chardonnay and trading Japanese yen over the Internet. His wife Marsha enters.

Marsha: Hi, honey. Glad to be home. Lousy day on the trading floor, though. Dullsville. No volume. But I did manage to hedge next year's production from our copper mine. I couldn't get a good quote on the right package of futures contracts, so I arranged a commodity swap.

John doesn't reply.

Marsha: John, what's wrong? Have you been buying yen again? That's been a losing trade for weeks.

John: Well, yes. I shouldn't have gone to Goldman Sachs's foreign exchange brunch. But I've got to get out of the house somehow. I'm cooped up here all day calculating covariances and efficient risk-return trade-offs while you're out trading commodity futures. You get all the glamour and excitement.

Marsha: Don't worry dear, it will be over soon. We only recalculate our most efficient common stock portfolio once a quarter. Then you can go back to leveraged leases.

John: You trade, and I do all the worrying. Now there's a rumor that our leasing company is going to get a hostile takeover bid. I knew the debt ratio was too low, and you forgot to put on the poison pill. And now you've made a negative-NPV investment!

Marsha: What investment?

John: That wildcat oil well. Another well in that old Sourdough field. It's going to cost \$5 million! Is there any oil down there?

Marsha: That Sourdough field has been good to us, John. Where do you think we got the capital for your yen trades? I bet we'll find oil. Our geologists say there's only a 30 percent chance of a dry hole.

John: Even if we hit oil, I bet we'll only get 300 barrels of crude oil per day.

Marsha: That's 300 barrels day in, day out. There are 365 days in a year, Dear.

John and Marsha's teenage son Johnny bursts into the room.

Johnny: Hi, Dad! Hi, Mom! Guess what? I've made the junior varsity derivatives team! That means I can go on the field trip to the Chicago Board Options Exchange. *(Pauses.)* What's wrong?

John: Your mother has made another negative-NPV investment. A wildcat oil well, way up on the North Slope of Alaska.

Johnny: That's OK, Dad. Mom told me about it. I was going to do an NPV calculation yesterday, but I had to finish calculating the junk-bond default probabilities for my corporate finance homework. *(Grabs a financial calculator from his backpack.)* Let's see: 300 barrels a day times 365 days per year times \$25 per barrel when delivered in Los Angeles . . . that's \$2.7 million per year.

John: That's \$2.7 million *next* year, assuming that we find any oil at all. The chances can't be better than 90 percent. Then production will start declining by 5 percent every year. And we still have to pay \$10 per barrel in pipeline and tanker charges to ship the oil from the North Slope to Los Angeles. That's a fixed cost. We've got some serious operating leverage here.

Marsha: On the other hand, our energy consultants project increasing oil prices. If they increase with inflation, price per barrel should increase by roughly 2.5 percent per year. The wells ought to be able to keep pumping for at least 15 years.

Johnny: I'll calculate NPV after I finish with the default probabilities. The interest rate is 6 percent. Is it OK if I work with the beta of .8 and our usual figure of 7 percent for the market risk premium?

Marsha: I guess so, Johnny. But I am concerned about the fixed shipping costs.

John: *(Takes a deep breath and stands up.)* Anyway, how about a nice family dinner? I've reserved our usual table at the Four Seasons.

Everyone exits.

Announcer: Is the wildcat well really negative-NPV? Will John and Marsha have to fight a hostile takeover? Will Johnny's derivatives team use Black-Scholes or the binomial method? Find out in the next episode of *The Jones Family, Incorporated*.