

A NEW USE FOR DECISION TREES AND RISK ANALYSIS: CHOOSING AN OPTIMUM FEE ARRANGEMENT

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Editor's Perspective:

Like it or not, litigation managers cannot predict the future. Good outcomes are what they want; good, informed decisions are the best they can do. Applying decision tree analysis to a creative billing proposal from an outside law firm will help managers make the best decisions—and save money in the long run.

Assume your company is planning to file a breach of contract suit for \$800,000 in damages. You have advised management that while the chances of prevailing are “quite good,” there are several contingencies that could whittle away at your recovery:

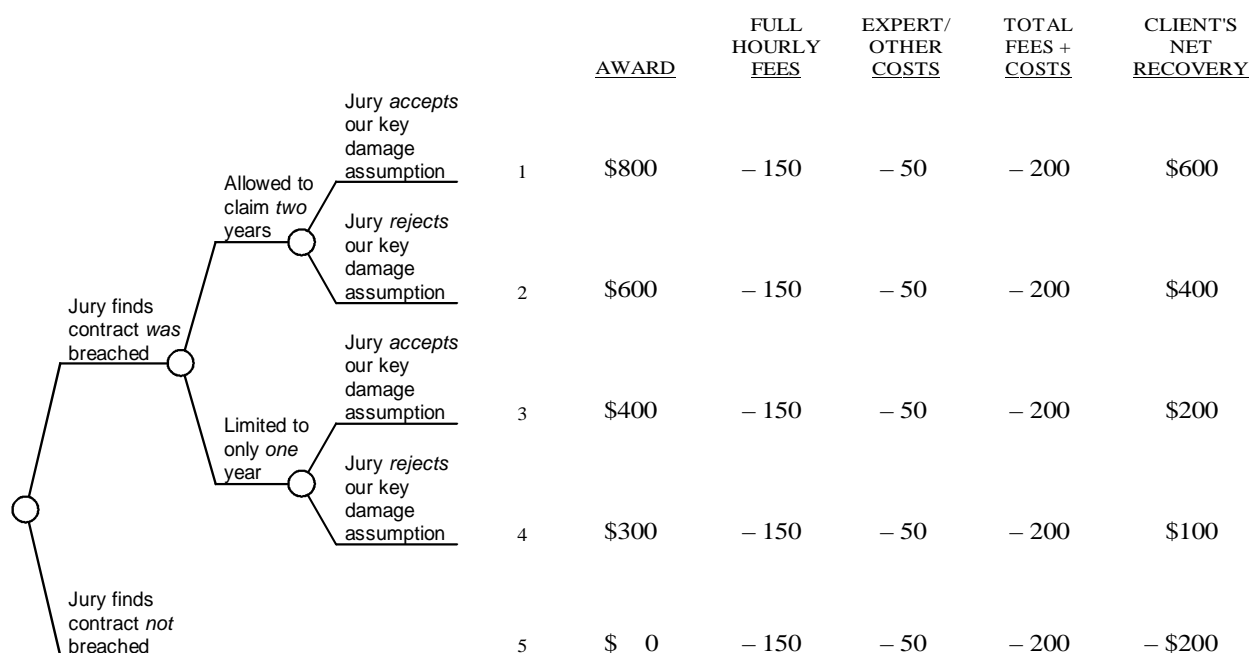
- ▷ There is “some risk” the defendant will defeat your claim in its entirety.
- ▷ A potential notice problem stands a “definite chance” of cutting the scope of your claim in half—from two years’ value to one—thus reducing the maximum recovery to \$400,000.
- ▷ The defendant will attack a key assumption in your damage model,

which “might possibly” convince the jury to diminish your claim by 25%.

For trying the case, outside counsel have estimated their litigation fees on an hourly basis at \$150,000 and tacked on another \$50,000 for experts and other costs. Although management would like nothing more than to win \$800,000, it would like nothing less than to suffer a defense verdict and be out-of-pocket \$200,000 in legal expenses.

As a compromise, your trial firm proposes the following: It will cut its hourly fees in half in exchange for 20% of any award, plus a bonus 10% of the amount (if any) by which the award exceeds \$400,000. Should the company accept? If not, what would be a fair counteroffer?

FIGURE 1: CLIENT'S NET RECOVERY UNDER STANDARD FEE PROPOSAL



Do the “probability arithmetic.” No law department can make an intelligent, bottom-line decision about alternative or incentive fee arrangements without quantifying the probability of the possible verdicts (including a defense verdict). At the same time, no law firm can formulate a proposal that will protect both the financial security of its partners and the reasonable budget constraints of its clients without knowing the basics of “decision tree” construction and probability theory.

1. Capture the ultimate liability and damage uncertainties in decision tree form (see **Figure 1**). [The “how to” of constructing decision trees, including the use of “dependency diagrams” to identify significant issues and their consequences, and “subtrees” to analyze complex issues in detail, is beyond the scope of this article—but is discussed in others posted at www.LitigationRisk.com.]

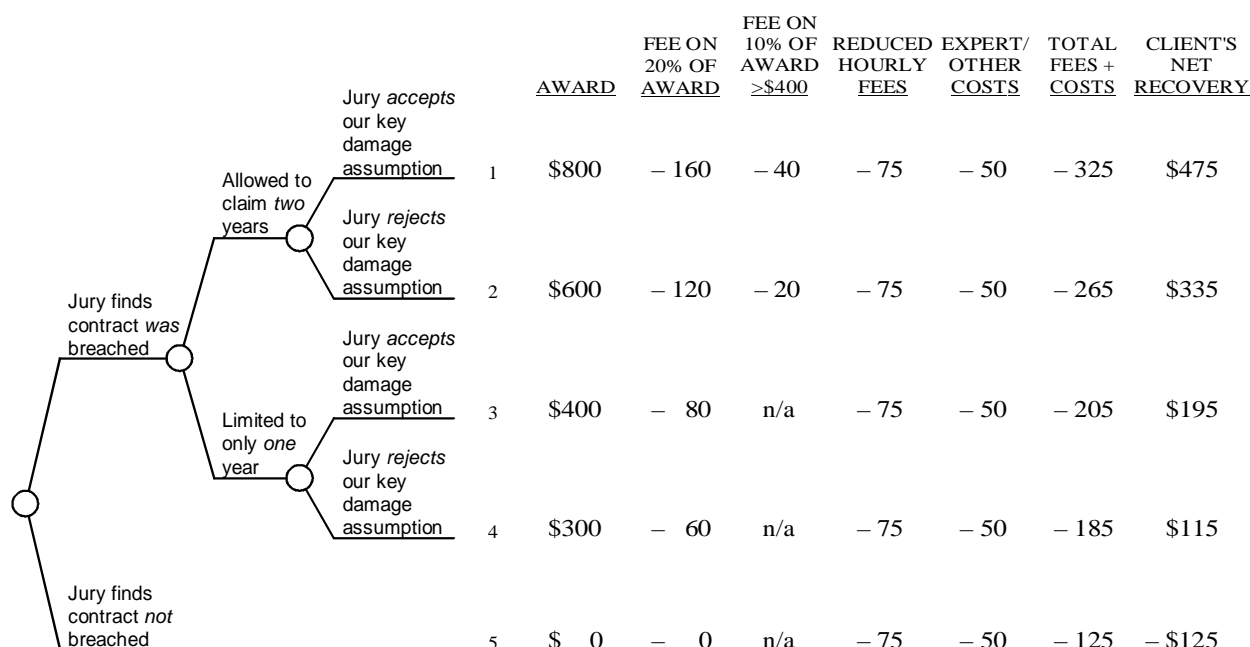
Note that the far right column shows the net effect of each contingency under outside counsel’s standard fee arrangement. The client’s possible recovery ranges from a loss of \$200,000 to a gain of \$600,000.

According to the same analysis, the alternative fee arrangement narrows this range (see **Figure 2**). While the client’s worst-case loss has improved to only \$125,000, its best-case gain has dropped \$475,000. [The gains in several other scenarios have also declined.]

2. Carefully assess the probabilities of each event on the tree. Don’t rush through this step. For each uncertainty, list all the reasons why the good or bad result could occur. Take into account the evidence, the credibility of the witnesses, the judge’s instructions, the nature of the parties, and all other influencing factors. Only then assess your percentages.

3. Calculate the “compound probability” of each result by multiplying those percentages that lie along each path through the tree. For example, the compound probability of the first path is $.80 \times .50 \times .75$, or .30 (30%). Similarly, the compound probability of the second path is $.80 \times .50 \times .25$, or .10 (10%). **Figure 3** shows these results. Note that the sum of the compound probabilities equals 1.00 (100%).

FIGURE 2: CLIENT'S NET RECOVERY UNDER ALTERNATIVE FEE PROPOSAL



Which of the fee proposals is the more cost-effective? One way to compare the proposals is to calculate their “expected values.” This is an average value, determined by weighting (i.e., multiplying) each contingency by its compound probability of occurring. The expected value of your client’s net recovery under the *standard* fee proposal is \$250,000:

$$(.30 \times \$600) + (.10 \times \$400) + (.30 \times \$200) + (.10 \times \$100) + (.20 \times -\$200) = \$180 + \$40 + \$60 + \$10 - \$40 = \$250.$$

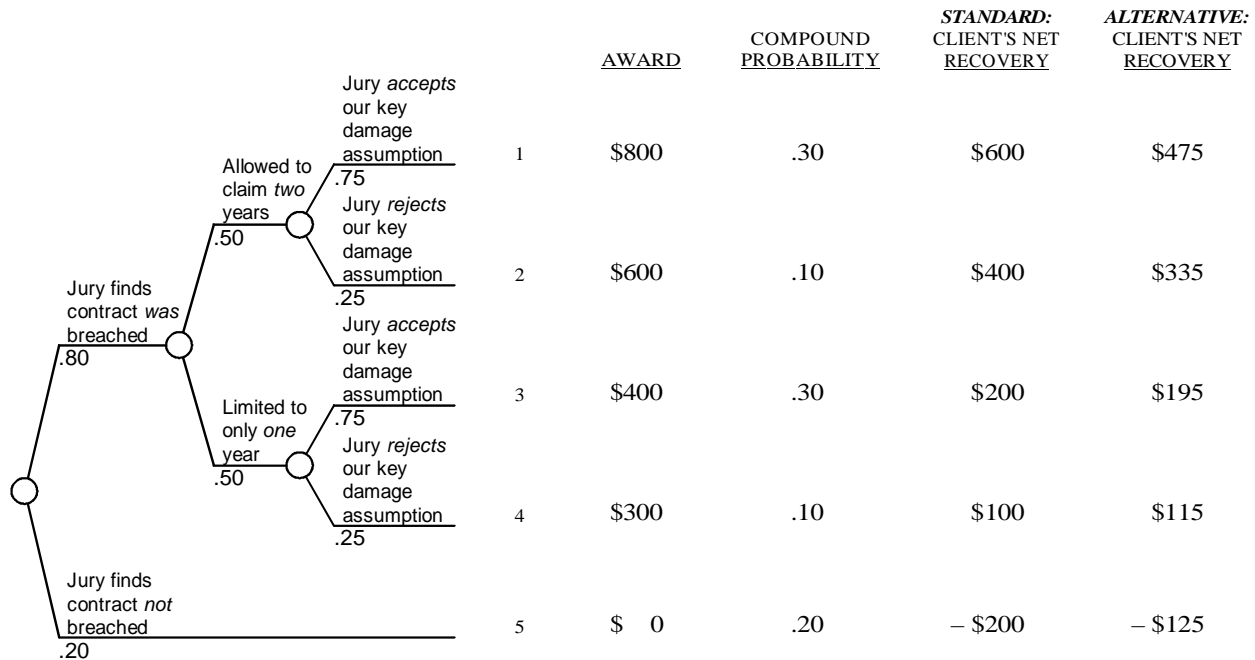
Applying the same arithmetic to the *alternative* fee proposal produces an expected value of \$221,000. *Upshot:* Under the alternative fee proposal, the client will net \$29,000 less, on average, than it would under the standard fee proposal.

A second look: Although choosing the alternative with the best expected value maximizes wealth over the long run, your company may not be able to afford to play the averages in ventures of this magnitude. If not, is \$29,000 a reasonable “premium” to pay to reduce the client’s worst-case exposure from a \$200,000 loss to a \$125,000 loss, where

counsel has assessed a 20% chance of such a result? [Figure 4 shows the full range of risk under both proposals.] For some smaller companies, it might be; for a large company, the premium is likely to be excessive. But because most business managers are averse to litigation (and to paying outside legal fees), unless the two proposals are analyzed in terms of probabilities and dollar consequences, a large company might accidentally give up the advantage of size and pay too high a premium to have the law firm relieve it of some risk that the company could easily afford to bear.

Tinkering with the parameters of this problem may help litigation managers lower the premium. *Examples:* A larger discount off the hourly fees; a smaller “base” contingent fee than 20%; a smaller “bonus” than 10% of the amount (if any) by which the award exceeds \$400,000; or a higher threshold than \$400,000 before the bonus kicks in. Any of these would be quite easy to evaluate with inexpensive decision tree software. [Note: The author uses and recommends TreeAge Pro.]

FIGURE 3: COMPOUND PROBABILITIES OF CLIENT'S POTENTIAL NET RECOVERIES



Don't judge the decision by the outcome.

One final advantage to decision trees and probabilities in this context: If the company accepts the alternative fee arrangement but wins on all points, it will net only \$475,000 instead of the \$600,000 under the standard fee arrangement. [There is, after all, a 30% chance that this will happen.] The company didn't make the wrong decision, so long as it's too small to risk losing the extra \$75,000 (\$200,000 versus \$125,000) in the event of a defense verdict (to which it assessed a 20% chance).

Likewise, if the company opts to stay with the standard fee arrangement but then loses \$200,000 instead of the \$125,000 it would have lost under the alternative arrangement (a 20% likelihood), it didn't make the wrong decision, as long as it's too big to pay a \$29,000 expected value premium rather than play the averages. But too many business managers (much like juries) view results with 20-20 hindsight. Having performed the Litigation Risk Analysis™ will help you explain—and defend—your decision to management.

