DECISION TREES TAKE GUESSWORK OUT OF CONTINGENCY-FEE PROPOSALS

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This paper was first published in Managing Litigation Costs, April, 1995.

In a previous article, I explained how a corporate *plaintiff* could evaluate a mixed hourly/contingency fee proposal suggested by its outside counsel. [See MLC August 1994, or contact the author for a reprint.] Only by capturing the liability and damage uncertainties in a decision tree, and quantifying your assessments with percentages, could a sound decision be made whether to accept or reject such a proposal.

Questions have arisen, though, about how a corporate *defendant* could set up a similar contingency fee proposal. In particular, the primary concern of most defendants and their counsel is how to determine on what result the contingency should be based—in other words, if counsel is to receive a percentage of the amount by which the award is below some result, how does one determine that target result? Difficulty with this issue is one of the reasons defendants shy away from such deals.

In fact, however, this is a very easy issue to deal with, so long as you are comfortable setting up the underlying issues in your case in a decision tree and expressing your probabilities in percentages (rather than terms such as "good chance"). Let's look at the same case described in my previous article, but from the defendant's point of view.

Your client has been sued for breach of contract, and the plaintiff is seeking $400,000 in damages for each of the two years that were left on the contract. You have assessed an 80% chance of being held liable for breach, but a 50% chance of being able to cut plaintiff's claim to only one year due to untimely notice, and a 25% chance of being able to reduce damages even further (by one-quarter) if the jury rejects a key assumption being made by plaintiff in its damage model.

These uncertainties and the resulting awards are captured in the decision tree shown in **Figure 1**.[i] With this tree it becomes very simple to evaluate the "expected" cost of any contingency fee arrangement.[ii] For example, let's assume that you are considering a three-part alternative to counsel's fee quote of $200,000 (which was made on a straight hourly basis):

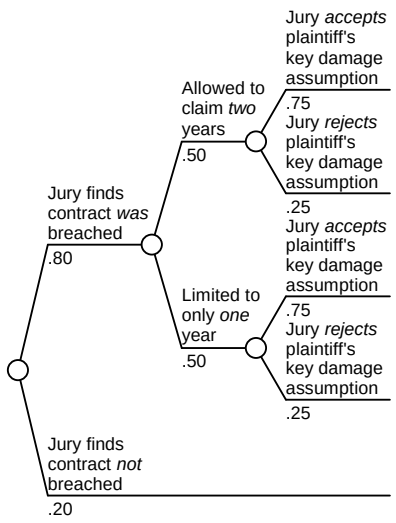
(A) First, a non-contingent payment of a fraction of the quoted hourly fees (e.g., one-half, or $100,000).

(B) Next, a payment of a percentage of the amount by which the award comes in below some "target result" (e.g., 40% of the amount by which the award is below $500,000).

(C) Last, a "bonus" should the trial result in a complete defense verdict (e.g., $100,000).

FIGURE 1: CLIENT'S POTENTIAL LIABILITY

(all dollar amounts in thousands)



	AWARD
1	$800
2	$600
3	$400
4	$300
5	$ 0

FIGURE 2: CLIENT'S COSTS WITH INCENTIVE FEE PROPOSAL

	REDUCED HOURLY FEES	40% FEE ON AMOUNT BY WHICH AWARD <$500	BONUS FOR DEFENSE VERDICT	TOTAL FEES	COMPOUND PROBABILITY
1	$100	n/a	n/a	$100	.30
2	$100	n/a	n/a	$100	.10
3	$100	$ 40	n/a	$140	.30
4	$100	$ 80	n/a	$180	.10
5	$100	$200	$100	$400	.20

"EXPECTED" COST = $180

Do not worry initially about the specific percentages or dollar amounts—just set up your model for calculating the expected cost, knowing that later you can easily tinker with the initial figures using inexpensive decision tree software.

These particular percentages and dollar amounts result in the total fees shown in **Figure 2**. To arrive at the expected cost of this fee proposal, first use probability theory to calculate the "compound probability" for each scenario. [These are also shown in Figure 2.] Next, use these probabilities to get your expected cost: (30% × $100,000) + (10% × $100,000) + (30% × $140,000) + (10% × $180,000) + (20% × $400,000) = $180,000.

So this proposal is a good deal: a $20,000 savings to the client (on average) compared to paying straight hourly fees of $200,000. But what if outside counsel has its own percentages and dollar amounts in mind? For example, what if they say the "bonus" for a defense verdict should be much higher. By how much could you sweeten the pot before your expected cost would exceed just paying straight hourly fees of $200,000? A "1-way sensitivity analysis graph" (see **Figure 3**) provides the answer: you could bump this bonus all the way from $100,000 to $200,000 before the alternative proposal would be excessive.[iii]

FIGURE 3: 1-WAY SENSITIVITY ANALYSIS SHOWS HOW EXPECTED COST VARIES WITH CHANGES IN BONUS FOR DEFENSE VERDICT

Note that Expected Cost of Incentive Proposal in our example only hits $200,000 cost of Hourly Proposal when Bonus for Defense Verdict rises from $100,000 to $200,000.

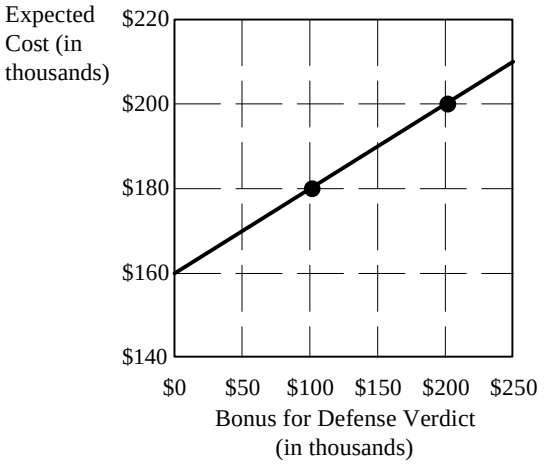
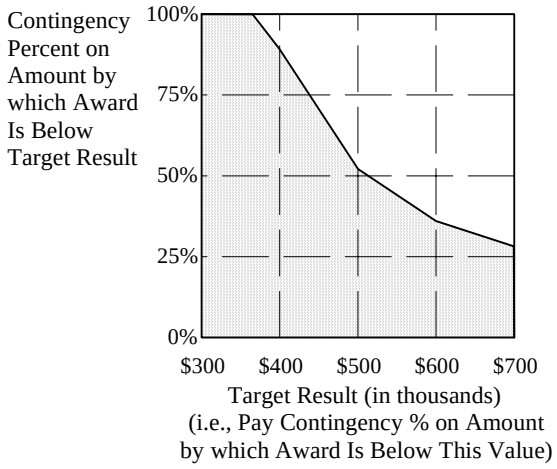


FIGURE 4: 2-WAY SENSITIVITY ANALYSIS SHOWS ACCEPTABLE COMBINATIONS OF CONTINGENCY PERCENTS AND TARGET RESULTS

Any combination in the shaded area will produce an Expected Cost which is less than the $200,000 Straight Hourly Fee.



Or what if outside counsel prefers an even lower "target result" (than $500,000) but a higher "contingency percentage" (than 40%) if they can beat this target? What kind of numbers could you accept? A "2-way sensitivity analysis graph" (see **Figure 4**) shows all the many combinations of Contingency Percent and Target Result you could live with: anything in the shaded area will keep your expected cost at or below the $200,000 straight-hourly-fee approach.

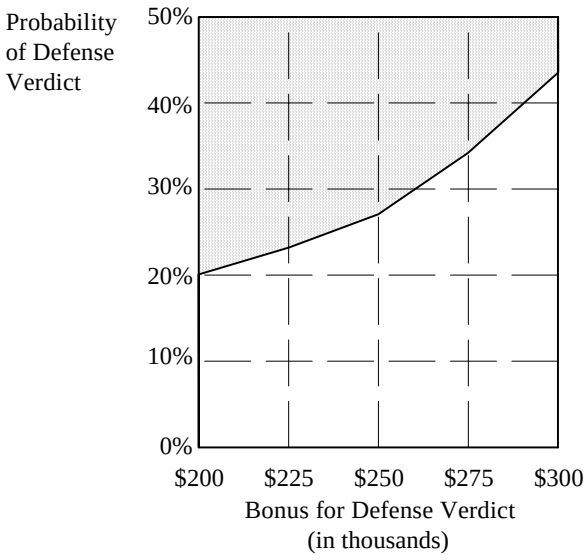
Another reason for performing a risk analysis on contingency fee arrangements: If instinct tells you that ***a big enough incentive might actually increase your chances of winning the lawsuit***—as a result of more closely aligning outside counsel's interests with your client's—one more sensitivity analysis will quickly show you whether you need a big impact or just a small one to make the extra incentive pay for itself. For example, consider a $250,000 bonus for a defense verdict. ***What would it take to make this pay off?***

The graph in **Figure 5** shows that the chance of a defense verdict would have to increase from 20% to approximately 27% to justify a bonus of this size.[iv] But if your gut was telling you that such a large bonus ought to boost your chances of winning by even more (for example, to something in the range of 35%), then this incentive fee arrangement would both reduce your client's *total* exposure (i.e., the expected award plus the expected fees) and increase outside counsel's expected payment!

Any corporate counsel looking to come out ahead by using incentive or contingency fees will find decision tree analysis an essential tool—not only to protect against a bad deal for the client, but to identify even better options that put both sides of the defense team ahead.

FIGURE 5: IDEAL INCENTIVE FEE ARRANGEMENT WILL MORE THAN PAY FOR ITSELF

Any combination in the shaded area will reduce the client's Expected Total Exposure (fees plus award), even though the Expected Cost of outside counsel fees is increasing.



[i] Ideally, in order to be more confident about your probability assessment on the critical ultimate issue of liability for breach of contract, you would (i) capture the underlying uncertainties related to the testimony of witnesses, the admissibility of evidence, the subissues of breach and causation, etc., in a "subtree," (ii) assess probabilities on each of these underlying uncertainties, and (iii) use the correct probability arithmetic to derive your overall chance of being found liable or not. On any important issue whose outcome is dependent on several underlying uncertainties, this approach should always be used to arrive at the overall probability of success.

[ii] The term "expected" is a technical term in decision tree analysis, and refers to the *probability-weighted average value,* not the one value that is most likely to occur. Making decisions based on this average value has been proven to maximize wealth or minimize losses, depending on the context.

[iii] Sensitivity analysis graphs such as those shown in Figures 3 and 4 are quickly generated using decision tree software. The key is to construct a *single* formula for *all* scenarios that will compute the total fees shown in the next-to-last column of Figure 2. The following will do the trick for users of TreeAge Pro™ decision tree software from TreeAge Software, Inc.

```
Mixed_Fee = hp*hourly+
            if(award<target;
            cp*(target-award);0)+
            if(award=0;bonus;0)
```

where
- hp = percentage of straight hourly fees [in our example, 50%]
- hourly = fees on straight hourly basis [in our example, $200,000]
- award = amount of award; varies from scenario to scenario in our tree
- target = result below which award must fall for contingency to be owed [in our example, $500,000]
- cp = contingency percentage [in our example, 40%] paid on difference between target result and actual award
- if = a standard software function with three parts: the first part is a condition which is either true or false [in our example, is the award in a given scenario less than the target result?]; if true, the formula uses the second part [in our example, it would multiply the contingency percent times the amount by which the award was below the target in the given scenario]; if false, the formula uses the third part [in our example, $0]
- bonus = amount of bonus owed [in our example, $100,000] <u>if</u> a complete defense verdict, i.e., if award=0; (otherwise, the bonus is $0)

[iv] To arrive at this graph it is necessary first to add the damage award in each scenario of the decision tree to the total fees, so that the "payoff formula" reflects the client's *total* litigation exposure:

```
Exposure  =  Award+Mixed_Fee
          =  award+hp*hourly+
             if(award<target;
             cp*(target-award);0)+
             if(award=0;bonus;0)
```