

## Complex Capital Structure Analysis

### The Challenge

Our client, an innovative developer of advanced laser lighting, has a very complex capitalization table reflecting the rights, preferences and expectations of a diverse set of investors gathered over time.

In addition to the normal terms, recent fundings have added a set of contingent, non-linear claims that cannot be modeled with the conventional valuation tools such as the Option Pricing Model (“OPM”). Potential returns to specific investors are unclear and the potential future value of common stock, management’s main equity incentive, is equally uncertain.

In addition, the common value can be very low below certain implied, but unstated, company value thresholds that result from the complex mix of terms. Management was faced with a significant challenge in both understanding the potential values and in explaining these to their Board in support of compensation discussions.

### The Solution

We developed a custom, interactive model of the capital table, reflecting all of the terms and preferences of each equity class. Because of the many complexities in their capitalization, the standard OPM (“Option Pricing Method”) could not be used. This unique model assists management with analyzing and presenting the results of a wide range of scenarios.

We incorporated custom functions to identify and address non-linear “jumps” in the allocation of returns. We also provided user-selectable inputs to adjust underlying assumptions, the range of future company values, and to support testing of various scenarios. The model presents a complete, dynamic and accurate analyses of all equity claims and their interactions and can be configured by management to reflect virtually all reasonable outcomes.

### The Benefits

In addition to having a robust tool going forwards (the model itself) management also gained a hands-on understanding of how the claims of various equities interact for different values of the firm. They are able to assess the returns that are earned by each investor and the ultimate return to common which drives the management incentive plans. In addition, management is able to identify the critical thresholds that drive changes in investor returns and explain them to their Board and investors.

Management is now equipped to rapidly analyze scenarios, including actual M&A offers, to understand the returns to investors and their own incentives and be able to explain these to all involved with a minimum of cost, time and confusion.

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