Developing a Market-based Discount Rate for Technology Commercialization Projects

Applying Project Premium in a Market-Driven Valuation (MDV)

Keycare's MDV approach attempts to avoid the problems from traditional methods. The MDV approach is based on the premise that investors require compensation for 4 categories of risk.

1. Expected inflation risk (time value of money)
2. Forecast of the company's default risk (reflecting additional risk that a company might default as a result of mismanagement)
3. Equity investor requires excess equity return for the risk they undertake above that of the bond investor (best captured in the company's share price volatility, extracted from the traded options of the company being analyzed)
4. Project Premium, an uniquely identified factor used to determine the additional return that will induce the marginal equity investor to invest in the project initiative. After developing a term-specific financial forecast, a project-specific discount rate is applied that best represents the present value of future cash flow.

The Project Premium recognizes that some form of risk adjustment is necessary due to the inherent risks of a project. The Project Premium risk-adjusted discount rate accounts for the distinctive risks and special characteristics of a project-specific investment. Investors expect additional compensation for project-specific risk.

The basis of the Project Premium is a set of combined company and project criteria that are used as a process to scale the expectations of the project's performance. By combining the two sets of criteria, it embeds the project into the management of the firm – which the two, optimally working together, can increase the probability of success.

The optimum condition of a Project Premium is when projects are in 'complete synchronization' with the firm… for this the Project Premium rate would be zero percent (0%).

ADJUSTING MDV FOR PROJECT PREMIUM

Equity Investor's Total Required Return = Market Driven Valuation MDV + Project Premium

Calculating Project Premium

The Project Premium is the additional price (risk premium) that accounts for special project-specific investment characteristics. The 'benchmark' index is the success of the individual project-specific investment. The numeric project premium factor is based on a model that is an inverse relationship to the expected success and maximized returns of the project. For example, a project premium of zero is a project measured to be a good fit with the sponsoring company, with experienced management, a recognized technical team, strong financial resources, focused on developing a needed project-specific new product serving a ready market. A superior rating is zero, and a less than superior rating is greater than zero and reflects the increased equity investor's required return. There is no negative scaling, as that would incorrectly reduce the three other factors.

The project premium scaling is based on a matrix, embedding relative weighting of the project with the company. Harmonization of the project-specific investment with the strong organizational capability of the firm is necessary – as one, without the other, limits success and, consequently increases the cost of capital. The Project Premium evaluation grid is used to determine an additional risk-adjusted rate. Examples of Project Premium criteria are based on the following questions:

Project Premium Evaluation Grid

Criteria	A	B	C
Company Specific Criteria			
Relation of company to project: integrate relevant management systems			
Reliance on and impact of success that influences or dictate future choices of company			
Historical information and review: corporate successes and failures, corporate strengths, other project development accomplishments			
Budget constraints			
Entrepreneurial nature of company			
Comparables company and industries assessment			
Managerial options			
Project Specific Criteria			
Documented detailed project development studies and plans			
Documented analytical review: product, schedule, and costs			
Trained, qualified and experience personnel (beware excessive reliance on select individuals)			
Project management supervision and controls			
Quality management supervision and controls			
Unique aspects of project – e.g. sources of value; spillover effects			
Financial			
Documented sales forecasts			
DCF valuation with proper risk-adjusted discount rate and sensitivity analysis (positive NPV rule)			
Ranking			