

Responsabilidad limitada: coste de capital y crisis empresariales: análisis por medio de la teoría de opciones

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Abstract

In this doctoral thesis entitled "Limited Liability: Cost of Capital and Financial Distress: An Analysis Through Option Theory" we extend Black and Scholes model for valuing shares using European options to a perpetual horizon. As a consequence we are able to value the limited liability option in the usual case in which the life of the firm does not extinguish in a finite horizon. Besides we integrate into the limited liability option the option to abandon, and the effects of fixed costs. These results enable us not only to analyse simultaneously the firm's bankruptcy and ceasing of activity but also to value the incidence of the option to abandon and fixed costs on the cost of capital. To this point the model that we have built up presents three stiff elements: constant interest rate, constant standard deviation, and a perpetual horizon. In order to overcome these constraints we turn this cost fixed model into a variable cost model in which the cost of debt adapts itself to the variations of interest rate and the value of the limited liability option. Besides we introduce several horizons in the model in order to value the limited liability option and the cost of capital in finite horizons.

This doctoral thesis studies, therefore, different aspects of the relationship between the values of stocks and liabilities using option theory, more precisely the shareholders' option of limited liability, and adding barrier options to model different scenarios of the firm's debt and financial distress situations, such as the ceasing of entrepreneurial activities, temporary receivership or voluntary reorganization of bankruptcy, and bankruptcy. In this way this thesis models the debt's rate of return that shareholders and creditors ask for.