Conic Financial Markets and Corporate Finance*

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Abstract

Markets passively accept a convex cone of cash flows that contains the the nonnegative cash flows. Different markets are defined by different cones and conditions are established to exclude the possibility of arbitrage between markets. Operationally these cones are defined by positive expectation under a concave distortion of the distribution function of the cash flow delivered to market. Firms access risky assets and risky liabilities and regulatory bodies ensure that sufficient capital is put at stake to make the risk of excess loss acceptable to taxpayers. Firms approach equity markets for funding and can come into existence only if they can raise sufficient equity capital. Firms that are allowed to exist approach debt markets for favorable funding opportunities. The costs of debt limit the amount of debt. Firms with lognormally distributed and correlated assets and liabilities are analysed for their required capital, their optimal debt levels, the value of the option to put losses back to the taxpayer, the costs of debt and equity, and the level of finally reported equity in the balance sheet. The relationship between these entities and the risk characteristics of a firm are analysed and reported in detail.

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