

Optimal Security Design for Risk Averse Investors
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Abstract

We use the tools of mechanism design, combined with the theory of risk measures, to analyse a model where a cash constrained issuer needs to raise capital from a population of different types of risk-averse and budget constrained investors in order to finance a project with a stochastic return. To achieve that goal, the issuer partitions and sells the project's realized cash flow into several securities, one for each type of risk-averse investor. The optimal partition conforms to the commonly observed practice of tranching with a sequential payment structure (e.g. senior debt, junior debt and equity) where senior claims are paid before subordinate ones. The holders of more senior/junior tranches are determined by the relative risk appetites of the different types of investors and of the issuer, with the more risk averse agents holding more senior tranches. We also offer comparative statics results involving the riskiness of the underlying asset.