

R&D, Risk Premia, and Credit Spreads

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Abstract

Empirical evidence suggests that R&D-intensive firms experience higher expected equity returns, but lower leverage, default rates, and credit spreads, than R&D-nonintensive firms. To provide a unified explanation for these cross-sectional differences, I propose a two-sector production-based dynamic stochastic general equilibrium model in which R&D firms are highly exposed to innovation risks, raising bankruptcy costs. Despite the tax benefits of debt, R&D firms tend to choose low leverage, lowering both default rates and credit spreads; nevertheless, the inherent riskiness of R&D activities dominates, generating high equity returns. The model generates sizable heterogeneity in the quantities of interest between R&D and non-R&D firms, as in the data, and fits the aggregate macroeconomic and asset pricing moments reasonably well.

Keywords: R&D, endogenous growth, innovation

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