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A BEJEAP Topics[1] article.

Abstract

This paper develops a theory of the firm's weighted average cost of capital (WACC) and the marginal tax rate with risky debt and potentially redundant depreciation and interest tax shields. The tax shields' risks, the firm's borrowing interest rate and its marginal tax rate are intertwined, and they must therefore be determined simultaneously. We capture these interdependencies by determining the borrowing interest rate endogenously, using the single-factor approximate arbitrage pricing theory. This research strategy: a) yields the correct discount rate for valuing the tax shields and shows how better WACC and marginal tax rate estimates can be generated, b) identifies the determinants of the firm's debt capacity in terms of asset characteristics and exogenous economic variables and c) specifies, numerically, how policy variables (corporate tax rate, tax rules, the risk-free rate) affect the market values of claims on the firm's output that are both private (debt, equity) and public (the tax claim).

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