

Corporate Finance, Module 16, "Debt Policy"

Homework

(The attached PDF file has better formatting.)

The risk-free interest rate (r_f) is 10%, the expected return on the market portfolio ($E[r_m]$) is 18%, and a firm's debt-to-equity ratio is 100%, so debt and equity each comprise 50% of capital. The corporate tax rate is zero.

If the cost of debt capital (r_d) is 12% and the beta of equity (β_e) is 1.500, what are

- A. The cost of equity capital? (Use the CAPM equation: $r_e = r_f + \beta_e \times [E(r_m) - r_f]$.)
- B. The beta of debt? (Apply the CAPM equation to the debt, and back out the beta of debt from the cost of debt capital.)
- C. The expected return on assets? (A weighted average of the cost of equity capital and the cost of debt capital, where the weights are the market values of each.)
- D. The beta of assets? (Use a weighted average of the beta of debt and the beta of equity, or back out the beta of assets from the return on assets.)