Corporate Finance, Module 18: Weighted Average Cost of Capital

Homework Assignment

(The attached PDF file has better formatting.)

A firm has debt of $25 million paying 9.5% interest. The firm has 2 million shares outstanding, selling at $40 per share. The company expects to earn $18 million before interest and taxes each year in perpetuity. The marginal tax rate is 35%.

A. What is the after-tax cost of debt capital? (The pre-tax cost times the complement of the corporate tax rate.)
B. What is the earnings of the firm after interest payments but before tax payments? (Subtract the par value of the debt times the coupon rate from the earnings before interest and taxes.)
C. What is the after-tax earnings of the firm available to shareholders? (Earnings after interest payments times the complement of the corporate tax rate.)
D. What is the market value of the equity? (Number of share times market price per share.)
E. What is the return on (market value) equity (r_e)? (After-tax earnings to shareholders divided by market value of equity.)
F. What is the return on assets? Use the weighted average cost of capital method. (Weight the after-tax cost of debt capital with the cost of equity capital, where the market value of debt and equity are the weights.)