Chapter 12 - Homework Questions and Problems Answers

9. Calculating WACC. Bargeron Corporation has a target capital structure of 75 percent common stock, 5 percent preferred stock, and 20 percent debt. Its cost of equity is 10.9 percent, the cost of preferred stock is 5.1 percent, and the pretax cost of debt is 5.8 percent. The relevant tax rate is 35 percent.

a. What is the company's WACC?
b. The company president has approached you about the company's capital structure. He wants to know why the company doesn't use more preferred stock financing, since it costs less than debt. What would you tell the president?

Answer: *a.* Using the equation to calculate the WACC, we find:

WACC = .75(.1090) + .05(.051) + .20(.058)(1 – .35)
WACC = .0918, or 9.18%

b. Since interest is tax deductible and dividends are not, we must look at the aftertax cost of debt, which is:

R_D = .058(1 – .35) R_D = .0377, or 3.77%

Hence, on an aftertax basis, debt is cheaper than the preferred stock.

10. Taxes and WACC. Tulloch Manufacturing has a target debt–equity ratio of .45. Its cost of equity is 10.3 percent, and its pretax cost of debt is 6.4 percent. If the tax rate is 35 percent, what is the company's WACC?

Answer: Here, we need to use the debt–equity ratio to calculate the WACC. A debt–equity ratio of .45 implies a weight of debt of .45/1.45 and an equity weight of 1/1.45. Using this relationship, we find:

WACC = .103(1/1.45) + .064(.45/1.45)(1 – .35) WACC = .0839, or 8.39%

14. WACC. Clifford, Inc., has a target debt–equity ratio of .85. Its WACC is 8.1 percent, and the tax rate is 35 percent.

If the company's cost of equity is 11 percent, what is its pretax cost of debt?

If the aftertax cost of debt is 3.8 percent, what is the cost of equity?

Answer: a. Using the equation to calculate WACC, we find:

WACC = .081 = (1/1.85)(.11) + (.85/1.85)(1 – .35)RD
RD = .0721, or 7.21%

b. Using the equation to calculate WACC, we find:

WACC = .081 = (1/1.85)RE + (.85/1.85)(.038) RE = .1176, or 11.76%