

### **Solution 1.46**

Your boss, whose background is in financial planning, is concerned about the company's high-weighted average cost of capital of 21%. He has asked you to determine what combination of debt-equity financing would lower the company's WACC to 13%. If the cost of the company's equity capital is 6% and the cost of debt financing is 28%, what debt-equity mix would you recommend?

*Solution:*

Let  $x$  = percentage of debt financing; Then,  $1 - x$  = percentage of equity financing

$$0.13 = x(0.28) + (1-x)(0.06)$$

$$0.22x = 0.07$$

$$x = 31.8\%$$

Recommendation: debt-equity mix should be 31.8% debt and 68.2% equity financing