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| **Student:** Navin James | **Instructor:** Curtis Woods | **Assignment:** Week6 Problem Set |
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| **Date:** 2/10/17 | **Course:** Managerial Finance | |

Suppose Goodyear Tire and Rubber Company is considering divesting one of its manufacturing plants. The plant is expected to generate free cash flows of $2.00 million per year, growing at a rate of 3.0% per year. Goodyear has an equity cost of capital of 9.0%, a debt cost of capital of 7.5%, a marginal corporate tax rate of 40%, and a debt-equity ratio of 3.1. If the plant has average risk and Goodyear plans to maintain a constant debt-equity ratio, what after-tax amount must it receive for the plant for the divestiture to be profitable?

To calculate the WACC, use the following formula:

$$r_{wacc} = \frac{E}{E+D}r_E + \frac{D}{E+D}r_D \times \left(1 - \tau_c\right)$$

Therefore,

$$r_{wacc} = \frac{1}{1+3.1} \times 0.09 + \frac{3.1}{1+3.1} \times 0.075 \times \left(1 - 0.40\right) = 0.0560$$

Goodyear's WACC is 5.60%.

To compute the levered value of the plant, use the following formula:

$$V_L = \frac{FCF}{r_{wacc} - g}$$

Therefore,

$$V_L = \frac{\$2.00 \text{ million}}{0.0560 - 0.030} = \$76.9 \text{ million}$$

A divestiture would be profitable if Goodyear received more than $76.9 million after tax.