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Integrative Case 4

Eco Plastics Company

Since its inception, Eco Plastics Company has been revolutionizing plastic and trying to do its part to save the environment. Eco's founder, Marion Cosby, developed a biodegradable plastic that her company is marketing to manufacturing companies throughout the southeastern United States. After operating as a private company for 6 years, Eco went public in 2012 and is listed on the Nasdaq stock exchange.

As the chief financial officer of a young company with lots of investment opportunities, Eco's CFO closely monitors the firm's cost of capital. The CFO keeps tabs on each of the individual costs of Eco's three main financing sources: long-term debt, preferred stock, and common stock. The target capital structure for Eco is given by the weights in the following table:

Source of capital	Weight
Long-term debt	30%
Preferred stock	20
Common stock equity	50
Total	100%

At the present time, Eco can raise debt by selling 20-year bonds with a \$1,000 par value and a 10.5% annual coupon interest rate. Eco's corporate tax rate is 40%, and its bonds generally require an average discount of \$45 per bond and flotation costs of \$32 per bond when being sold. Eco's outstanding preferred stock pays a 9% dividend and has a \$95-per-share par value. The cost of issuing and selling additional preferred stock is expected to be \$7 per share. Because Eco is a young firm that requires lots of cash to grow it does not currently pay a dividend to common stockholders. To track the cost of common stock the CFO uses the capital asset pricing model (CAPM). The CFO and the firm's investment advisors believe that the appropriate risk-free rate is 4% and that the market's expected return equals 13%. Using data from 2012 through 2015, Eco's CFO estimates the firm's beta to be 1.3.

Although Eco's current target capital structure includes 20% preferred stock, the company is considering using debt financing to retire the outstanding preferred stock, thus shifting their target capital structure to 50% long-term debt and 50% common stock. If Eco shifts its capital mix from preferred stock to debt, its financial advisors expect its beta to increase to 1.5.

TO DO

- Calculate Eco's current after-tax cost of long-term debt.
- Calculate Eco's current cost of preferred stock.

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PART 4 Risk and the Required Rate of Return

- c. Calculate Eco's current cost of common stock.
- d. Calculate Eco's current weighted average cost capital.
- e. (1) Assuming that the debt financing costs do not change, what effect would a shift to a more highly leveraged *capital structure* consisting of 50% long-term debt, 0% preferred stock, and 50% common stock have on the risk premium for Eco's common stock? What would be Eco's new cost of common equity?
- (2) What would be Eco's new weighted average cost of capital?
- (3) Which capital structure—the original one or this one—seems better? Why?

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