Weighted Average Cost of Capital (WACC)

Given the following information, what is the WACC for the following firm?

Debt: 9,000 bonds with a par value of $1,000 and a quoted price of 112.65. The bonds have coupon rate of 7 percent and 28 years to maturity.

Preferred Stock: 20,000 shares of 3.5 percent preferred selling at a price of $65.

Common Stock: 400,000 shares of stock selling at a market price of $48. The beta of the stock is 0.9. The stock just paid a dividend of $2.10 per share and the dividends are expected to grow at 6 percent per year indefinitely.

Market: The expected return on the market is 14 percent and the risk-free rate is 3.5 percent. The company is in the 38 percent tax bracket.

Debt

Bond :

Enter	56		–$1,126.50	$35	$1,000
	N	**I/Y**	**PV**	**PMT**	**FV**
Solve for		3.028%			

$3.028 \times 2 = 6.06\%$

$R_D = 6.06\ (1 - .38) = 3.75\%$

Preferred Stock

$$R_P = \frac{D_1}{P_0} = \frac{3.50}{65} = .0538 \text{ or } 5.38\ \%$$

Equity

$R_E = R_f + \beta[E(R_M) - R_f] = 3.5 + 0.9[14 - 3.5] = 12.95\%$

$$R_E = \frac{D_1}{P_0} + g = \frac{2.10(1.06)}{48} + .06 = .1064 \text{ or } 10.64\%$$

$$R_E = \frac{12.95\% + 10.64\%}{2} = 11.80\%$$

Debt:	9,000 × $1,126.50 =	$10,138,500	$w_d = .331$
PS:	20,000 × $65 =	$1,300,000	$w_p = .042$
E:	400,000 × $48 =	$19,200,000	$w_e = .627$
		$30,638,500	

$WACC = (.331 \times 3.75) + (.042 \times 5.38) + (.627 \times 11.80) = 8.86\%$

Adjusting the cost of capital

Subjective Approach

Pure Play Approach

Questions/Concerns

What is the risk-free rate?

What is the industry?

How do you weight if there are different companies in the industry?