Final B, Summer 2013

1. +5 $r_{WACC} = \left(\frac{95}{95+700}\right)^{+3}(.02)^{+3}(1-.35)^{+3} + \left(\frac{700}{95+700}\right)^{+3} r_E$ (17)

+5 $r_E = .02^{+3} + \beta_E(.07)^{+3}$ (11)

+5 $\beta_E = \frac{cov_{E,S\&P}}{var_{S\&P}}$ (5)

+5 $cov_{E,S\&P} = \frac{1}{3}\left(\left(35^{+1} - \bar{R}_A\right)\left(16^{+1} - \bar{R}_{S\&P}\right) + \left(-8^{+1} - \bar{R}_A\right)\left(3^{+1} - \bar{R}_{S\&P}\right) + \left(15^{+1} - \bar{R}_A\right)\left(2^{+1} - \bar{R}_{S\&P}\right) + \left(59^{+1} - \bar{R}_A\right)\left(27^{+1} - \bar{R}_{S\&P}\right)\right)^{+2}$ (15)

+2 $\bar{R}_A = \frac{1}{4}\left(35^{+1} - 8^{+1} + 15^{+1} + 59^{+1}\right)^{+2}$ (6)

+2 $\bar{R}_{S\&P} = \frac{1}{4}\left(16^{+1} + 3^{+1} + 21^{+1} + 27^{+1}\right)^{+2}$ (8)

+5 $var_{S\&P} = \frac{1}{3}\left(\left(16^{+1} - \bar{R}_{S\&P}\right)^2 + \left(3^{+1} - \bar{R}_{S\&P}\right)^2 + \left(21^{+1} - \bar{R}_{S\&P}\right)^2 + \left(27^{+1} - \bar{R}_{S\&P}\right)^2\right)^{+2}$ (11)

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2. +7 $NPV = -15^{+4} - \frac{12^{+4}}{\left(1+r_{WACC}\right)^{+1}}^{+7} - \left(3^{+4} - \left(3^{+2} - 2\right)\left(35^{+2}\right)\right)^{+7}$ (19) (8)

$+ \left(\frac{2.5^{+4}}{r_{WACC}^{+1} - .015^{+4}}\right)\left(1 - \left(\frac{1.015}{1+r_{WACC}}\right)^{19}\right)^{+7}\left(\frac{1}{1+r_{WACC}}\right)^{+7}$

(23) (14)