

Quiz B for 2:30 Class: 11/19/12

Name Key

Use the following information to set up the calculations needed to determine the beta of Netflix's assets and Netflix's bonds.

Information on Netflix's assets: market value = \$6 billion, book value = \$1.9 billion, standard deviation of returns = 40%, average life = 20 years

Information on Netflix's bonds: market value = \$1 billion, book value = \$0.9 billion, standard deviation of returns = 10%, maturity = 5 years, maturity value of debt = \$1.2 billion

Information on Netflix's stock: market value = \$5 billion, book value = \$1 billion, standard deviation of returns = 45%, beta = 0.7

Returns on Treasuries by maturity: 1-year = 0.2%; 5-year = 0.7%; 10-year = 1.6%; 12-year = 1.7%; 20-year = 2.2%; 30-year = 2.7%

$$+6 \left(\beta_U = \frac{0.7}{\Delta \left(1 + \frac{1}{5}\right)} \right) \textcircled{19}$$

+4 $(\Delta = N(d_1)) \Rightarrow$ look up on tables or in Excel $\textcircled{5}$

$$+6 \left(d_1 = \frac{\ln\left(\frac{6}{PVCK}\right)}{2.4 \sqrt{5}} + \frac{.4 \sqrt{5}}{2} \right) \textcircled{19}$$

$$+6 \left(PVCK = \frac{1.2}{(1.007)^5} \right) \textcircled{18}$$

$$+6 \left(\beta_D = (1 - \Delta) \frac{6}{1.9} \beta_U \right) \textcircled{14}$$