Quiz A for 11:30 Class: 7/29/13 Name Key

Assume there is a 35% chance that Falling Apple's EBIT will equal $45 million per year, a 45% chance that Falling Apple's EBIT will equal $75 million per year, and a 20% chance that Falling Apple's EBIT will equal $120 million per year.

a. What is Falling Apple's optimal level of interest payments if capital markets are perfect? Note: No need to justify your answer.
b. How will Falling Apple's optimal level of interest payments change (compared to a) if the corporate tax rate equals 25%?
c. How will Falling Apple's optimal level of interest payments change (compared to b) if the corporate tax rate equals 25%, the personal tax rate on equity income is 15%, and the personal tax rate on ordinary income is 20%? Justify your answer.
d. How will Falling Apple's optimal level of interest payments change (compared to c) if management has superior information about the firm? Note: No need to justify your answer.

a. There is no optimal level 8

b. $120 million per year 8

c. >45-75

$$T^* = 1 - \frac{(1-(.65)(.25))(1-.15)}{(1-.2)} = +.1102$$ 12

> 75-120

$$T^* = 1 - \frac{(1-(.2)(.25))(1-.15)}{(1-.2)} = -.0094$$ 12

⇒ optimal = 75 million

d. Higher 8

Scale:
48 = 75
44 = 73
38 = 71
36 = 69
30 = 67
24 = 61
20 = 55
7 = 38