**Quiz A for 9:45 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 there is the potential for conflict of interest between the firm's stockholders and managers? Note: No need to justify your answer.

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a. There is no optimal level 8

b. $120 million per year 8

c. > 45–75

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

> 75–120

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

⇒ optimal = 75 million

d. Higher 8

Scale:
52 = 75
44 = 71
36 = 67
28 = 60