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

Assume there is a 30% chance that Falling Apple's EBIT will equal \$15 million per year, a 45% chance that Falling Apple's EBIT will equal \$25 million per year, and a 25% chance that Falling Apple's EBIT will equal \$40 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 30%?
c. How will Falling Apple's optimal level of interest payments change (compared to b) if the corporate tax rate equals 30%, the personal tax rate on equity income is 10%, and the personal tax rate on ordinary income is 40%? Justify your answer.
d. How will Falling Apple's optimal level of interest payments change (compared to c) if there are direct and indirect costs associated with financial distress. No need to justify your answer.

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a. There is no optimal level 8

b. \$40 million per year 8 (✓✓) increase

c. 0 − 15

$$T^* = 1 - \frac{(1-.3)(1-.1)}{(1-.4)} = -.05$$ 16

⇒ optimal = \$0

d. No change 8 ⇒ comment − this would drive optimal (leverage even lower.) (✓✓✓) if not 8

Scale:

30 = 15
28 = 70
26 = 65
24 = 61
18 = 55