Scale
Vs = pts
33 = 75
32 = 74
31 = 73
29 = 71
28 = 70
24 = 66
22 = 64
21 = 62
20 = 60
19 = ~~58~~ 59
18 = 58
17 = 57
16 = 56
13 = 51

Quiz A for 2:30 Class: 10/10/12 Name Key

Note: There are no points for solving this problem. All points are for setting up all relevant equations, plugging in all relevant numbers, and stating what you want to solve for (if you are not simply solving the equation).

Assume that Riften Enterprises always has earnings before interest and taxes of $10 million per year and that the total value of Riften is currently $100 million. Assume also that Riften's current interest expense equals $10 million per year. Finally, assume that the corporate tax rate is 35%, the personal tax rate on dividends and capital gains is 20%, and the personal tax rate on interest income is 45%.

a. Calculate Riften's value if it issues an additional $5 million of equity and uses the proceeds to retire $5 million of debt.
b. Calculate Riften's value if it issues an additional $10 million of debt and uses the proceeds to repurchase $10 million of shares.

Comment: Think very carefully before answering parts c. and d. below.
c. How would a reduction in the corporate tax rate affect Riften's optimal level of debt? Briefly explain.
d. How would a reduction in the personal tax rate on interest income affect Riften's optimal level of debt? Briefly explain.

Wall Street Journal Questions are on the back of this page.

✓ $V^L = V^U + \left(1 - \frac{(1-E(T_d))(1-T_c)}{(1-T_i)}\right) D$

a. $V^L = 100 - \left(1 - \frac{(1-.35)(1-.2)}{(1-.45)}\right) 5$

b. $V^L = 100 + \left(1 - \frac{(1-0)(1-.2)}{(1-.45)}\right) 10$

c. unclear
⇒ a lower T_c reduces T^*
⇒ in general this means there is less of an incentive to issue debt (if interest
⇒ if T^* drops but remains positive, no change
⇒ if T^* drops below zero, optimal debt falls to ∅.

d. No change
⇒ a lower T_i increases T^*
⇒ in general this provides more incentive to issue debt
⇒ but all earnings already promised to BH