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FIN401 - Homemade Leverage Template

W_E = Weight of Equity

W_D = Weight of Debt

R_D = Cost of Debt

V_L = Value of Levered Firm

EPS_{AE} = Firm's EPS under All Equity Scenario

EPS_{DEBT} = Firm's EPS under Debt Scenario

$SH_{Interest}$ = Interest that the Shareholder Earns or Pays

SH_{Funds} = Shareholder Funds

SH_{Value} = Shareholder's Initial Equity Value

SH_{Debt} = Shareholder's Debt Value

Step 1: Determine Investor's Preference

- If the investor prefers the All Equity Scenario, **go to Step 2.**
- If the investor prefers the Debt Scenario, **go to Step 3.**

Step 2: Investor Prefers that the Firm remain All Equity, but the Firm has chosen to take on debt.

a) Determine W_D in Firm. The investor must sell this percentage of their own shares and put these proceeds (SH_{Funds}) in a bank account that earns interest at the same rate as the firm (R_D).

W_D = Debt / V_L

b) # of Shares Sold = (Shares owned by Investor)(W_D)

c) New # of Shares Owned by Investor = Shares owned by Investor - # of Shares Sold

d) SH_{Funds} = (# of Shares Sold)(Stock Price)

e) $SH_{Interest}$ = (SH_{Funds})(R_D)

f) $EPS_{DEBT} = \frac{EBIT - Firm's\ Interest}{New\ \#\ of\ Shares\ Outstanding}$

g) Investor's Cash Flow = [EPS_{DEBT}] (New # of Shares Owned by Investor) + $SH_{Interest}$

Step 3: Investor Prefers that the Firm takes on Debt, but the Firm has chosen to remain All Equity.

a) Determine D/E Ratio of Firm. The investor must replicate this ratio by borrowing money (SH_{Debt}) at the same rate as the Firm (R_D) to buy shares.

D/E = Debt / Equity

b) SH_{Value} = (Shares owned by Investor)(Stock Price)

c) $SH_{Debt} = (SH_{Value})(D/E)$

d) $SH_{Interest} = (SH_{Debt})(R_D)$

e) # of Shares Bought = SH_{Debt} / Stock Price

f) New # of Shares Owned by Investor = Shares owned by Investor + # of Shares Bought

g) $EPS_{AE} = \frac{EBIT}{Old\ \#\ of\ Shares\ Outstanding}$

h) Investor's Cash Flow = [EPS_{AE}] (New # of Shares Owned by Investor) - $SH_{Interest}$