Q1. Which of the following companies has the highest sensitivity of EBIT with respect to changes in revenue?

|  |  |  |  |
| --- | --- | --- | --- |
|  | Company A | Company B | Company C |
| Revenue | $100 | $200 | $300 |
| Variable Costs | $55 | $150 | $260 |
| Fixed Costs | $35 | $40 | $20 |
| Operating Profits (EBIT) | $10 | $10 | $20 |

(A) Company A

(B) Company B

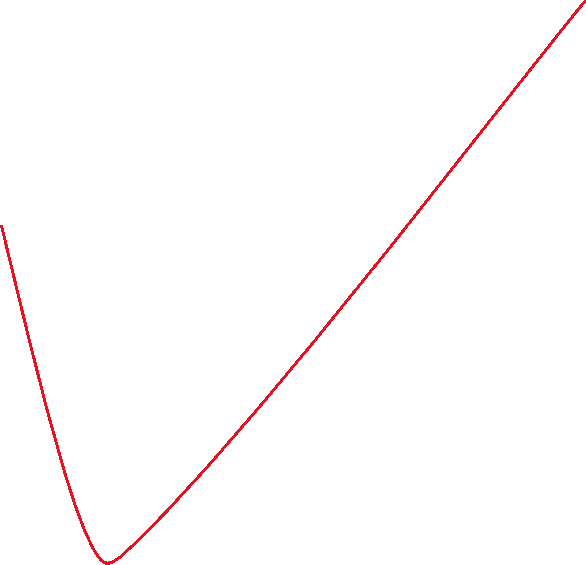
(C) Company C

(D) All of them have the same sensitivity

DOL = (Fixed Costs + Operating Profits)/(Operating Profits)

DOL for A = (35+10)/10 = 4.5

DOL for B = (40+10)/10 = 5



DOL for C = (20+20)/20 = 2

Suppose 100% increase in Sales

|  |  |  |  |
| --- | --- | --- | --- |
|  | Company A | Company B | Company C |
| Revenue | $200 | $400 | $600 |
| Variable Costs | $110 | $300 | $520 |
| Fixed Costs | $35 | $40 | $20 |
| Operating Profits (EBIT) | $55 | $60 | $40 |
| Growth in Operating Profits | (55-10)/10 = 4.5  Or 450% | (60-10)/10 = 5  Or 500% | (40-20)/20 = 2  Or 200% |

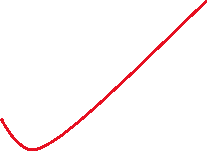
Q2. The degree of operating leverage of Company ABC is 1.4, and its degree of financial leverage is 5. If the sales of Company ABC increase by 10%, how much would its earning per share go up by?

(A) 14%

(B) 50%

(C) 70%

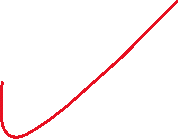
(D) 64%



DTL = 1.4\*5 = 7

10\*7 = 70%

Q3. Company XYZ produces drones and each of them sells at $100. When the variable cost of each drone is $90, and the fixed costs associated with producing drones is $500,000, compute how many drones this company needs to sell in the market so that it can break-even.



(100-90)\*Q – 500,000 = 0

Q = 50,000

Q4-5. Company SZ currently has 2 million common stocks outstanding and the price of each stock is $1. It is thinking about sourcing another $2 million under two different financing schemes:



First choice: Issue another 2 million common stocks at $1/share.



Second choice: Issue a perpetual bond whose price is $2 million - the coupon on the perpetual bond is $0.1 million every year.



Assume the tax rate is 20%.



Q4. Compute EPS under the first financing choice if EBIT is $50 million in the following year



(A) $1/share

(B) $5/share

(C) $10/share

(D) $50/share

Earning after tax = 50M\*(1-0.2) = 40M



EPS = 40M/(2M+2M) = 10

Q5. How much EBIT does Company SZ need to make in order that EPS is the same across the two different financing schemes?

(A) $100,000

(B) $200,000

(C) $300,000

(D) $400,000

EBIT\*(1-0.2)/4M = (EBIT-0.1M)\*(1-0.2)/2M

EBIT = $200,000