# FinAct.docx Accounting Fundamentals for Finance

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## Part FA Statement fundamentals

### FA1 Find change in net working capital and whether a source or use

The Company had quite a few changes during the past year. The changes for their different balance sheet items from last year to this year were (the changes in parentheses are declines; otherwise the changes are increases): ($6,400) for Receivables; ($7,300) for Payables; ($4,700) for Cash; $5,200 for Short-term Notes Payable; ($7,000) for Plant, Property, & Equipment; and $4,900 for Long-Term Debt. Which statement is most accurate?

{ANSWER: E ; xlADDRESS: FA1!$B$200 }

/\a. The change in net working capital is ($9,000) and represents a use of financing

/\b. The change in net working capital is ($7,800) and represents a use of financing

/\c. The change in net working capital is ($10,400) and represents a use of financing

/\d. The change in net working capital is ($7,800) and represents a source of financing

/\e. The change in net working capital is ($9,000) and represents a source of financing

### FA2 Find whether change is a source or a use

The Company had quite a few changes during the past year. On the balance sheet, for example, Current Liabilities is listed as $4,500 at year-end 2525, and $7,500 at year-end 2526. Which statement about this change is most accurate?

{ANSWER: B ; xlADDRESS: FA1!$B$214 }

/\a. The change represented a $2,609 use of financing

/\b. The change represented a $3,000 source of financing

/\c. The change represented a $3,450 use of financing

/\d. The change represented a $3,000 use of financing

/\e. The change represented a $3,450 source of financing

### FA9 Find OR(net income, total assets) given sales and ratios

The company reports that sales equal $135,000 , the net profit margin (=net income ÷ sales) is 6.6%, and the asset turnover ratio is (=sales ÷ total assets) is 2.3 . How much is the total assets?

{ANSWER: E ; xlADDRESS: FA1!$B$182 }

/\a. $44,099 b. $64,565 c. $48,509 d. $53,360 e. $58,696

### FA12 Find net income given income statement items

During year 2526 company expects sales of $23,000 and a gross margin (=(sales – cost-of-goods-sold) ÷ sales) of 23%; selling, general and administrative expenses are nil. Depreciation is expected to equal $1,800 and interest charges will equal $760 . Corporate taxes equal 30% of taxable income. What is net income for 2526?

{ANSWER: E ; xlADDRESS: FA1!$B$777 }

/\a. $1,305 b. $1,737 c. $1,436 d. $1,579 e. $1,911

### FA8 Find p/e given net income, shareprice, and #shares

Today the company announces net income equals $33 million. They have 10 million shares outstanding, and today’s share price is $126.06 . Find the company’s price-to-earnings ratio.

{ANSWER: B ; xlADDRESS: FA1!$B$227 }

/\a. 46.2 b. 38.2 c. 42.0 d. 34.7 e. 31.6

### FA10 Find change in market cap for simplest setting

The company stock price yesterday was $52 a share. Suppose that today the share price increases by 2.4%. There are 220 million shares outstanding. Find the change ($millions) in company market capitalization.

{ANSWER: D ; xlADDRESS: FA1!$B$749 }

/\a. $249.6 million b. $365.4 c. $302.0 d. $274.6 e. $332.2

### FA14 Find change in stock price from last year given ror etc

Shareholders had a good year, earning a 29% annual rate of return. The P/E ratio today is 22.9 and the company just announced earnings per share of $2.50 . The company has a 75% payout ratio. How much did the stock price change over the past year?

{ANSWER: D ; xlADDRESS: FA1!$B$805 }

/\a. $12.56 b. $15.20 c. $16.72 d. $11.42 e. $13.81

### FA19 Find shareholder's ROR given P(-1), div(0), and P(0)

The investor bought a share of company stock one year ago for $50 . Today the investor receives the annual dividend of $2.00 and the stock’s current price is $60 . Find the stockholder’s annual rate of return.

{ANSWER: A ; xlADDRESS: FA1!$B$1035 }

/\a. 24.0% b. 16.4% c. 19.8% d. 21.8% e. 18.0%

### FA16 Find ROR for two stocks given p/b and roe

Company X reports that next year they expect a 24% return-on-equity. Company Z expects exactly the same ROE. Both companies also have a 35% dividend payout ratio. You assume that the equity P/B ratios are likely to stay constant. The current P/B equals 1.25 for company X and 0.62 for company Z. What is the difference between expected shareholder rates of return (“ROR”) for each company?

{ANSWER: C ; xlADDRESS: FA1!$B$855 }

/\a. The ROR equals 25.7% for company X and 29.1% for company Z

/\b. The ROR equals 19.4% for company X and 29.1% for company Z

/\c. The ROR equals 22.3% for company X and 29.1% for company Z

/\d. The ROR equals 19.4% for company X and 25.3% for company Z

/\e. The ROR equals 22.3% for company X and 25.3% for company Z

### FA17 Find ROE for Z that gives same ROR as X

The P/B ratio is 2.06 for company X and 0.73 for company Z. Both have 30% dividend payout ratios. Company X expects a 25% return-on-equity. What ROE for company Z provides its shareholders with exactly the same rate of return that company X shareholders receive?

{ANSWER: C ; xlADDRESS: FA1!$B$869 }

/\a. 20.9% b. 17.3% c. 19.0% d. 15.7% e. 23.0%

### FA20a For changing P/B find AND(ROR,ROE)

Find below information from the Company’s financial statements.

*Balance Sheet, 12/31/2525 Income, 1/1 – 12/31/2526*

$3,080 Current assets $4,900 Debt Sales $17,710

$4,620 PP&E $2,800 Stockholders’ equity total costs $16,116

$7,700 Total assets $7,700 net income $1,594

dividends $956

The equity price-to-book ratio equals 1.31 at year-end 2525. During 2526 the company neither issues nor repays debt or equity. Furthermore, they expect that at year-end 2526 the price-to-book ratio will equal 1.12. Find for year 2526 the return-on-equity (=*Net income2526 ÷ Stockholders equity2525* , “ROE”) and stockholder’s rate of return (“ROR”).

{ANSWER: B ; xlADDRESS: FA1!$B$1056 ; CLUES: SE2526= $3,438 ; MarketCap2525= $3,668 ; MarketCap2526= $3,850 ; #shares cancels out, use market cap / SE }

/\a. Stockholder’s ROR is 35.7% and book ROE is 65.5%

/\b. Stockholder’s ROR is 31.0% and book ROE is 56.9%

/\c. Stockholder’s ROR is 27.0% and book ROE is 65.5%

/\d. Stockholder’s ROR is 27.0% and book ROE is 56.9%

/\e. Stockholder’s ROR is 31.0% and book ROE is 65.5%

### FA20b For changing P/B find ROR

Find below information from the Company’s financial statements.

*Balance Sheet, 12/31/2525 Income, 1/1 – 12/31/2526*

$3,080 Current assets $4,900 Debt Sales $17,710

$4,620 PP&E $2,800 Stockholders’ equity total costs $16,116

$7,700 Total assets $7,700 net income $1,594

dividends $956

The equity price-to-book ratio equals 1.31 at year-end 2525. During 2526 the company neither issues nor repays debt or equity. Furthermore, they expect that at year-end 2526 the price-to-book ratio will equal 1.12. Find for year 2526 the stockholder’s rate of return (“ROR”).

{ANSWER: E ; xlADDRESS: FA1!$F$1056 ; CLUES: SE2526= $3,438 ; MarketCap2525= $3,668 ; MarketCap2526= $3,850 ; #shares cancels out, use market cap / SE }

/\a. 28.2% b. 34.1% c. 25.6% d. 37.6% e. 31.0%

### FA18 Find post-merger market cap

The balance sheet for the Raider Company shows *Total assets* of $13,700 financed by $3,400 of *Debt* and $10,300 of *Stockholders’ equity*. For the Target Company *Total assets* of $7,100 are financed by $2,800 of *Debt* and $4,300 of *Stockholders’ equity*. The Raider Company plans to takeover the Target Company. The equity price-to-book ratio is 5.90 for the Raider and 1.10 for the Target Company. Suppose tax effects and synergistic gains and losses equal zero; that is, accumulated sales, costs, and profits remain the same. Find the market capitalization for the post-merger conglomerate company.

{ANSWER: C ; xlADDRESS: FA1!$B$954 }

/\a. $79,260 b. $72,050 c. $65,500 d. $95,900 e. $87,180

*Multiple setup (FA3m)*

The balance sheet for the Raider Company shows *Total assets* of $11,200 financed by $5,000 of *Debt* and $6,200 of *Stockholders’ equity*. The Raider Company has 600 common shares outstanding, their equity price-to-book ratio is 4.40, and their price-to-earnings ratio is 46.3. For the Target Company *Total assets* of $8,200 are financed by $1,600 of *Debt* and $6,600 of *Stockholders’ equity*. The Target Company has 700 common shares outstanding, their equity price-to-book ratio is 1.60, and their price-to-earnings ratio is 12.9.

The Raider Company plans to takeover the Target Company. The Raider Company offers 1 share(s) of Raider stock to Target shareholders that tender 2 Target shares (the exchange ratio is 0.500000; assume fractional shares can be exchanged). Suppose tax effects and synergistic gains and losses equal zero; that is, accumulated sales, costs, and profits remain the same.

{SET-UP: FinAct!R45C1 ; CLUES: new shares outstanding = 950; total capitalization =$37,840 ; target wealth per share = $4.83 ; total net income = $1,408 }

### FA3am Find new price-to-book ratio for conglomerate

After the Raider takes control of all Target shares, what is the equity price-to-book ratio for the new conglomerated Company?

{ANSWER: C ; xlADDRESS: FA1!$B$260 }

/\a. 2.69 b. 2.22 c. 2.96 d. 3.25 e. 2.44

### FA3bm Find the new price-to-earnings ratio for merged statements

After the Raider takes control of all Target shares, what is the price-to-earnings ratio for the new conglomerated Company?

{ANSWER: D ; xlADDRESS: FA1!$F$260 }

/\a. 29.6 b. 24.4 c. 20.2 d. 26.9 e. 22.2

### FA3cm Find conglomerate share price

After the Raider takes control of all Target shares, what is the stock price for the new conglomerated Company?

{ANSWER: A ; xlADDRESS: FA1!$J$260 }

/\a. $39.83 b. $32.92 c. $36.21 d. $48.20 e. $43.81

### FA3dm Find the new earnings per share for merged statements

After the Raider takes control of all Target shares, what is the earnings per share for the new conglomerated Company?

{ANSWER: B ; xlADDRESS: FA1!$N$260 }

/\a. $1.63 b. $1.48 c. $1.22 d. $1.35 e. $1.79

### FA3jm Find the new market cap for the conglomerate

After the Raider takes control of all Target shares, what is the market capitalization for the new conglomerated Company?

{ANSWER: E ; xlADDRESS: FA1!$R$268 }

/\a. $28,430 b. $25,845 c. $31,273 d. $34,400 e. $37,840

### FA3em Find Target capital gain per share tendered for merger setting

After the Raider takes control of all Target shares, how much is the change in Target shareholder wealth per share tendered?

{ANSWER: E ; xlADDRESS: FA1!$B$268 }

/\a. $3.30 b. $4.39 c. $3.63 d. $3.99 e. $4.83

### FA3fm Find the %change(Target wealth) for merger setting

After the Raider takes control of all Target shares, what is the percentage change in Target shareholder wealth?

{ANSWER: D ; xlADDRESS: FA1!$F$268 }

/\a. 24.0% b. 29.1% c. 21.8% d. 32.0% e. 26.4%

### FA3gm Find the total wealth transfer for merger setting

After the Raider takes control of all Target shares, what is the total transfer of wealth from Raider to Target shareholders?

{ANSWER: A ; xlADDRESS: FA1!$J$268 }

/\a. $3,378 b. $3,716 c. $4,087 d. $2,792 e. $3,071

### FA3hm Choose correct effect on shareholder wealth for merger setting

After the Raider takes control of all Target shares, what is the effect of the merger on shareholder wealth?

{ANSWER: D ; xlADDRESS: FA1!$N$268 }

/\a. Target shareholder wealth decreases by $5.79 per share tendered

/\b. Raider shareholder wealth decreases by $4.69 per share outstanding

/\c. Raider shareholder wealth decreases by $4.83 per share outstanding

/\d. Target shareholder wealth increase by $4.83 per share tendered

/\e. Even though the total market capitalization doesn’t change, $2815 is transferred from raider to target shareholders

### FA4 Find company price-to-book in a simple setting and make an inference

The Company has Stockholders Equity equal to $4,800 and there are 1100 shares outstanding. The market shareprice for their stock is $5.15 . The price-to-book ratio for this company’s peer group equals 0.93. How does the company’s price-to-book ratio compare to its peer group.

{ANSWER: A ; xlADDRESS: FA1!$B$281 }

/\a. the company’s price-to-book ratio is 1.18 and the company stock compared to its peer group is relatively expensive

/\b. the company’s price-to-book ratio is 1.18 and the company stock compared to its peer group is relatively cheap

/\c. the company’s price-to-book ratio is 1.56 and the company stock compared to its peer group is relatively cheap

/\d. the company’s price-to-book ratio is 1.36 and the company stock compared to its peer group is relatively cheap

/\e. the company’s price-to-book ratio is 1.56 and the company stock compared to its peer group is relatively expensive

### FA5 Find market cap and price/book for simplest setting

The company share price in the stock market is $27 . The equity book value per share according to the balance sheet is $33 . There are 590 million shares outstanding. Find the company market capitalization and equity price to book ratio.

{ANSWER: E ; xlADDRESS: FA1!$B$294 }

/\a. Market cap equals $18,320 million and price-to-book is 0.94

/\b. Market cap equals $15,930 million and price-to-book is 0.94

/\c. Market cap equals $13,850 million and price-to-book is 0.94

/\d. Market cap equals $18,320 million and price-to-book is 0.82

/\e. Market cap equals $15,930 million and price-to-book is 0.82

### FA6 Find %change market cap given $change in share price

The company stock price yesterday was $28 a share. Suppose that today the share price decreases by $5 and that there are 570 million shares outstanding. Find the percentage change in company market capitalization.

{ANSWER: C ; xlADDRESS: FA1!$B$308 }

/\a. -16.23% b. -21.61% c. -17.86% d. -14.76% e. -19.64%

### FA7 find ending stock price given ror and dividend and initial price

A venture capitalist is bragging about receiving today the annual dividend of $2.22 on a stock for which she paid $37 exactly one year ago. She says the annual rate of return for the investment is 35.0% . Find the price that the stock is worth today.

{ANSWER: B ; xlADDRESS: FA1!$B$321 }

/\a. $43.39 b. $47.73 c. $52.50 d. $57.75 e. $39.45

### FA11a Find equity multiplier, debt-to-assets, and debt-to-equity (given TA&SE)

The company balance sheet lists *Total assets* of $29,000 and *Stockholders’ equity* of $15,000 . Find the company equity multiplier, debt-to-assets, and debt-to-equity ratios.

{ANSWER: D ; xlADDRESS: FA1!$B$762 }

/\a. the debt-to-equity is 0.48

/\b. the equity multiplier is 0.93

/\c. the debt-to-equity is 1.93

/\d. the equity multiplier is 1.93

/\e. the debt-to-assets is 0.93

### FA11b Find equity multiplier, debt-to-assets, and debt-to-equity (given TL&SE)

The company balance sheet lists *Total liabilities* of $14,000 and *Stockholders’ equity* of $15,000 . Find the company equity multiplier, debt-to-assets, and debt-to-equity ratios.

{ANSWER: A ; xlADDRESS: FA1!$F$762 }

/\a. the equity multiplier is 1.93

/\b. the debt-to-assets is 0.93

/\c. the debt-to-assets is 1.93

/\d. the equity multiplier is 0.48

/\e. the debt-to-equity is 0.48

### FA13 Find total assets given eps and profit margin

How much is the company’s *Total assets* if they just announced earnings per share of $0.80 , there are 18,000 shares outstanding, the net profit margin is 19%, and the asset turnover ratio (= *Salest ÷ Total assetst* ) is 2.6 ?

{ANSWER: B ; xlADDRESS: FA1!$B$791 }

/\a. $35,271 b. $29,150 c. $26,500 d. $38,798 e. $32,065

*FA15m Multipart single-setup*

At year-end 2525 the company has Total assets of $8,200 financed by Debt of $4,800 and Stockholders’ equity of $3,400 . For 160 common shares outstanding, the equity price-to-book ratio at year-end 2525 is 0.64. During 2526, the company expects an asset turnover ratio (= *Salest ÷ Total assetst-1* ) of 3.2 and an operating margin (= (*Sales – operating expenses) ÷ Sales* ) of 10.8%. Interest charges will equal 6% of Debt. Corporate taxes equal 30% of taxable income and the payout ratio always is 55%. Your analyst tells you that at year-end 2526 the company price-to-earnings ratio will equal 1.3.

{xlADDRESS: FA1!$B$841 }

### FA15am Find net income given next year’s pe and operating margin

What is net income for 2526?

{ANSWER: B ; xlADDRESS: FA1!$B$841 }

/\a. $1,620 b. $1,782 c. $2,156 d. $1,473 e. $1,960

### FA15bm Find stock price given next year’s pe and operating margin

What is the expected stock price at year-end 2526?

{ANSWER: E ; xlADDRESS: FA1!$F$841 }

/\a. $19.27 b. $15.93 c. $13.16 d. $17.52 e. $14.48

### FA15cm Find stock ROR given next year’s pe and operating margin

What is the shareholders’ rate of return for year 2526?

{ANSWER: B ; xlADDRESS: FA1!$J$841 }

/\a. 68.6% b. 51.5% c. 75.4% d. 62.3% e. 56.7%

## Part BE Breakeven analysis and financial statements

### BE1a Find quantity at operating breakeven

The company computes that each unit of production incurs variable operating costs of $28 and sells for $40 . The company’s fixed costs are $34,000 per year. Find the number of units per year the company must sell to exactly cover operating costs.

{ANSWER: D ; xlADDRESS: PortTheory!$B$405 }

/\a. 2,576 b. 1,935 c. 2,342 d. 2,833 e. 2,129

### BE1b Find quantity at target EBIT

The company computes that each unit of production incurs variable operating costs of $28 and sells for $40 . The company’s fixed costs are $34,000 per year. Find the number of units per year the company must sell to earn $25,000 of operating income.

{ANSWER: E ; xlADDRESS: PortTheory!$F$405 }

/\a. 5,949 b. 4,470 c. 6,544 d. 5,408 e. 4,917

### BE2a Find sales revenue at operating breakeven

The most recent annual report lists company *Sales revenue* at $86,225 . Cost analysis suggests that annual *Total fixed costs* equal $38,250 and *Total variable costs* equal $45,450 . The company believes that the ratio of *Sales revenue* to *Total variable costs* is constant. Find the company’s operating breakeven *Sales revenue*.

{ANSWER: E ; xlADDRESS: PortTheory!$B$433 }

/\a. $88,974 b. $73,532 c. $60,770 d. $66,848 e. $80,885

### BE2b Find sales revenue at target EBIT

The most recent annual report lists company *Sales revenue* at $86,225 . Cost analysis suggests that annual *Total fixed costs* equal $38,250 and *Total variable costs* equal $45,450 . The company believes that the ratio of *Sales revenue* to *Total variable costs* is constant. Find the target *Sales revenue* per year at which the company earns $9,450 of operating income.

{ANSWER: A ; xlADDRESS: PortTheory!$F$433 }

/\a. $100,869 b. $91,699 c. $134,257 d. $110,956 e. $122,051

### BE9 Find Target EBIT AND(Sales revenue, Total variable costs)

The most recent annual report lists company *Sales revenue* at $56,600 . Cost analysis suggests that annual *Total fixed costs* $21,250 equal and *Total variable costs* equal $30,300 . The company believes that the ratio of *Sales revenue* to *Total variable costs* is constant. The company sets a target to earn $5,250 of operating income. Find the *Sales revenue* and *Total variable costs* that allow the company to reach the target.

{ANSWER: E ; xlADDRESS: PortTheory!$B$807 }

/\a. The *Sales revenue* would equal $57,030 and *Total variable costs* equal $26,548 .

/\b. The *Sales revenue* would equal $57,030 and *Total variable costs* equal $23,085 .

/\c. The *Sales revenue* would equal $65,585 and *Total variable costs* equal $26,548 .

/\d. The *Sales revenue* would equal $65,585 and *Total variable costs* equal $30,530 .

/\e. The *Sales revenue* would equal $57,030 and *Total variable costs* equal $30,530 .

### BE3 Find %decline in sales to reach operating breakeven

The most recent annual report lists company *Sales revenue* at $66,000 . Cost analysis suggests that annual *Total fixed costs* equal $29,750 and *Total variable costs* equal $30,300 . The company believes that the ratio of *Sales revenue* to *Total variable costs* is constant. Find the percentage decline in annual *Sales revenue* that would cause the company to fall to its operating breakeven point.

{ANSWER: B ; xlADDRESS: PortTheory!$B$446; CLUES: operating breakeven point = 55,000 }

/\a. -15.2% b. -16.7% c. -18.3% d. -13.8% e. -12.5%

### BE4a Find breakeven quantity at target operating profit margin

The company computes that each unit of production incurs variable operating costs of $20 and sells for $30 . The company’s fixed costs are $42,500 per year. Find the number of units per year the company must sell to attain a 21.7% operating margin [= (*Sales revenue – total operating costs) ÷ Sales*].

{ANSWER: A ; xlADDRESS: PortTheory!$B$419 }

/\a. 12,178 b. 13,395 c. 14,735 d. 16,208 e. 17,829

### BE4b Find breakeven revenue at target operating profit margin

The company computes that each unit of production incurs variable operating costs of $20 and sells for $30 . The company’s fixed costs are $42,500 per year. Find the annual *Sales revenue* at which the company attains a 21.7% operating margin [= (*Sales revenue – total operating costs) ÷ Sales*].

{ANSWER: E ; xlADDRESS: PortTheory!$F$419 }

/\a. $401,862 b. $486,254 c. $332,118 d. $442,049 e. $365,330

### BE5a Find sales revenue at total breakeven point

The most recent annual report lists company *Sales revenue* at $80,150 . Cost analysis suggests that annual *Total fixed costs* equal $21,250 and *Total variable costs* equal $40,400 . The company believes that the ratio of *Sales revenue* to *Total variable costs* is constant. The annual *Interest* expense is $3,400 and the company pays *Preferred dividends* of $300 per year. They also pay 30% of taxable income as taxes. Find the *Sales* *revenue* at the total breakeven point.

{ANSWER: B ; xlADDRESS: PortTheory!$B$465 }

/\a. $55,624 b. $50,567 c. $37,992 d. $41,791 e. $45,970

### BE5b Find sales revenue and ebit at total breakeven

The most recent annual report lists company *Sales revenue* at $80,150 . Cost analysis suggests that annual *Total fixed costs* equal $21,250 and *Total variable costs* equal $40,400 . The company believes that the ratio of *Sales revenue* to *Total variable costs* is constant. The annual *Interest* expense is $3,400 and the company pays *Preferred dividends* of $300 per year. They also pay 30% of taxable income as taxes. Find the *Sales* *revenue* and *EBIT* at the total breakeven point.

{ANSWER: D ; xlADDRESS: PortTheory!$F$464 }

/\a. *Sales revenue* equals $38,236 and *EBIT* equals $4,403

/\b. *Sales revenue* equals $43,972 and *EBIT* equals $3,829

/\c. *Sales revenue* equals $50,567 and *EBIT* equals $4,403

/\d. *Sales revenue* equals $50,567 and *EBIT* equals $3,829

/\e. *Sales revenue* equals $38,236 and *EBIT* equals $3,829

### BE5c Find operating and total breakeven sales revenues

The most recent annual report lists company *Sales revenue* at $80,150 . Cost analysis suggests that annual *Total fixed costs* equal $21,250 and *Total variable costs* equal $40,400 . The company believes that the ratio of *Sales revenue* to *Total variable costs* is constant. The annual *Interest* expense is $3,400 and the company pays *Preferred dividends* of $300 per year. They also pay 30% of taxable income as taxes. Find the *Sales* *revenue* at the total breakeven point, and at the operating breakeven point.

{ANSWER: C ; xlADDRESS: PortTheory!$J$465 }

/\a. Sales equal $43,972 at the total breakeven point and $42,847 at the operating breakeven point

/\b. Sales equal $50,567 at the total breakeven point and $49,275 at the operating breakeven point

/\c. Sales equal $50,567 at the total breakeven point and $42,847 at the operating breakeven point

/\d. Sales equal $43,972 at the total breakeven point and $49,275 at the operating breakeven point

/\e. Sales equal $58,152 at the total breakeven point and $49,275 at the operating breakeven point

### BE6 Find Sales at target EAC

The most recent annual report lists company *Sales revenue* at $90,800 . Cost analysis suggests that annual *Total fixed costs* equal $42,500 and *Total variable costs* equal $35,350 . The company believes that the ratio of *Sales revenue* to *Total variable costs* is constant. The annual *Interest* expense is $2,550 and the company pays *Preferred dividends* of $450 per year. They also pay 35% of taxable income as taxes. Find the target annual *Sales revenue* at which the company would have $8,200 of *Earnings available for common*.

{ANSWER: D ; xlADDRESS: PortTheory!$B$483 ; CLUES: EBIT@EACtarget= $15,858 }

/\a. $105,118 b. $115,629 c. $86,874 d. $95,561 e. $127,192

### BE8a Find Sales at target EAC (PD=0)

The most recent annual report lists company *Sales revenue* at $66,900 . Cost analysis suggests that annual *Total fixed costs* equal $25,500 and *Total variable costs* equal $30,300 . The company believes that the ratio of *Sales revenue* to *Total variable costs* is constant. The annual *Interest* expense is $4,250 and there is no preferred stock. They also pay 25% of taxable income as taxes. Find the target annual *Sales revenue* at which the company would have $6,700 of *Earnings available for common*.

{ANSWER: E ; xlADDRESS: PortTheory!$B$742 }

/\a. $58,436 b. $77,779 c. $53,124 d. $64,280 e. $70,708

### BE8b Find Sales and VCosts at target EAC (PD=0)

The most recent annual report lists company *Sales revenue* at $66,900 . Cost analysis suggests that annual *Total fixed costs* equal $25,500 and *Total variable costs* equal $30,300 . The company believes that the ratio of *Sales revenue* to *Total variable costs* is constant. The annual *Interest* expense is $4,250 and there is no preferred stock. They also pay 25% of taxable income as taxes. Find the target annual *Sales revenue* and *Total variable costs* at which the company would have $6,700 of *Earnings available for common*.

{ANSWER: C ; xlADDRESS: PortTheory!$F$742 }

/\a. Sales at the target equal $61,485 and variable costs are $32,025

/\b. Sales at the target equal $70,708 and variable costs are $36,828

/\c. Sales at the target equal $70,708 and variable costs are $32,025

/\d. Sales at the target equal $53,465 and variable costs are $32,025

/\e. Sales at the target equal $61,485 and variable costs are $36,828

### BE7a Find Sales needed to reach target ROE (PD=0)

The most recent annual report lists company *Sales revenue* at $93,275 . Cost analysis suggests that annual *Total fixed costs* equal $25,650 and *Total variable costs* equal $50,750 . The annual *Interest* expense is $4,250 and there is no preferred stock. The company pays 25% of taxable income as taxes. The annual report also shows ROE, that is return on equity (=*Net incomet ÷ Stockholders’ equityt*), equals 15.3%. The company wants to increase its ROE to a target of 21.0%. They plan to hold constant *Stockholders’ equity*, *Total assets, Total fixed costs*, *Interest,* and the ratio of *Sales revenue* to *Total variable costs.* Find the target *Sales revenue* that provides the target ROE.

{ANSWER: B ; xlADDRESS: PortTheory!$B$503; CLUES: EAC0=$9,469 , EAC1=$12,996 , SE= $61,887 , new Total variable costs=$56,363 }

/\a. $77,830 b. $103,592 c. $70,754 d. $94,174 e. $85,613

### BE7b Find sales & net profit margin needed to reach target ROE (PD=0)

The most recent annual report lists company *Sales revenue* at $93,275 . Cost analysis suggests that annual *Total fixed costs* equal $25,650 and *Total variable costs* equal $50,750 . The annual *Interest* expense is $4,250 and there is no preferred stock. The company pays 25% of taxable income as taxes. The annual report also shows ROE, that is return on equity (=*Net incomet ÷ Stockholders’ equityt*), equals 15.3%. The company wants to increase its ROE to a target of 21.0%. They plan to hold constant *Stockholders’ equity*, *Total assets, Total fixed costs*, *Interest,* and the ratio of *Sales revenue* to *Total variable costs.* Find the target *Sales revenue* and net profit margin (=*Net income ÷ Sales revenue*) that provides the target ROE.

{ANSWER: A ; xlADDRESS: PortTheory!$F$503; CLUES: EAC0=$9,469 , EAC1=$12,996 , SE= $61,887 , new Total variable costs=$56,363 }

/\a. Target *Sales revenue* equals $103,592 and the net profit margin is 12.5%

/\b. Target *Sales revenue* equals $90,080 and the net profit margin is 14.4%

/\c. Target *Sales revenue* equals $90,080 and the net profit margin is 12.5%

/\d. Target *Sales revenue* equals $103,592 and the net profit margin is 14.4%

/\e. Target *Sales revenue* equals $78,330 and the net profit margin is 12.5%

### BE10a Find Sales with economic breakeven ratio giving target ROR

The most recent annual report lists company *Sales revenue* at $91,125 and *Stockholders equity* at $37,500 . Cost analysis of the annual report suggests that *Total fixed costs* equal $34,200 and *Total variable costs* equal $45,675 . The company believes that the ratio of *Sales revenue* to *Total variable costs* is constant. The price-to-book ratio and payout ratio, also constant, equal 1.20 and 40%, respectively. The annual *Interest* expense is constant at $2,550 . There is no preferred stock and the number of common shares is constant. The company tax rate is 35%. Advanced analysis convinces management that the shareholder equilibrium rate of return equals 10.2%. Find the target annual *Sales revenue* at which this most likely occurs.

{ANSWER: D ; xlADDRESS: PortTheory!$B$830 }

/\a. $78,475 b. $94,955 c. $64,856 d. $86,323 e. $71,341

### BE10b Find AND(Net Income, Sales) with economic breakeven ratio giving target ROR

The most recent annual report lists company *Sales revenue* at $91,125 and *Stockholders equity* at $37,500 . Cost analysis of the annual report suggests that *Total fixed costs* equal $34,200 and *Total variable costs* equal $45,675 . The company believes that the ratio of *Sales revenue* to *Total variable costs* is constant. The price-to-book ratio and payout ratio, also constant, equal 1.20 and 40%, respectively. The annual *Interest* expense is constant at $2,550 . There is no preferred stock and the number of common shares is constant. The company tax rate is 35%. Advanced analysis convinces management that the shareholder equilibrium rate of return equals 10.2%. Find the target annual *Net income* and *Sales revenue* at which this most likely occurs.

{ANSWER: E ; xlADDRESS: PortTheory!$F$830 }

/\a. *Net income* equals $3,564 and *Sales* equal $86,323 .

/\b. *Net income* equals $3,564 and *Sales* equal $75,064 .

/\c. *Net income* equals $4,098 and *Sales* equal $75,064 .

/\d. *Net income* equals $4,713 and *Sales* equal $75,064 .

/\e. *Net income* equals $4,098 and *Sales* equal $86,323 .

### BE10c Find AND(Dividends, Sales) with economic breakeven ratio giving target ROR

The most recent annual report lists company *Sales revenue* at $91,125 and *Stockholders equity* at $37,500 . Cost analysis of the annual report suggests that *Total fixed costs* equal $34,200 and *Total variable costs* equal $45,675 . The company believes that the ratio of *Sales revenue* to *Total variable costs* is constant. The price-to-book ratio and payout ratio, also constant, equal 1.20 and 40%, respectively. The annual *Interest* expense is constant at $2,550 . There is no preferred stock and the number of common shares is constant. The company tax rate is 35%. Advanced analysis convinces management that the shareholder equilibrium rate of return equals 10.2%. Find the target annual *Sales revenue* at which this most likely occurs and find the *Dividends* that shareholders would receive.

{ANSWER: C ; xlADDRESS: PortTheory!$J$830 }

/\a. *Sales* equal $86,323 and shareholders receive *Dividends* of $1,885

/\b. *Sales* equal $86,323 and shareholders receive *Dividends* of $2,168

/\c. *Sales* equal $86,323 and shareholders receive *Dividends* of $1,639

/\d. *Sales* equal $75,064 and shareholders receive *Dividends* of $1,639

/\e. *Sales* equal $75,064 and shareholders receive *Dividends* of $1,885

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