

Financial Modeling

– Certification Quiz Questions

Module 2 – Accounting Concepts, the Three Financial Statements, and Interview Questions

1. You are working with the corporate finance team at your company to estimate how the company's Net Cash Flow will differ from its Net Income in the current quarter. The team has made the following estimates for various line items this quarter:
 - Operating Income of \$200.
 - Net Interest Expense of \$10.
 - Depreciation of \$10.
 - Accounts Receivable has increased by \$50.
 - The company has purchased \$40 of Inventory and not yet delivered it to customers in the form of finished products.
 - The company has paid for \$30 of annual property insurance upfront in cash, but the policy begins next quarter.
 - The company has collected \$40 in cash from customers without delivering the associated products/services.
 - The company spent \$20 on Capital Expenditures (CapEx).
 - And the company issued \$30 in Common Dividends to its shareholders.

Based on this information, how much of a DIFFERENCE will there be between Net Income and Net Cash Flow? Assume a 25% tax rate.

- a. Net Income will be higher by \$140.
- b. Net Income will be higher by \$135.

- c. Net Income will be higher by \$120.
 - d. Net Income will be higher by \$100.
2. A company signs a lease that results in a \$200 Operating Lease Asset and a \$200 Operating Lease Liability appearing on its Balance Sheet. Its fixed annual cash rental payment is \$25 per year, and it uses a Discount Rate of 6% for this lease, which has a term of 10 years.

After one (1) year passes, how will this company's Total Assets DIFFER under the U.S. GAAP vs. IFRS treatments of Operating Leases? Assume a 25% tax rate.

- a. They'll be the same because under both accounting systems, the Operating Lease Asset for a single lease decreases by the same amount each year.
 - b. Under IFRS, Total Assets will be lower by \$5.
 - c. Under IFRS, Total Assets will be lower by \$3.
 - d. Under IFRS, Total Assets will be lower by \$1.
3. Consider the scenario shown below, in which a company uses straight-line depreciation over 3 years for Book purposes but accelerated depreciation for Tax purposes. The Book version contains all the calculations, and the Tax version is mostly blank:

Assumptions & Model Output

Tax Rate: 25.0%
 Initial CapEx Spending at the End of Year 0: \$ 300

Annual Depreciation %: 33.3% 33.3% 33.3%

Annual Depreciation %: 66.7% 33.3% 0.0%

| Income Statement: | Book Accounting | | |
|----------------------------|-----------------|----------|----------|
| | Year 1 | Year 2 | Year 3 |
| Revenue: | \$ 1,000 | \$ 1,000 | \$ 1,000 |
| Cost of Goods Sold (COGS): | 100 | 100 | 100 |
| Gross Profit: | 900 | 900 | 900 |
| Operating Expenses: | 700 | 700 | 700 |
| Depreciation: | 100 | 100 | 100 |
| Operating Income: | 100 | 100 | 100 |
| (-) Net Interest Expense: | - | - | - |
| Pre-Tax Income: | 100 | 100 | 100 |
| (-) Income Taxes: | (25) | (25) | (25) |
| Net Income: | \$ 75 | \$ 75 | \$ 75 |

| Income Statement: | Tax Accounting | | |
|----------------------------|----------------|----------|----------|
| | Year 1 | Year 2 | Year 3 |
| Revenue: | \$ 1,000 | \$ 1,000 | \$ 1,000 |
| Cost of Goods Sold (COGS): | 100 | 100 | 100 |
| Gross Profit: | 900 | 900 | 900 |
| Operating Expenses: | 700 | 700 | 700 |
| Depreciation: | | | |
| Operating Income: | | | |
| (-) Net Interest Expense: | | | |
| Pre-Tax Income: | | | |
| (-) Income Taxes: | | | |
| Net Income: | | | |

Which of the following statements is **NOT** true about the Deferred Income Taxes, Deferred Tax Liability, and Net PP&E over Years 1 – 3?

- a. Initially, Deferred Income Taxes will be negative since Tax Depreciation is higher than Book Depreciation, but they will turn positive in Year 3.
 - b. The Deferred Tax Liability at the end of Year 1 will be \$25.
 - c. On both versions of the statements, the Net PP&E and Deferred Tax Liability will be \$0 at the end of Year 3.
 - d. Year 2 will be the only period where the Deferred Taxes are \$0.
4. Consider the comparison of Revenue and EBITDA growth rates and key metrics and ratios for Best Buy and Target shown below:

Metrics and Ratios: Best Buy vs. Target

(\$ in Million Except Per Share Data)

Best Buy - Key Metrics and Ratios:

| Historical Period: | Units: | Year 1 | Year 2 | Year 3 |
|---|--------|---------------|---------------|---------------|
| Cash Flow from Operations: | \$ M | \$ 2,141 | \$ 2,408 | \$ 2,565 |
| (-) Capital Expenditures: | \$ M | (688) | (819) | (743) |
| Free Cash Flow: | \$ M | 1,453 | 1,589 | 1,822 |
| Operating Income from Income Statement: | \$ M | 1,843 | 1,900 | 2,009 |
| (+) Non-Recurring Charges: | \$ M | - | - | - |
| Earnings Before Interest & Taxes (EBIT): | \$ M | 1,843 | 1,900 | 2,009 |
| (+) D&A from Cash Flow Statement: | \$ M | 683 | 770 | 812 |
| EBITDA: | \$ M | 2,526 | 2,670 | 2,821 |
| EBITDA Growth: | % | 0.7% | 5.7% | 5.7% |
| Revenue: | \$ M | 42,151 | 42,879 | 43,638 |
| Revenue Growth: | % | 7.0% | 1.7% | 1.8% |
| Total Debt / EBITDA: | x | 0.5 x | 0.5 x | 0.5 x |
| EBITDA / Interest Expense: | x | 33.7 x | 36.6 x | 44.1 x |
| Return on Equity (ROE): | % | 24.0% | 42.3% | 45.4% |
| Return on Assets (ROA): | % | 7.4% | 11.3% | 10.8% |
| Invested Capital (IC): | \$ M | 4,967 | 4,694 | 4,750 |
| Net Operating Profit After Taxes (NOPAT): | \$ M | 1,013 | 1,473 | 1,553 |
| Return on Invested Capital (ROIC): | % | 18.4% | 30.5% | 32.9% |

Target - Key Metrics and Ratios:

| | Year 1 | Year 2 | Year 3 |
|----|---------------|---------------|---------------|
| \$ | 6,935 | \$ 5,973 | \$ 7,117 |
| | (2,533) | (3,516) | (3,027) |
| | 4,402 | 2,457 | 4,090 |
| | 4,224 | 4,110 | 4,658 |
| | - | - | - |
| | 4,224 | 4,110 | 4,658 |
| | 2,476 | 2,474 | 2,604 |
| | 6,700 | 6,584 | 7,262 |
| | (6.7%) | (1.7%) | 10.3% |
| | 72,714 | 75,356 | 78,112 |
| | 3.5% | 3.6% | 3.7% |
| | 1.7 x | 1.7 x | 1.6 x |
| | 10.3 x | 14.3 x | 15.2 x |
| | 25.7% | 25.5% | 28.3% |
| | 7.5% | 7.2% | 7.8% |
| | 23,049 | 22,572 | 23,332 |
| | 3,384 | 3,276 | 3,634 |
| | 14.5% | 14.4% | 15.8% |

Which of the following statements is the LEAST VALID conclusion about each company's performance, based on this data?

- The two companies seem to be quite similar, and it's suspicious that Best Buy's ROE, ROA, and ROIC all increased significantly in the past two years – which means that a tax rate change or another new policy might be responsible.
- Target seems to be using more Debt funding than Best Buy, but both companies have low Debt levels currently.
- For both companies, EBIT is a reasonable proxy for Free Cash Flow, and EBITDA is a reasonable proxy for Cash Flow from Operations.

- d. Best Buy is growing its Revenue and EBITDA more quickly than Target, so its ROE, ROA, and ROIC should all be substantially higher – and they are.

- 5. In Step 1, a company orders \$200 of Inventory “on credit,” without paying for any of it in cash.

In Step 2, it turns this Inventory into finished products and sells and delivers it to customers for \$400 in sales.

However, the customers do not pay upfront in cash, so the company cannot pay its suppliers for this Inventory yet.

Finally, in Step 3, the company collects the \$400 in owed cash and pays its suppliers.

Explain how the company’s Cash balance changes in Steps 1 – 2 (combined) and then in Steps 1 – 3 (combined).

- a. Cash is down by \$250 in the first two steps; over all three steps, it's up by \$150.
 - b. Cash is down by \$150 in the first two steps; over all three steps, it's up by \$75.
 - c. Cash is down by \$50 in the first two steps; over all three steps, it's up by \$150.
 - d. Cash is up by \$350 in the first two steps; over all three steps, it's up by \$150.
- 6. Company A acquires Company B for \$1,000, using 50% Stock and 50% Debt. Company B has \$1,000 in Total Assets and \$500 in Total Liabilities. Company A plans to allocate 60% of the purchase premium to Goodwill and the remaining 40% to Other Intangible Assets, with a useful life of 5 years.

Company A will pay an 8% interest rate on the Debt used to fund this deal. Company B will contribute \$200 in Revenue and \$100 in Operating Expenses to Company A in the first year following the acquisition.

Walk through the financial statements over the first year and explain how Company A's Cash balance changes from beginning to end. Use a 25% tax rate and assume that the Amortization of Intangibles is NOT Cash-Tax Deductible.

- a. Cash is up by \$45.
- b. Cash is up by \$55.
- c. Cash is up by \$15.
- d. Cash is unchanged.