

**CHAPTER 13**

**INTEGRATION OF FIN...EMENT  
ANALYSIS TECHNIQUES**

1. (C) net income – cash flow from operations – cash flow from investing.

**Explanation**

The following is an appropriate formula for calculating cash flow based accruals, not CGO: cash flow based accruals = net income – cash flow from operations – cash flow from investing.

(Module 13.5, LOS 3.e)

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2. (B) decrease and inventory turnover may or may not change.

**Explanation**

Depreciation expense increases as the depreciable life of an asset decreases. Thus, net income will decline. Depreciation will only affect inventory turnover if depreciation has been allocated to individual inventory items; when and why this happens is outside the scope of the Level II curriculum.

(Module 13.2, LOS 3.b)

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3. (B) ROA 5.0% and ROE 18.2%.

**Explanation**

The reported ROA and ROE are 5.6% (30/535) and 20.0% (30/150) respectively. Under the new depreciation assumptions, depreciation expense would be  $(140 - 14)/5 = 25.2$  million. Under the original assumptions depreciation of the fleet was 20 million. Therefore depreciation increases by 5.2 million. With the change in depreciation methods EDI would have reported:

Depreciation expense	\$35.20 million	(30 + 5.2)
Net income	\$26.62 million	(30 – [5.2 × (1 – 0.35)])
Total assets	\$529.80 million	(535 – 5.2)
Shareholder's equity	\$146.62 million	(150 – 3.38)

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Note that assets would have been lower by \$5.2 million due to the new depreciation assumptions and shareholder's equity by \$3.38 million [ $5.2 \times (1 - 0.35)$ ] due to lower retained earnings. Tax liabilities would have fallen by \$1.82 million to balance the \$5.2 million reduction in assets. Therefore, ROA would have been 5.0% ( $26.62 / 529.80$ ) and ROE would have been 18.16% ( $26.62 / 146.62$ ).

(Module 13.2, LOS 3.b)

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4. (B) 16.

**Explanation**

Since the P/E ratio was 12 and EPS was \$4, the price of the stock was \$48 ( $12 \times 4$ ). After removing the nonrecurring gain, earnings will be \$94.5 million ( $126 - 31.5$ ). We know the number of shares is 31.5 million ( $126 \text{ Million} \div 4$ ). So the new EPS number is 3 ( $94.5 \text{ million} \div 31.5 \text{ million}$ ) and new P/E ratio is 16 ( $48 \div 3$ ).

(Module 13.6, LOS 13.e)

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5. (C) \$143.04 million.

**Explanation**

To normalize earnings you would increase it by the non-recurring charge of \$27 million and decrease it by the non-recurring gain, both tax adjusted.

$$\$136 + (27 - 16)(1 - 0.36) = \$143.04.$$

(Module 13.6, LOS 13.e).

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6. (B) facilitate an economic decision.

**Explanation**

The primary goal of financial statement analysis is to facilitate an economic decision. For example, the firm may use financial analysis to decide whether to recommend a stock to its clients. Documentation and justification of trading decisions may be aided by financial statement analysis, but these are not the primary purposes.

(Module 13.1, LOS 13.a).

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7. (B) ROA is 12.96% and ROE is 16.56%.

**Explanation**

The change in depreciation methods results in net income increasing by \$3.25 million (\$5 million x (1-0.35)) and total assets increasing by \$5 million. Without the change in depreciation methods SCI would have reported:

Depreciation expense	\$30 million	(\$25 + \$5)
Net income	\$31.75 million	(\$35 – \$3.25)
Total assets	\$245 million	(\$250 – \$5)
Shareholder's equity	\$191.75 million	(\$195 – \$3.25)

Note that assets would have been lower by \$5 million due to the accelerated depreciation and equity would be lower by \$3.25 million (\$5 x (1 – 0.35)) due to lower retained earnings. In order to balance the \$5 million reduction in assets, equity will fall by \$3.25 million and tax liabilities will fall by \$1.75 million. Therefore, ROA would have been 12.96% (\$31.75 / \$245) and ROE would have been 16.56% (\$31.75 / \$191.75).

(Module 13.2, LOS 13.b)

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8.

	Operating income	Operating cash flow
(A)	Higher	No effect

**Explanation**

Lower bad debt expense will result in higher operating income. Operating cash flow is not affected until Galaxy actually collects the receivables.

(Module 13.6, LOS 13.e).

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9. (C) \$6.236 million and \$3.724 million.

**Explanation**

You will increase 1999 earnings by the tax-adjusted value of the 2.4 million one-time charge ( $2.4 \times (1 - 0.36) = +1.536$ ), and you would decrease Y2000 earnings by the tax-adjusted amount of the \$0.9 million one-time gain [ $0.9 \times (1 - 0.36) = -0.576$ ].

(Module 13.6, LOS 13.e).

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CFA<sup>®</sup>**10. (B) a review of his firm's framework for analysis of financial statements.****Explanation**

Analysis of financial statements should be performed in the context of an overall framework for the analysis of financial statements. Specific adjustments or analysis of specific ratios is a secondary concern.

(Module 13.1, LOS 13.a).

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**11. (B) Common-size financial statements.****Explanation**

Common-size financial statements are created in the data processing step of the framework for financial analysis. Audited financial statements would be obtained during the "collect input" phase of the financial analysis framework. Creating a written list of questions to be answered by the analysis is part of the "define the purpose" phase of the financial analysis framework.

(Module 13.1, LOS 13.a).

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**12. (A) 18.4 and 14.3.****Explanation**

The ROE for Firm A is adjusted for the \$400,000 loss on discontinued operations and the \$300,000 non-recurring gain. The ROE for Firm B is adjusted to remove the effects of the \$2.6 million one-time gain.

The first step in this problem is to solve for equity using ROE. Then, "normalize" net income by adjusting for discontinued operations and non-recurring items. Then, solve for "normalized" ROE.

**Firm A:**

$$18\% = 3,200,000 / \text{Equity}_A$$

$$\text{Equity}_A = 17,777,778 \text{ (rounding)}$$

$$\text{Normalized Net Income}_A = 3,200,000 + (1 - 0.36)(400,000 - 300,000)$$

$$\text{Normalized ROE}_A = 3,264,000 / 17,777,778 = 18.360\%$$

**Firm B:**

$$16\% = 16,000,000 / \text{Equity}_B$$

$$\text{Equity}_B = 100,000,000$$

$$\text{Normalized Net Income}_B = 16,000,000 + (1 - 0.36)(-2,600,000)$$

$$\text{Normalized ROE}_B = 14,336,000 / 100,000,000 = 14.336\%$$

18.360 and 14.336 are closest to 18.4 and 14.3

(Module 13.6, LOS 13.e).

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**13. (B) EBIT + depreciation + amortization.**

**Explanation**

We are most likely to approximate segment cash flow as EBIT plus depreciation and amortization. This calculation is necessary because segmental cash flow data is generally not reported.

(Module 13.2, LOS 13.c).

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**14. (C) LIFO results in lower COGS, higher earnings, higher taxes, and lower cash flows.**

**Explanation**

Remember, prices are falling. Under LIFO, the most recent purchases flow to COGS. So, LIFO results in lower COGS, higher earnings, higher taxes, and lower cash flows.

(Module 13.6, LOS 13.e).

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**15. (B) equity by \$200 million.**

**Explanation**

If goodwill has no economic value apart from the firm, it should be eliminated from the balance sheet. If the value of the intangibles can be reliably estimated they can be substituted for accounting goodwill.

(Module 13.6, LOS 13.e).

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**16. (B) \$1,980,000.00.**

**Explanation**

The highly probably LIFO liquidation suggests net income, income tax expense, and equity will rise. The analyst can make this adjustment now for forecasting purposes. The adjustment to retained earnings will be:  $\$125,000 \times (1 - 0.36)$ .

(Module 13.2, LOS 13.b)

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CFA<sup>®</sup>**17. (C) LIFO.****Explanation**

During an inflationary period, using LIFO would increase COGS, since the most recent (highest cost) inventory would be sold. Therefore, earnings and taxes would be lowest under LIFO.

(Module 13.2, LOS 13.b)

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**18. (B) revenues.****Explanation**

In a common size income statement, all the line items in a company's income statement are divided by the company's revenues. Common size statements make comparability across companies much easier. An analyst might use a common size statement to compare trends in income statement variables (such as gross margins) for a group of companies.

(Module 13.2, LOS 13.c)

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**19. (C) \$460,240.****Explanation**

The reduction in COGS would result in an increase in net income  $(62,000 - 78,000) \times (1 - 0.36)$ .

(Module 13.6, LOS 13.e)

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**20. (C) Define the purpose of the analysis, process input data, and follow up.****Explanation**

Proper analysis framework should include:

1. Define the purpose of the analysis.
2. Collect input data.
3. Process input data.
4. Interpret processed data.
5. Develop and communicate conclusions.
6. Follow up

(Module 13.1, LOS 13.a)

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**21. (B) collecting data.**

**Explanation**

Communication with management, suppliers, customers, and competitors is an input during the data collection step. Processing data is the third phase of the financial analysis framework.

Establishing the objective of the analysis is part of the "define the purpose" phase of the financial analysis framework.

(Module 13.1, LOS 13.a)

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**22. (B) 60.0%.**

**Explanation**

Tax burden =  $NI/EBT$  or  $1 - \text{the effective tax rate}$ . The increase in the return on pension plan assets assumption increased EBIT, EBT, Income Taxes, and Net Income from what it would have been. Removing \$2 million from the reported numbers will reduce EBIT, EBT, Income Taxes, and Net Income. However, the tax burden ratio will still be  $1 - \text{the effective tax rate}$ .

(Module 13.6, LOS 13.e)

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