

## Schweser Printable Answers - Session Financial Statement Analysis: Earnings Quality Issues and Financial Ratio Analysis

Test ID#: 1362408

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### Question 1 - #9072

George Edwards is a senior analyst with The Edge Group, an independent equity research firm specializing in micro cap companies that have recently had an initial public offering, or are likely to go public within the next three years. Over the current market cycle, small company stocks have been the leading performers in the equity market, and micro cap money managers have had huge cash inflows due to their funds' strong performance. With an excess amount of cash and few good investment opportunities due to the high valuations in the marketplace, fund managers have turned to independent research firms like The Edge Group to help them discover new investment ideas.

With a large number of mutual fund managers asking them for research reports, business at The Edge Group is booming. To help handle the large amount of business, Edwards has hired two new junior analysts, Paul Kelley and Rachael Schmidt. Both Kelley and Schmidt have degrees in finance, and came highly recommended to Edwards.

In Kelley and Schmidt's orientation meeting, Edwards told them that what has made The Edge Group successful in delivering quality research to its clients is its willingness to dig into company financial statements and not take the accounting numbers at face value. Every item in the financial statements should be scrutinized and adjusted if necessary. Edwards tells the new analysts that if there is one lesson they should learn, it is that "there is a difference between accounting reality and economic reality."

For their first assignment, Edwards has asked the new analysts to put together a draft of a research report on Landesign, an architecture firm specializing in landscape design for municipalities, residential developments, and wealthy individuals. The firm also sells various kinds of stone and plastic products which are used in landscaping applications. Edwards tells the new analysts that he will help put together the report, but he would like them to do a majority of the legwork.

Since it was founded seven years ago, Landesign has grown at an annual rate exceeding 20 percent. Much of the growth comes from Landesign's acquisitions of regional competitors. Edwards points out to the analysts that Landesign uses purchase method accounting. Kelley, looking to impress Edwards with his knowledge, tells him that when one company acquires another, assets of both companies are restated to fair market value, and that higher depreciation can lead to lower quality earnings. Not wanting to be outdone, Schmidt adds that liquidity measures such as the quick ratio and the cash ratio should improve as Landesign makes acquisitions.

Kelley decides to review Landesign's 2004 financial statements and make notes about significant accounting practices being used. His notes are shown in the exhibit below:

#### Exhibit 1: Kelley's Notes on Landesign's Accounting Practices

- The firm uses first in, first out (FIFO) accounting. As a side note, the current inflation rate has remained relatively constant at an annual rate of 3 percent.
- Equipment and office furniture are depreciated based on the 200 percent declining balance method.
- Fixed assets (equipment) are generally assigned short useful life estimates.
- The expected return on defined benefit pension plan assets is 2 to 3 percentage points below the long-term rate of return for similar assets.
- Landesign reports deferred taxes of \$350,000 for 2004, compared with \$300,000 and \$280,000 in deferred taxes for 2003 and 2002, respectively.

Schmidt notices that the footnotes to Landesign's financial statements include a reference to an agreement to receive a minimum amount of stone used to construct landscape walls from a supplier. Under the terms of the agreement, Landesign will pay for the stone whether it is used in the current accounting period or not. The agreement allows Landesign to pay a price that is significantly less than the current market price for similar quality stone.

A second footnote indicates that Landesign has an eight-year rental commitment for a greenhouse used to grow plants and store mulch that Landesign uses in the landscaping process. On the financial statements, \$55,000 in rent expense for the greenhouse is listed on the income statement. The footnote also states that the \$55,000 rental expense payment was agreed upon with Fred's Nursery, the owner of the greenhouse, based upon an interest rate of 7 percent.

A third footnote indicates that Landesign has sold its accounts receivable to Dais Enterprises for 95 percent of their original value of \$130,000. The footnote indicates that Landesign retains the risk of noncollection of the receivables.

The final footnote on the page indicates that Landesign has a revolving line of credit at which it can borrow funds in the future at an interest rate of 6 percent.

After going through the information, Kelley and Schmidt discuss their findings and start to work on their report for Edwards.

Part 1)

All of the following items noted in Kelley's Notes on Landesign's Accounting Practices would be considered indicators of high earnings quality **EXCEPT** Landesign's use of:

- A) First in, first out (FIFO) accounting in a mildly inflationary economy.
- B) short useful life estimates for fixed assets.
- C) the 200 percent declining balance method of depreciation on its furniture and equipment.
- D) an expected return on its defined benefit pension plan assets at 2-3 percentage points below the long-term rate of return for similar assets.

Your answer: A was incorrect. The correct answer was A) First in, first out (FIFO) accounting in a mildly inflationary economy.

High earnings quality is established by a clear and conservative approach to stating earnings. Even though inflation is relatively mild, FIFO accounting will result in lower COGS, and higher net income. This is more aggressive than the use of LIFO. Short useful lives for fixed assets, use of accelerated depreciation, and using a conservative estimate for returns on pension assets will all tend to increase expenses and are examples of conservative accounting practices.

Part 2)

Which of the following adjustments should Kelley make to Landesign's balance sheet to account for deferred taxes? Kelley should:

- A) add \$350,000 to equity and subtract \$350,000 from liabilities.
- B) add \$56,000 to assets and subtract \$56,000 from liabilities.
- C) add \$56,000 to equity and subtract \$56,000 from liabilities.
- D) add \$350,000 to assets and subtract \$350,000 from liabilities.

Your answer: A was incorrect. The correct answer was A) add \$350,000 to equity and subtract \$350,000 from liabilities.

Deferred tax liabilities are shown to be growing over the last three years, indicating a low probability of reversal in the near future. In this case, Kelley should assume zero deferred tax liabilities on the adjusted balance sheet, and an increase in equity of \$350,000. Note that if the deferred taxes were expected to reverse, Kelley would have needed to calculate the present value of the expected tax liability.

Part 3)

Which of the following adjustments should Schmidt make to Landesign's financial statements for the agreement to purchase stone at a discount?

- A) An estimate of the future liability should be recognized on the balance sheet.
- B) No changes are necessary since Landesign expenses the costs as part of normal operating expense.
- C) Since Landesign is getting a break on the price of the goods, an adjustment should be made to cost of goods sold.
- D) A prepaid expense needs to be added to the asset side of the balance sheet.

Your answer: A was incorrect. The correct answer was A) An estimate of the future liability should be recognized on the balance sheet.

The adjustment for a take-or-pay contract is similar to adjusting for operating leases. The present value of future payments needs to be recognized as a liability on Landesign's balance sheet.

Part 4)

Which of the following adjustments should Schmidt make to Landesign's financial statements to account for the greenhouse that Landesign uses to grow plants and store mulch?

- A) Increase both liabilities and assets by \$341,500.
- B) Increase liabilities and decrease equity by \$440,000.
- C) Increase both liabilities and assets by \$328,400.
- D) Increase both liabilities and assets by \$440,000.

Your answer: A was incorrect. The correct answer was A) Increase both liabilities and assets by \$341,500.

The rental agreement for the greenhouse is an operating lease and essentially represents off-balance sheet financing. To adjust Landesign's balance sheet for the operating lease, Schmidt needs to capitalize the lease by increasing both liabilities and assets by the present value of the lease payments. The interest rate used in the present value computation is the lower of the firm's financing rate or the rate implicit in the lease. We are told that the rental payments of \$55,000 are based on an interest rate of 7 percent. However, we are told in another footnote that Landesign expects to be able to borrow funds in the future at a rate of 6 percent. We therefore use the lower firm financing rate of 6 percent in our computation. The present value of the lease payments is:  $N = 8$ ;  $I/Y = 6\%$ ;  $PMT = -55,000$ ;  $FV = 0$ ;  $CPT PV = \$341,539$ .

Part 5)

Regarding the comments made about Landesign's growth through acquisition strategy:

- A) Kelley's comment was incorrect; Schmidt's comment was correct.
- B) Kelley's comment was correct; Schmidt's comment was incorrect.
- C) Kelley's comment was correct; Schmidt's comment was correct.
- D) Kelley's comment was incorrect; Schmidt's comment was incorrect.

Your answer: A was incorrect. The correct answer was D) Kelley's comment was incorrect; Schmidt's comment was incorrect.

Kelley and Schmidt both made incorrect comments concerning Landesign's growth through acquisition strategy. Kelley was correct that purchase method accounting will lead to higher depreciation, and potentially lower quality earnings as a result of restating asset values to fair market value. However, Kelley was incorrect insofar as the comment on balance sheet restatement, since only the assets of the target are restated to fair value – the value of the acquirer, in this case Landesign, would not be revalued. Schmidt was incorrect in stating that liquidity ratios such as the quick ratio and cash ratio should improve. The current ratio is likely to improve in a purchase method acquisition due to the revaluation of the target's inventory. However, the quick ratio and cash ratio do not include inventory in their calculation, so the effect of the acquisition on those ratios is inconclusive.

Part 6)

Which of the following statements regarding the adjustments that Schmidt should make to Landesign's financial statements for its sale of receivables is **CORRECT**?

- A) \$123,500 should be added to cash flow from financing, and \$123,500 should be subtracted from cash flow from operations.
- B) Accounts receivable should be increased by \$123,500, cash should be decreased by \$123,500, and a loss of \$6,500 should be recognized on the income statement.
- C) Accounts receivable should be increased by \$123,500, loans payable should be increased by \$123,500, and a loss of \$6,500 should be recognized on the income statement.
- D) \$6,500 should be recorded as a negative cash flow from investing, \$130,000 should be added to cash flow from financing, and \$123,500 should be subtracted from cash flow from operations.

Your answer: A was incorrect. The correct answer was A) \$123,500 should be added to cash flow from financing, and \$123,500 should be subtracted from cash flow from operations.

When receivables are sold with recourse, the risk of noncollection of sold receivable is retained by Landesign. Therefore, Schmidt should make two adjustments: (1) The sale of receivables should be reclassified as CFF instead of CFO, meaning that \$123,500 should be added to cash flow from financing, and \$123,500 should be subtracted from cash flow from operations. (2) The full amount of the receivables, \$130,000, should be added to accounts receivable, and a liability called loan payable of \$123,500 should be added to the liabilities side of the balance sheet. Note that no adjustments to income are made at this time. As the receivables are collected, the 5% discount (\$6,500) is amortized as interest expense.

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Question 2 - #9091

Company X owns 20 percent of company S, which is in the same industry, and accounts for the investment using the equity method. The following are the income statements for 2002 and the balance sheets for 2001 and 2002 for companies X and S.

	<i>Company X</i>	<i>Company S</i>
Sales	1,000	200
Cost of goods sold	700	150
Depreciation	60	5
Operating expenses	93	25
Other income	3	0
Earnings before taxes	150	20
Taxes	45	5
Net income	105	15
Dividends	15	4

	<i>Company X</i>		<i>Company S</i>	
	<i>2001</i>	<i>2002</i>	<i>2001</i>	<i>2002</i>
Cash	50	60	10	10
Accounts receivables	200	220	25	30
Inventories	100	110	35	40
Other current assets	100	110	20	20
Gross PP&E	900	1,000	185	200
Less accumulated depreciation	290	350	55	60
Net PP&E	610	650	130	140
Deferred tax assets	10	40	0	0
Other fixed assets	40	50	10	10
Total assets	1,110	1,240	230	250
Accounts payable	70	80	10	15
Current portion of LTD	100	100	5	10
Notes payable	100	220	0	10
Other current liabilities	30	30	5	5
Deferred tax liabilities	10	20	0	0
Long-term debt	300	200	40	30
Common stock	180	180	100	100
Paid in capital	70	70	50	50
Retained earnings	250	340	20	30

The following information is found in the footnotes of companies X and S and may be relevant:

- Company X uses last in first out (LIFO) and company S uses first in first out (FIFO). The LIFO reserve for company X was 70 in 2001 and 75 in 2002.
- The 2002 deferred tax assets have a valuation allowance of 20.
- The deferred tax liabilities will likely never reverse.
- The long-term debt of company X is in the form of bonds that have a market value of 280.
- The property, plant, and equipment (PP&E) for company S includes 50 of real estate, for which it recently received an offer of 120.

Assume for the following questions an analyst is trying to compare the financial statements of company X with other companies in the industry.

Part 1)

After modifying the balance sheet, the value of current assets for company X on December 31, 2002, is:

- A) \$520.
- B) \$575.
- C) \$500.
- D) \$595.

Your answer: A was incorrect. The correct answer was D) \$595.

For each of the following answers the analytic objective is to replace the equity method accrual with proportionate consolidation to get a truer picture of the impact of company S on company X.

The inventory of company X should be put on a FIFO basis by adding the LIFO reserve, which is  $110 + 75 = 185$ . Company X should include the proportionate equity of each of the accounts. Cash would be  $60 + (0.2 \times 10) = 62$ ; accounts receivable would be  $220 + (0.2 \times 30) = 226$ ; other current assets would be  $110 + (0.2 \times 20) = 114$ ; and inventory would be  $185 + (0.2 \times 40) = 193$ , so current assets =  $62 + 226 + 114 + 193 = 595$ .

Part 2)

After modifying the balance sheet, the value of non-current assets for company X on December 31, 2002, is:

- A) \$784.
- B) \$728.
- C) \$714.
- D) \$764.

Your answer: A was incorrect. The correct answer was B) \$728.

Company X should include the proportionate equity of each of the accounts. The PP&E for company S should be adjusted by adding the  $(120 - 50 =) 70$  of market value compared to book value of the real estate. The PP&E of company S would be  $140 + 70 = 210$ , and the adjusted PP&E of company X would be  $650 + (0.2 \times 210) = 692$ . The deferred tax assets for company X should be reduced by 20 because of the valuation allowance, which means they will be equal to  $40 - 20 = 20$ . The unadjusted other fixed assets for company X includes the equity position for company S, which is worth 20 percent of the equity of company S, which is  $0.2 \times 180 = 36$ . The adjusted other fixed assets would be  $50 - 36 + (0.2 \times 10) = 16$ . The total non-current assets for S are  $692 + 20 + 16 = 728$ .

Part 3)

After modifying the balance sheet, the value of accounts payable for company X on December 31, 2002, is:

- A) \$78.
- B) \$63.
- C) \$58.
- D) \$83.

Your answer: A was incorrect. The correct answer was D) \$83.

Company X should include the proportionate equity of each of the accounts. The accounts payable for company S would be  $80 + (0.2 \times 15) = 83$ .

Part 4)

After modifying the balance sheet, the value of all liabilities (including deferred taxes) is:

- A) \$624.
- B) \$644.
- C) \$664.
- D) \$610.

Your answer: A was incorrect. The correct answer was A) \$624.

Company X should include the proportionate equity of each of the accounts. The total long-term debt must also be adjusted for the lower market value—the combined current portion is worth 280. The adjusted

long-term debt is  $280 + (0.2 \times (10 + 30)) = 288$ . The accounts payable for company S would be  $80 + (0.2 \times 15) = 83$ , the notes payable would be  $220 + (0.2 \times 10) = 222$ , and the other current liabilities would be  $30 + (0.2 \times 5) = 31$ . Deferred taxes would be worth 0. The total liabilities would be  $288 + 83 + 222 + 31 = 624$ .

Part 5)

Both company X and S desire to provide higher quality earnings. Which of the following is **TRUE**, given the information that has been provided?

- A) Company S must change its accounting procedures, but company X might not have to change its procedures.
- B) Company X must change its accounting procedures, but company S might not have to change its procedures.
- C) Companies X and S must change their accounting procedures.
- D) Neither company X nor S must change its accounting procedures.

Your answer: A was incorrect. The correct answer was A) Company S must change its accounting procedures, but company X might not have to change its procedures.

Since company S uses FIFO, it must change to LIFO to provide higher quality earnings. There is no information suggesting that company X is not providing high quality earnings.

Part 6)

Assuming the tax rate is 36 percent, what will be the adjusted value of company X's 2002 retained earnings after the LIFO reserve is included?

- A) \$388.
- B) \$340.
- C) \$415.
- D) \$462.

Your answer: A was incorrect. The correct answer was C) \$415.

The entire LIFO reserve is allocated to retained earnings.  $340 + 75 = 415$  There is no need to adjust for the tax rate in this problem. Tax effects should be ignored unless it is known that there a high probability of a LIFO liquidation.

### Question 3 - #9078

For the past three years Paul Schindler, CFA, has worked for Zirconia Capital Management (Zirconia) as a research analyst in the firm's small cap equity division. Last week, Schindler was promoted to portfolio manager of the Zirconia Small Cap Equity Fund, where he co-manages the fund with Zirconia's founder, Dick Killen. Over the last three quarters, performance for the Zirconia Small Cap Fund has been excellent, ranking in the top 10 percent of its peer group. Since the fund now has a three year track record, it is showing up in many of the screens run by investment managers and consultants, and assets have been flowing into the fund at a rapid pace. Due to the large influx of assets, Schindler and Killen are considering expanding the number of companies held in their fund and are looking for new investment ideas.

One company that looks interesting to them is Bingaman Corporation (Bingaman), a manufacturer of oil and gas exploration equipment. Killen and Schindler have talked to Bingaman's management and like the story behind the firm. Before taking a position in the firm, the fund managers want to analyze their financial statements to assess the true financial situation at the firm. This will necessarily involve a review of the accounting methods used by Bingaman's management.

Financial statements for Bingaman Corporation for the year ended December 31, 2004, are shown below with relevant footnotes:

<i>Balance Sheet</i>			
<i>(in \$ millions)</i>			
Cash	35	Accounts Payable	60

Accounts Receivable	75	Long Term Debt	120
Inventory	190	Common Stock	360
Equipment	400	Retained Earnings	230
Real Estate	50		
Goodwill	20		

*Income Statement*  
(in \$ millions)

Sales	600
Cost of Goods Sold	(450)
Depreciation	(50)
Rent Payments	(20)
Interest Expense	(10)
Other Expenses	<u>(20)</u>
Net Income	50

*Statement of Cash Flows for the period*  
*1/1/2004 – 12/31/2004*  
(in \$ millions)

Cash Flow from Operations (CFO)	120
Cash Flow from Investing (CFI)	(95)
Cash Flow from Financing (CFF)	<u>(10)</u>
Change in cash	15
+ Beginning of Period Cash	<u>20</u>
Ending Cash Balance	35

- Inventory is valued under the last in, first out (LIFO) cost flow assumption. The LIFO reserve was \$50 million on January 1, 2004 and \$60 million on December 31, 2004.
- The firm has operating leases with a present value of \$100 million. Rent payments of \$20 million equate to \$10 million interest expense plus \$10 million depreciation expense.
- A class action lawsuit has been filed against Bingaman for environmental contamination of a wildlife reserve. According to Bingaman's attorney's, the likely outcome is a \$12,000,000 judgment adverse to Bingaman in early 2006.
- Because of an increase in market interest rates during the year, the market value of Bingaman's long term debt has changed by \$15 million.
- Goodwill is from previous acquisitions.

Schindler has determined that Bingaman's marginal tax rate is 40 percent, and he assumes that that inflation will average 2.5 percent per year over the foreseeable future.

Part 1)

Factoring out the impact of LIFO accounting on Bingaman's 2004 net income, normal net income for the year ended December 31, 2004, would be:

- A) \$40 million.
- B) \$44 million.
- C) \$54 million.
- D) \$56 million.

Your answer: A was incorrect. The correct answer was D) \$56 million.

During 2004, the LIFO reserve increased from \$50 to \$60 during the year implying that the higher priced new inventory was passed along, understating net income. To calculate the adjustment, we need to multiply the change in the LIFO reserve by  $(1 - \text{tax rate})$ .

Change in LIFO reserve =  $(50 - 60) = -10$ . Change in net income =  $(-)(-10)(1-0.4) = +\$6$ . To adjust net income we add the \$6 to our original value of \$50 for an adjusted value of \$56.

Part 2)

On the 2004 modified balance sheet of Bingaman Corporation, total assets are:

- A) \$720 million.
- B) \$760 million.
- C) \$910 million.
- D) \$880 million.

Your answer: A was incorrect. The correct answer was C) \$910 million.

Modified total assets are calculated by adding in the fair market value of the operating leases, the LIFO reserve as of December 31, 2004, and subtracting the goodwill from previous acquisitions.  $(\$770 + \$60 + \$100 - \$20) = \$910$  million.

Part 3)

On the 2004 modified balance sheet of Bingaman Corporation, net adjustments to equity are:

- A) -\$16,000,000.
- B) \$6,000,000.
- C) \$14,000,000.
- D) \$43,000,000.

Your answer: A was incorrect. The correct answer was D) \$43,000,000.

Bingaman's modified balance sheet will show the following net adjustments to equity: adding the entire LIFO reserve (due to the assumption of rising prices), less the value of the goodwill from previous acquisitions, less the expected litigation exposure, plus the offset to equity for the decrease in the value of the long term debt due to rising interest rates:  $(+\$60,000,000 - \$20,000,000 - \$12,000,000 + \$15,000,000) = \$43,000,000$ .

Part 4)

After restating Bingaman's 2004 financials, Schindler and Killen analyze the firm's financial ratios in order to compare Bingaman to other firms in its industry. In discussing the impact of the restatement on the financial ratios, Schindler makes the following four statements:

- Statement 1: Bingaman's return on assets will be lower after restating the financials.
- Statement 2: Bingaman's return on equity will be lower after restating the financials.
- Statement 3: The current ratio will remain unchanged after restating the financials.
- Statement 4: The long-term debt to total asset ratio will increase after restating the financials.

After their conversation, Killen tells Schindler that he needs to redo some of his calculations because at least one of his assessments are wrong. Which of the following describes Schindler's statements?

- A) Statements 1, 2, and 3 are correct, but statement 4 is incorrect.
- B) Statements 2 and 4 are correct, but statements 1 and 3 are incorrect.
- C) Statements 1 and 4 are correct, but statements 2 and 3 are incorrect.
- D) Statements 1 and 2 are correct, but statements 3 and 4 are incorrect.

Your answer: A was incorrect. The correct answer was C) Statements 1 and 4 are correct, but statements 2 and 3 are incorrect.

Statement 1 is correct – adjusting for operating leases and adding the LIFO reserve will cause total assets to be higher, which will reduce return on assets (net income/assets). Note that the proportionate increase in assets is higher than the increase in adjusted income, so ROA will decline.

Statement 2 is incorrect – the firm's equity increased from \$590 million to \$633 million, while the net income

increased from \$50 million to \$56 million.  $50/590 = 0.0847$  or 8.47%,  $56/633 = 0.0885$  or 8.85%. Summary of the change in equity: + LIFO reserve + decline in value of the firm's debt - litigation exposure - goodwill =  $60 + 15 - 12 - 20 = \$43$  million. Change in net income = change in LIFO reserve  $\times (1 - T) = 10 (1 - 0.4) = \$6$  million.

Statement 3 is incorrect - the value of inventory will be increased by the LIFO reserve, which will result in a higher level of current assets and a higher current ratio.

Statement 4 is correct. Total assets before restatement = \$770 million; after restatement = \$910 million. Long-term debt before restatement = \$120; after restatement = \$217. Long-term debt to total assets before restatement =  $120/770 = 0.156$  or 15.6%; after restatement =  $217/910 = 0.238$  or 23.8%. Summary of change in total assets: prior assets + LIFO reserve + PV of leases - goodwill =  $\$770 + \$60 + \$100 - \$20 = \$910$  million. Summary of change in LT debt: prior LT debt + PV of leases + litigation exposure - change in market value of debt =  $\$120 + \$100 + \$12 - \$15 = \$217$  million.

Part 5)

Schindler has determined that fixed capital expenditures for Bingaman are \$80 million. What is the free cash flow to the firm (FCFF)?

- A) -\$39,000,000.
- B) \$31,000,000.
- C) \$34,000,000.
- D) \$46,000,000.

Your answer: A was incorrect. The correct answer was D) \$46,000,000.

$$\text{FCFF} = \text{CFO} + [\text{Interest expense} \times (1 - \text{tax rate})] - \text{FCInv}$$

$$\text{FCFF} = 120 + [10 \times (1 - 0.40)] - 80$$

$$\text{FCFF} = 120 + 6 - 80$$

$$\text{FCFF} = \$46 \text{ million}$$

Part 6)

The analyst team at Zirconia has been investigating the concept of comprehensive income as a tool for capturing economic changes to equity. Schindler has been put in charge of the project and has prepared a memo listing adjustments that must be made to equity in order to compute comprehensive income. Which of the following adjustment items listed in Schindler's memo is **NOT** required under U.S. GAAP in order to calculate comprehensive income?

- A) Minimum pension liabilities.
- B) Unrealized gains and losses on available for sale securities.
- C) Cumulative foreign currency translation adjustments.
- D) Deferred taxes.

Your answer: A was incorrect. The correct answer was D) Deferred taxes.

Comprehensive income is an income figure that allows for all changes in equity during a period, excluding those resulting from investments from and distributions to owners. Adjustments to made to equity under U.S. GAAP to calculate comprehensive income include:

- Minimum pension liability.
- Unrealized gains and losses on available for sale securities.
- Cumulative foreign currency translation adjustments.
- Deferred gains and losses on cash flow hedges.

Note that many analysts make adjustments beyond those prescribed by U.S. GAAP, which could include adjustment items such as deferred taxes.

Question 4 - #9073

Lawrence Berenz, CFA, is an analyst for Cannon Capital Management, a firm specializing in managing

mid-cap value equity portfolios for high net worth clients and institutions. Cannon follows a bottom up stock picking process and seeks to select stocks for its portfolios that are selling at a 40 percent discount to intrinsic value.

Anne Douglas, CFA, a Senior Portfolio Manager with Cannon, has asked Berenz to analyze the stock of Brenda's Bakery Supply. Brenda's makes ovens, fryers, mixers, and other machines which are used in the process of making sweet foods and other confections. Recently, a diet craze in the United States has led consumers to seek low carbohydrate foods, which has cut down on the number of consumers going to bakeries, thus putting pressure on Brenda's profitability. Douglas believes that the "low carb" craze will prove to be a short-lived fad, and that Brenda's Bakery Supply offers compelling value at its current price.

Berenz begins his analysis by reviewing Brenda's Bakery Supply's financial statements for the last two years. Berenz believes that to properly analyze individual accounts, the balance sheet and income statement should be restated in order to more accurately portray the economic reality of the firm's financial position. Berenz also disagrees with the practice of some analysts to assume that deferred taxes will not reverse in the future. Brenda's Bakery Supply financial statements are shown in the exhibits below.

Before starting on the project,

Douglas tells Berenz to focus on Brenda's comprehensive income in order to reduce the volatility caused by nonrecurring items in net income and get a better idea of Brenda's future earning power. Berenz states that he has reservations about the use of comprehensive income because under U.S. GAAP does not require an adjustment for any minimum pension liabilities that may exist. Douglas then walks away saying she would like a report on his analysis before their 9:00 a.m. conference call the next morning.

#### Exhibit 1:

<b>Brenda's Bakery Supplies Consolidated Balance Sheets (in 000's)</b>		
	<i>2003</i>	<i>2004</i>
Cash and Cash Equivalents	362	104
Accounts Receivable	494	600
Inventories	750	900
<i>Total Current Assets</i>	<i>1,606</i>	<i>1,604</i>
Net Fixed Assets	3,333	3,516
Goodwill	500	370
Prepaid Pension Cost	152	190
<i>Total Assets</i>	<i>5,591</i>	<i>5,680</i>
Current portion of long term debt	254	310
Accounts Payable	768	916
<i>Total Current Liabilities</i>	<i>1,022</i>	<i>1,226</i>
Deferred Taxes	194	272
Long Term Debt	1,944	2,380
Pension and Other Benefit Obligations	456	512
<i>Total Liabilities</i>	<i>3,616</i>	<i>4,390</i>
Common Stock	800	800
Retained Earnings	1,175	490
<i>Total Equity</i>	<i>1,975</i>	<i>1,290</i>
<i>Total Liabilities and Equity</i>	<i>5,591</i>	<i>5,680</i>

#### Exhibit 2: Footnotes to the Financial Statements

- Brenda's reported an operating loss for 2004 and did not pay taxes. The tax rate in 2003 was 32 percent and the rate is assumed to be 32 percent going forward.
- Brenda's incremental borrowing rate is 7 percent.
- Inventory is valued at lower of cost or market based on the last in first out (LIFO) convention. The LIFO reserve was \$240 for 2003 and \$310 for 2004.

- Brenda's currently has an 8 year, non-cancelable operating lease for machinery used to construct the heating elements in donut fryers. Annual lease expense reflected on the income statement is \$50 per year. The interest rate implicit in the lease is 9 percent.
- Brenda's has a defined-benefit pension plan. In recent years, stock market returns have been excellent. Due to the strong returns, plan assets exceed the projected benefit obligation (PBO) by \$40.
- Due to declining interest rates, the current market value of all outstanding long-term debt is \$2,500,000.
- 25 years ago, a previous tenant at one of the facilities that Brenda's now owns dumped hazardous waste on the site. The Environmental Protection Agency (EPA) has designated this site for cleanup and Brenda's faces a highly certain environmental cleanup bill of \$100.

In addition, Cannon Capital Management's chief economist has noted to Berentz that the consumer price index has been rising for several years, and it is expected to continue to rise over the foreseeable future at an annualized rate of 3.2 percent.

#### Part 1)

Which of the following adjustments should Berentz make to the balance sheet to reflect the proper value of inventory for 2004?

- A) Increase inventory by \$310, increase retained earnings by \$310, and deferred taxes will be unchanged.
- B) Decrease inventory by \$70, decrease retained earnings by \$22, and decrease deferred taxes by \$48.
- C) Increase inventory by \$70, increase retained earnings by \$48, and deferred taxes will be unchanged.
- D) No adjustment is necessary – the use of LIFO properly reflects the value of current inventory.

Your answer: A was incorrect. The correct answer was A) Increase inventory by \$310, increase retained earnings by \$310, and deferred taxes will be unchanged.

With rising prices (the chief economist indicates that inflation has been occurring and is expected to continue), LIFO will understate the current value of inventory and should be adjusted to FIFO. Under U.S. GAAP, all firms using LIFO must report a LIFO reserve, which is the difference between what their ending inventory would have been under FIFO and its value under LIFO. To adjust the financial statements, Berentz should add the current LIFO reserve to inventory (increase inventory by \$310). To make the balance sheet balance, retained earnings should be increased by the LIFO Reserve = 310. The deferred tax liability should be unchanged as there is no indication that Brenda's Bakery Supply will cease to be a going concern in the near future.

#### Part 2)

Which of the following adjustments should Berentz make to adjust for the status of Brenda's pension plan for 2004?

- A) Increase pension assets by \$40, decrease pension liabilities by 150, and increase equity by \$27.
- B) Increase pension assets by \$40, decrease pension liabilities by \$512, decrease deferred taxes by \$164, and increase equity by \$230.
- C) Increase pension assets by \$40, decrease pension liabilities by \$472, and increase equity by \$129.
- D) Decrease pension assets by \$150, decrease pension liabilities by \$512, and increase equity by \$362.

Your answer: A was incorrect. The correct answer was D) Decrease pension assets by \$150, decrease pension liabilities by \$512, and increase equity by \$362.

For 2004, Brenda's Bakery Supply reports prepaid pension plan costs (a pension asset) of \$190 and pension and other benefit liabilities of \$512 for a net pension liability of \$322. The main balance sheet adjustment should result in the actual economic status of the plan (funded status) being represented rather than the assets and liabilities reported for accounting purposes. Because the plan is over-funded, the pension liability should be eliminated and a net pension asset of \$40 should be reported. Therefore, we will decrease pension assets by  $40 - 190 = -150$ . The net adjustments to the liability and equity side of the balance sheet will total  $(512 - 150) = 362$  and equity should be increased by this amount. Remember that for balance sheet adjustments related to pension expense, tax effects should be ignored.

## Part 3)

Which of the following adjustments should Berenz make to account for the market value of long-term debt?

- A) Decrease long-term debt by \$120 and increase equity by \$120.
- B) Increase long-term debt by \$120 and decrease equity by \$120.
- C) Decrease long-term debt by \$120 and decrease assets by \$120.
- D) Decrease long-term debt by \$190 and increase equity by \$190.

Your answer: A was incorrect. The correct answer was D) Decrease long-term debt by \$190 and increase equity by \$190.

Brenda's reports that the current market value of its outstanding long-term debt is \$2.5 million. Long-term debt and the current portion of long-term debt are reported on the balance sheet at \$2.380 million and \$0.310 million respectively, for a total of \$2,690,000. (Don't forget to include the current portion of long-term debt in the total!) Therefore, we need to adjust long-term debt downward and equity upward by  $\$2,690 - \$2,500 = \$190$ .

## Part 4)

Which of the following adjustments should Berenz make to account for the operating lease?

- A) Add \$277 to net fixed assets and add \$277 to equity.
- B) Add \$277 to net fixed assets and add \$277 long-term debt.
- C) Add \$299 to net fixed assets and add \$299 to equity.
- D) Add \$299 to net fixed assets and add \$299 to long-term debt.

Your answer: A was incorrect. The correct answer was D) Add \$299 to net fixed assets and add \$299 to long-term debt.

The existence of operating leases is essentially off-balance sheet financing. To adjust the balance sheet for operating leases, the present value of the lease payments is added to both assets and liabilities. The interest rate used in the present value computation is the lower of the firm's financing rate or the interest rate that is implicit in the lease. In this case, Brenda's financing rate is 7%, while the rate implicit in the lease is 9%, so we use 7% in our computation. Using our financial calculator, the present value of the lease payments is:  $N = 8$ ;  $PMT = 50$ ;  $I/Y = 7$ ;  $FV = 0$ ;  $CPT PV = \$298.56$ . Therefore, we will increase net fixed assets by \$299 and also increase long term debt by \$299.

## Part 5)

Which of the following statements regarding adjustments that Berenz will make to Brenda's Bakery Supply financial statement is **CORRECT**?

- A) Adjusting for the firm's operating lease will serve to increase future cash flow from financing.
- B) Brenda's use of LIFO inventory accounting is an indicator of low earnings quality.
- C) Adjusting for the firm's potential environmental clean up obligation will increase the financial leverage multiplier.
- D) Adjusting for the market value of the firm's long-term debt will increase return on assets.

Your answer: A was incorrect. The correct answer was C) Adjusting for the firm's potential environmental clean up obligation will increase the financial leverage multiplier.

To account for the obligation of the environmental clean-up, Brenda's would increase liabilities by \$100 and decrease equity by \$100. The financial leverage multiplier, which is calculated as assets/equity would increase as equity would be lower while assets would remain unchanged. Note that the other answers are incorrect. Capitalizing the operating lease will serve to increase future cash from operations and decrease cash flow from financing as part of the lease expense will be considered repayment of debt. Because prices are rising, the use of LIFO inventory accounting is considered conservative and indicates high earnings quality. The adjustment for the market value of long-term debt only impacts debt and equity; therefore return on assets will be unaffected.

## Part 6)

Regarding their conversation about comprehensive income:

- A) Douglas' statement is correct; Berenz's statement is incorrect.

- B) Douglas' statement is incorrect; Berenz's statement is correct.
- C) Douglas' statement is correct; Berenz's statement is correct.
- D) Douglas' statement is incorrect; Berenz's statement is incorrect.

Your answer: A was incorrect. The correct answer was D) Douglas' statement is incorrect; Berenz's statement is incorrect.

Comprehensive income (CI) is an income figure that allows for all changes in equity. CI aggregates all valuation changes to assets and liabilities in a component of the equity account called comprehensive income (loss). One of the criticisms of comprehensive income is that it is inherently volatile because of its dependence on valuation changes and is not a reliable measure of a firm's earning power. Douglas' statement is therefore incorrect – it appears Douglas is confused with another term, normalized earnings, which adjusts income for nonrecurring items in an effort to get a better idea of the firm's earning power. Berenz's statement is also incorrect. While comprehensive income under U.S. GAAP does not include an adjustment for a pension fund's funding status, GAAP does dictate that a direct to equity adjustment be made for minimum pension liabilities determined under SFAS 87.

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