Practice Problems

The following information relates to Questions 1–6[1]

John Martinson, CFA, is an equity analyst with a large pension fund. His supervisor, Linda Packard, asks him to write a report on Karp Inc. Karp prepares its financial statements in accordance with US GAAP. Packard is particularly interested in the effects of the company's use of the LIFO method to account for its inventory. For this purpose, Martinson collects the financial data presented in Exhibits 1 and 2.

Exhibit 1. Balance Sheet Information (US$ Millions)

As of 31 December	2009	2008
Cash and cash equivalents	172	157
Accounts receivable	626	458
Inventories	620	539
Other current assets	125	65
Total current assets	1,543	1,219
Property and equipment, net	3,035	2,972
Total assets	4,578	4,191
Total current liabilities	1,495	1,395
Long-term debt	644	604
Total liabilities	2,139	1,999
Common stock and paid in capital	1,652	1,652
Retained earnings	787	540
Total shareholders' equity	2,439	2,192
Total liabilities and shareholders' equity	4,578	4,191

Exhibit 2. Income Statement Information (US$ Millions)

For the Year Ended 31 December	2009	2008
Sales	4,346	4,161

For the Year Ended 31 December	2009	2008
Cost of goods sold	2,211	2,147
Depreciation and amortisation expense	139	119
Selling, general, and administrative expense	1,656	1,637
Interest expense	31	18
Income tax expense	62	48
Net income	247	192

Martinson finds the following information in the notes to the financial statements:

- The LIFO reserves as of 31 December 2009 and 2008 are $155 million and $117 million respectively, and
- The effective income tax rate applicable to Karp for 2009 and earlier periods is 20 percent.

1. If Karp had used FIFO instead of LIFO, the amount of inventory reported as of 31 December 2009 would have been *closest* to:

A. $465 million.

B. $658 million.

C. $775 million.

2. If Karp had used FIFO instead of LIFO, the amount of cost of goods sold reported by Karp for the year ended 31 December 2009 would have been *closest* to:

A. $2,056 million.

B. $2,173 million.

C. $2,249 million.

3. If Karp had used FIFO instead of LIFO, its reported net income for the year ended 31 December 2009 would have been higher by an amount *closest to*:

A. $30 million.

B. $38 million.

C. $155 million.

4. If Karp had used FIFO instead of LIFO, Karp's retained earnings as of 31 December 2009 would have been higher by an amount *closest to*:

A. $117 million.

B. $124 million.

C. $155 million.

5. If Karp had used FIFO instead of LIFO, which of the following ratios computed as of 31 December 2009 would *most likely* have been lower?

A. Cash ratio.

B. Current ratio.

C. Gross profit margin.

6. If Karp had used FIFO instead of LIFO, its debt to equity ratio computed as of 31 December 2009 would have:

A. increased.

B. decreased.

C. remained unchanged.

The following information relates to Questions 7–12[2]

Robert Groff, an equity analyst, is preparing a report on Crux Corp. As part of his report, Groff makes a comparative financial analysis between Crux and its two main competitors, Rolby Corp. and Mikko Inc. Crux and Mikko report under US GAAP and Rolby reports under IFRS.

Groff gathers information on Crux, Rolby, and Mikko. The relevant financial information he compiles is in Exhibit 1. Some information on the industry is in Exhibit 2.

Exhibit 1. Selected Financial Information (US$ Millions)

	Crux	Rolby	Mikko
Inventory valuation method	LIFO	FIFO	LIFO
From the Balance Sheets			
As of 31 December 2009			
Inventory, gross	480	620	510
Valuation allowance	20	25	14
Inventory, net	460	595	496
Total debt	1,122	850	732
Total shareholders' equity	2,543	2,403	2,091
As of 31 December 2008			
Inventory, gross	465	602	401

*This does not match the change in the inventory valuation allowance because the valuation allowance is reduced to reflect the valuation allowance attached to items sold and increased for additional necessary write-downs.

Valuation allowance	23	15	12
Inventory, net	442	587	389
From the Income Statements			
Year Ended 31 December 2009			
Revenues	4,609	5,442	3,503
Cost of goods sold[a]	3,120	3,782	2,550
Net income	229	327	205
[a]Charges included in cost of goods sold for inventory write-downs*	13	15	15

*This does not match the change in the inventory valuation allowance because the valuation allowance is reduced to reflect the valuation allowance attached to items sold and increased for additional necessary write-downs.

LIFO Reserve			
As of 31 December 2009	55	0	77
As of 31 December 2008	72	0	50
As of 31 December 2007	96	0	43
Tax Rate			
Effective tax rate	30%	30%	30%

Exhibit 2. Industry Information

	2009	2008	2007
Raw materials price index	112	105	100
Finished goods price index	114	106	100

To compare the financial performance of the three companies, Groff decides to convert LIFO figures into FIFO figures, and adjust figures to assume no valuation allowance is recognized by any company.

After reading Groff's draft report, his supervisor, Rachel Borghi, asks him the following questions:

Question 1 Which company's gross profit margin would best reflect current costs of the industry?

Question 2

Would Rolby's valuation method show a higher gross profit margin than Crux's under an inflationary, a deflationary, or a stable price scenario?

Question 3 Which group of ratios usually appears more favorable with an inventory write-down?

7. Crux's inventory turnover ratio computed as of 31 December 2009, after the adjustments suggested by Groff, is *closest* to:

   A. 5.67.

   B. 5.83.

   C. 6.13.

8. Rolby's net profit margin for the year ended 31 December 2009, after the adjustments suggested by Groff, is *closest* to:

   A. 6.01%.

   B. 6.20%.

   C. 6.28%.

9. Compared with its unadjusted debt-to-equity ratio, Mikko's debt-to-equity ratio as of 31 December 2009, after the adjustments suggested by Groff, is:

   A. lower.

   B. higher.

   C. the same.

10. The *best* answer to Borghi's Question 1 is:

   A. Crux's.

   B. Rolby's.

   C. Mikko's.

11. The *best* answer to Borghi's Question 2 is:

   A. Stable.

   B. Inflationary.

   C. Deflationary.

12. The *best* answer to Borghi's Question 3 is:

   A. Activity ratios.

   B. Solvency ratios.

C. Profitability ratios.

The following information relates to Questions 13–20[3]

ZP Corporation is a (hypothetical) multinational corporation headquartered in Japan that trades on numerous stock exchanges. ZP prepares its consolidated financial statements in accordance with US GAAP. Excerpts from ZP's 2009 annual report are shown in Exhibits 1–3.

Exhibit 1. Consolidated Balance Sheets (¥ Millions)

31 December	2008	2009
Current Assets		
Cash and cash equivalents	¥542,849	¥814,760
⋮	⋮	⋮
Inventories	608,572	486,465
⋮	⋮	⋮
Total current assets	4,028,742	3,766,309
⋮	⋮	⋮
Total assets	**¥10,819,440**	**¥9,687,346**
⋮	⋮	⋮
Total current liabilities	¥3,980,247	¥3,529,765
⋮	⋮	⋮
Total long-term liabilities	2,663,795	2,624,002
Minority interest in consolidated subsidiaries	218,889	179,843
Total shareholders' equity	3,956,509	3,353,736
Total liabilities and shareholders' equity	**¥10,819,440**	**¥9,687,346**

Exhibit 2. Consolidated Statements of Income (¥ Millions)

For the years ended 31 December	2007	2008	2009
Net revenues			
Sales of products	¥7,556,699	¥8,273,503	¥6,391,240
Financing operations	425,998	489,577	451,950
	7,982,697	8,763,080	6,843,190
Cost and expenses			
Cost of products sold	6,118,742	6,817,446	5,822,805
Cost of financing operations	290,713	356,005	329,128

For the years ended 31 December	2007	2008	2009
Selling, general and administrative	827,005	832,837	844,927
⋮	⋮	⋮	⋮
Operating income (loss)	746,237	756,792	–153,670
⋮	⋮	⋮	⋮
Net income	¥548,011	¥572,626	–¥145,646

Exhibit 3. Selected Disclosures in the 2009 Annual Report

Management's Discussion and Analysis of Financial Condition and Results of Operations

Cost reduction efforts were offset by increased prices of raw materials, other production materials and parts … Inventories decreased during fiscal 2009 by ¥122.1 billion, or 20.1%, to ¥486.5 billion. This reflects the impacts of decreased sales volumes and fluctuations in foreign currency translation rates.

Management & Corporate Information

Risk Factors

<u>Industry and Business Risks</u>

The worldwide market for our products is highly competitive. ZP faces intense competition from other manufacturers in the respective markets in which it operates. Competition has intensified due to the worldwide deterioration in economic conditions. In addition, competition is likely to further intensify because of continuing globalization, possibly resulting in industry reorganization. Factors affecting competition include product quality and features, the amount of time required for innovation and development, pricing, reliability, safety, economy in use, customer service and financing terms. Increased competition may lead to lower unit sales and excess production capacity and excess inventory. This may result in a further downward price pressure.

ZP's ability to adequately respond to the recent rapid changes in the industry and to maintain its competitiveness will be fundamental to its future success in maintaining and expanding its market share in existing and new markets.

Notes to Consolidated Financial Statements

2. Summary of significant accounting policies:

Inventories. Inventories are valued at cost, not in excess of market. Cost is determined on the "average-cost" basis, except for the cost of finished products carried by certain subsidiary companies which is determined "last-in, first-out" ("LIFO") basis. Inventories valued on the LIFO basis totaled ¥94,578 million and ¥50,037 million at December 31, 2008 and 2009, respectively. Had the "first-in, first-out" basis been used for those companies using the LIFO basis, inventories would have been ¥10,120 million and ¥19,660 million higher than reported at December 31, 2008 and 2009, respectively.

9. Inventories:

Inventories consist of the following:

31 December (¥ Millions)	2008	2009
Finished goods	¥ 403,856	¥ 291,977
Raw materials	99,869	85,966
Work in process	79,979	83,890
Supplies and other	24,868	24,632
	¥ 608,572	**¥ 486,465**

13. The MD&A indicated that the prices of raw material, other production materials, and parts increased. Based on the inventory valuation methods described in Note 2, which inventory classification would *least accurately* reflect current prices?

A. Raw materials.

B. Finished goods.

C. Work in process.

14. The 2008 inventory value as reported on the 2009 Annual Report if the company had used the FIFO inventory valuation method instead of the LIFO inventory valuation method for a portion of its inventory would be *closest* to:

A. ¥104,698 million.

B. ¥506,125 million.

C. ¥618,692 million.

15. What is the *least likely* reason why ZP may need to change its accounting policies regarding inventory at some point after 2009?

A. The US SEC is likely to require companies to use the same inventory valuation method for all inventories.

B. The US SEC is likely to prohibit the use of one of the methods ZP currently uses for inventory valuation.

C. One of the inventory valuation methods used for US tax purposes may be repealed as an acceptable method.

16. If ZP had prepared its financial statement in accordance with IFRS, the inventory turnover ratio (using average inventory) for 2009 would be:

A. lower.

B. higher.

C. the same.

17. Inventory levels decreased from 2008 to 2009 for all of the following reasons *except*:

A. LIFO liquidation.

B. decreased sales volume.

C. fluctuations in foreign currency translation rates.

18. Which observation is *most likely* a result of looking only at the information reported in Note 9?

A. Increased competition has led to lower unit sales.

B. There have been significant price increases in supplies.

C. Management expects a further downturn in sales during 2010.

19. Note 2 indicates that, “Inventories valued on the LIFO basis totaled ¥94,578 million and ¥50,037 million at December 31, 2008 and 2009, respectively.” Based on this, the LIFO reserve should *most likely*:

A. increase.

B. decrease.

C. remain the same.

20. The Industry and Business Risk excerpt states that, “Increased competition may lead to lower unit sales and excess production capacity and excess inventory. This may result in a further downward price pressure.” The downward price pressure could lead to inventory that is valued above current market prices or net realisable value. Any write-downs of inventory are *least likely* to have a significant effect on the inventory valued using:

A. weighted average cost.

B. first-in, first-out (FIFO).

C. last-in, first-out (LIFO).

Practice Problems

The following information relates to Questions 1–6[1]

Melanie Hart, CFA, is a transportation analyst. Hart has been asked to write a research report on Altai Mountain Rail Company (AMRC). Like other companies in the railroad industry, AMRC's operations are capital intensive, with significant investments in such long-lived tangible assets as property, plant, and equipment. In November of 2008, AMRC's board of directors hired a new team to manage the company. In reviewing the company's 2009 annual report, Hart is concerned about some of the accounting choices that the new management has made. These choices differ from those of the previous management and from common industry practice. Hart has highlighted the following statements from the company's annual report:

Statement 1	"In 2009, AMRC spent significant amounts on track replacement and similar improvements. AMRC expensed rather than capitalised a significant proportion of these expenditures."
Statement 2	"AMRC uses the straight-line method of depreciation for both financial and tax reporting purposes to account for plant and equipment."
Statement 3	"In 2009, AMRC recognized an impairment loss of €50 million on a fleet of locomotives. The impairment loss was reported as 'other income' in the income statement and reduced the carrying amount of the assets on the balance sheet."
Statement 4	"AMRC acquires the use of many of its assets, including a large portion of its fleet of rail cars, under long-term lease contracts. In 2009, AMRC acquired the use of equipment with a fair value of €200 million under 20-year lease contracts. These leases were classified as operating leases. Prior to 2009, most of these lease contracts were classified as finance leases."

Exhibits 1 and 2 contain AMRC's 2009 consolidated income statement and balance sheet. AMRC prepares its financial statements in accordance with International Financial Reporting Standards.

Exhibit 1. Consolidated Statement of Income

For the Years Ended 31 December	2009 € Millions	2009 % Revenues	2008 € Millions	2008 % Revenues
Operating revenues	2,600	100.0	2,300	100.0
Operating expenses				
Depreciation	(200)	(7.7)	(190)	(8.3)
Lease payments	(210)	(8.1)	(195)	(8.5)
Other operating expense	(1,590)	(61.1)	(1,515)	(65.9)
Total operating expenses	(2,000)	(76.9)	(1,900)	(82.6)
Operating income	600	23.1	400	17.4
Other income	(50)	(1.9)	—	0.0
Interest expense	(73)	(2.8)	(69)	(3.0)
Income before taxes	477	18.4	331	14.4
Income taxes	(189)	(7.3)	(125)	(5.4)
Net income	288	11.1	206	9.0

Exhibit 2. Consolidated Balance Sheet

As of 31 December	2009		2008	
Assets	€ Millions	% Assets	€ Millions	% Assets
Currentassets	500	9.4	450	8.5
Property & equipment:				
Land	700	13.1	700	13.2
Plant & equipment	6,000	112.1	5,800	109.4
Total property & equipment	6,700	125.2	6,500	122.6
Accumulated depreciation	(1,850)	(34.6)	(1,650)	(31.1)
Net property & equipment	4,850	90.6	4,850	91.5
Total assets	5,350	100.0	5,300	100.0
Liabilities and Shareholders' Equity				
Current liabilities	480	9.0	430	8.1
Long-term debt	1,030	19.3	1,080	20.4
Other long-term provisions and liabilities	1,240	23.1	1,440	27.2
Total liabilities	2,750	51.4	2,950	55.7

As of 31 December	2009		2008	
Assets	€ Millions	% Assets	€ Millions	% Assets
Shareholders' equity				
Common stock and paid-in-surplus	760	14.2	760	14.3
Retained earnings	1,888	35.5	1,600	30.2
Other comprehensive losses	(48)	(0.9)	(10)	(0.2)
Total shareholders' equity	2,600	48.6	2,350	44.3
Total liabilities & shareholders' equity	5,350	100.0	5,300	100.0

1. With respect to Statement 1, which of the following is the *most likely* effect of management's decision to expense rather than capitalise these expenditures?

   A. 2009 net profit margin is higher than if the expenditures had been capitalised.

   B. 2009 total asset turnover is lower than if the expenditures had been capitalised.

   C. Future profit growth will be higher than if the expenditures had been capitalised.

2. With respect to Statement 2, what would be the *most likely* effect in 2010 if AMRC were to switch to an accelerated depreciation method for both financial and tax reporting?

   A. Net profit margin would increase.

   B. Total asset turnover would decrease.

   C. Cash flow from operating activities would increase.

3. With respect to Statement 3, what is the *most likely* effect of the impairment loss?

   A. Net income in years prior to 2009 was likely understated.

   B. Net profit margins in years after 2009 will likely exceed the 2009 net profit margin.

   C. Cash flow from operating activities in 2009 was likely lower due to the impairment loss.

4. Based on Exhibits 1 and 2, the *best estimate* of the average remaining useful life of the company's plant and equipment at the end of 2009 is:

   A. 20.75 years.

   B. 24.25 years.

   C. 30.00 years.

5. With respect to Statement 4, if AMRC had used its old classification method for its leases instead of its new classification method, its 2009 total asset turnover ratio would *most likely* be:

   A. lower.

   B. higher.

   C. the same.

6. With respect to Statement 4 and Exhibit 1, if AMRC had used its old classification method for its leases instead of its new classification method, the *most likely* effect on its 2009 ratios would be a:

   A. higher net profit margin.

   B. higher fixed asset turnover.

   C. higher total liabilities-to-total assets ratio.

The following information relates to Questions 7–13[2]

Brian Jordan is interviewing for a junior equity analyst position at Orion Investment Advisors. As part of the interview process, Mary Benn, Orion's Director of Research, provides Jordan with information about two hypothetical companies, Alpha and Beta, and asks him to comment on the information on their financial statements and ratios. Both companies prepare their financial statements in accordance with International Financial Reporting Standards (IFRS) and are identical in all respects except for their accounting choices.

Jordan is told that at the beginning of the current fiscal year, both companies purchased a major new computer system and began building new manufacturing plants for their own use. Alpha capitalised and Beta expensed the cost of the computer system; Alpha capitalised and Beta expensed the interest costs associated with the construction of the manufacturing plants. In mid-year, both companies leased new office headquarters. Alpha classified the lease as an operating lease, and Beta classified it as a finance lease.

Benn asks Jordan, "What was the impact of these decisions on each company's current fiscal year financial statements and ratios?"

Jordan responds, "Alpha's decision to capitalise the cost of its new computer system instead of expensing it results in lower net income, lower total assets, and higher cash flow from operating activities in the current fiscal year. Alpha's decision to capitalise its interest costs instead of expensing them results in a lower fixed asset turnover ratio and a higher interest coverage ratio. Alpha's decision to classify its lease as an operating lease instead of a finance lease results in higher net income, higher cash flow from operating activities, and stronger solvency and activity ratios compared to Beta."

Jordan is told that Alpha uses the straight-line depreciation method and Beta uses an accelerated depreciation method; both companies estimate the same useful lives for long-lived assets. Many companies in their industry use the units-of-production method.

Benn asks Jordan, "What are the financial statement implications of each depreciation method, and how do you determine a company's need to reinvest in its productive capacity?"

Jordan replies, "All other things being equal, the straight-line depreciation method results in the least variability of net profit margin over time, while an accelerated depreciation method results in a declining trend in net profit margin over time. The units-of-production can result in a net profit margin trend that is quite variable. I use a three-step approach to estimate a company's need to reinvest in its productive capacity. First, I estimate the average age of the assets by dividing net property, plant, and equipment by annual depreciation expense. Second, I estimate the average remaining useful life of the assets by dividing accumulated depreciation by depreciation expense. Third, I add the estimates of the average remaining useful life and the average age of the assets in order to determine the total useful life."

Jordan is told that at the end of the current fiscal year, Alpha revalued a manufacturing plant; this increased its reported carrying amount by 15 percent. There was no previous downward revaluation of the plant. Beta recorded an impairment loss on a manufacturing plant; this reduced its carrying by 10 percent.

Benn asks Jordan "What was the impact of these decisions on each company's current fiscal year financial ratios?"

Jordan responds, "Beta's impairment loss increases its debt to total assets and fixed asset turnover ratios, and lowers its cash flow from operating activities. Alpha's revaluation increases its debt to capital and return on assets ratios, and reduces its return on equity."

At the end of the interview, Benn thanks Jordan for his time and states that a hiring decision will be made shortly.

7. Jordan's response about the financial statement impact of Alpha's decision to capitalise the cost of its new computer system is most likely *correct* with respect to:

A. lower net income.

B. lower total assets.

C. higher cash flow from operating activities.

8. Jordan's response about the ratio impact of Alpha's decision to capitalise interest costs is most likely *correct* with respect to the:

A. interest coverage ratio.

B. fixed asset turnover ratio.

C. interest coverage and fixed asset turnover ratios.

9. Jordan's response about the impact of Alpha's decision to classify its lease as an operating lease instead of finance lease is most likely *incorrect* with respect to:

A. net income.

B. solvency and activity ratios.

C. cash flow from operating activities.

10. Jordan's response about the impact of the different depreciation methods on net profit margin is most likely *incorrect* with respect to:

A. accelerated depreciation.

B. straight-line depreciation.

C. units-of-production depreciation.

11. Jordan's response about his approach to estimating a company's need to reinvest in its productive capacity is most likely *correct* regarding:

A. estimating the average age of the asset base.

B. estimating the total useful life of the asset base.

C. estimating the average remaining useful life of the asset base.

12. Jordan's response about the effect of Beta's impairment loss is most likely *incorrect* with respect to the impact on its:

A. debt to total assets.

B. fixed asset turnover.

C. cash flow from operating activities.

13. Jordan's response about the effect of Alpha's revaluation is most likely *correct* with respect to the impact on its:

A. return on equity.

B. return on assets.

C. debt to capital ratio.

Practice Problems

The following information relates to Questions 1–6

Cinnamon, Inc. is a diversified manufacturing company headquartered in the United Kingdom. It complies with IFRS. In 2009, Cinnamon held a 19 percent passive equity ownership interest in Cambridge Processing that was classified as available-for-sale. During the year, the value of this investment rose by £2 million. In December 2009, Cinnamon announced that it would be increasing its ownership interest to 50 percent effective 1 January 2010 through a cash purchase. Cinnamon and Cambridge have no intercompany transactions.

Peter Lubbock, an analyst following both Cinnamon and Cambridge, is curious how the increased stake will affect Cinnamon's consolidated financial statements. He asks Cinnamon's CFO how the company will account for the investment, and is told that the decision has not yet been made. Lubbock decides to use his existing forecasts for both companies' financial statements to compare the outcomes of alternative accounting treatments.

Lubbock assembles abbreviated financial statement data for Cinnamon (Exhibit 1) and Cambridge (Exhibit 2) for this purpose.

Exhibit 1. Selected Financial Statement Information for Cinnamon, Inc. (£ Millions)

Year ending 31 December	2009	2010*
Revenue	1,400	1,575
Operating income	126	142
Net income	62	69
31 December	**2009**	**2010***
Total assets	1,170	1,317
Shareholders' equity	616	685

*Estimates made prior to announcement of increased stake in Cambridge.

Exhibit 2. Selected Financial Statement Information for Cambridge Processing (£ Millions)

Year ending 31 December	2009	2010*
Revenue	1,000	1,100
Operating income	80	88
Net income	40	44
Dividends paid	20	22
31 December	**2009**	**2010***
Total assets	800	836
Shareholders' equity	440	462

*Estimates made prior to announcement of increased stake by Cinnamon.

1. In 2009, Cinnamon's earnings before taxes includes a contribution (in £ millions) from its investment in Cambridge Processing that is *closest* to:

   A. £3.8.

   B. £5.8.

   C. £7.6.

2. In 2010, if Cinnamon is deemed to have control over Cambridge, it will *most likely* account for its investment in Cambridge using:

   A. the equity method.

   B. the acquisition method.

   C. proportionate consolidation.

3. At 31 December 2010, Cinnamon's shareholders' equity on its balance sheet would *most likely* be:

   A. highest if Cinnamon is deemed to have control of Cambridge.

   B. independent of the accounting method used for the investment in Cambridge.

   C. highest if Cinnamon is deemed to have significant influence over Cambridge.

4. In 2010, Cinnamon's net profit margin would be *highest* if:

   A. it is deemed to have control of Cambridge.

   B. it had not increased its stake in Cambridge.

   C. it is deemed to have significant influence over Cambridge.

5. At 31 December 2010, assuming control and recognition of goodwill, Cinnamon's reported debt to equity ratio will *most likely* be highest if it accounts for its investment in Cambridge using the:

A. equity method.

B. full goodwill method.

C. partial goodwill method.

6. Compared to Cinnamon's operating margin in 2009, if it is deemed to have control of Cambridge, its operating margin in 2010 will *most likely* be:

A. lower.

B. higher.

C. the same.

The following information relates to Questions 7–12

Zimt, AG is a consumer products manufacturer headquartered in Austria. It complies with IFRS. In 2009, Zimt held a 10 percent passive stake in Oxbow Limited that was classified as held for trading securities. During the year, the value of this stake declined by €3 million. In December 2009, Zimt announced that it would be increasing its ownership to 50 percent effective 1 January 2010.

Franz Gelblum, an analyst following both Zimt and Oxbow, is curious how the increased stake will affect Zimt's consolidated financial statements. Because Gelblum is uncertain how the company will account for the increased stake, he uses his existing forecasts for both companies' financial statements to compare various alternative outcomes.

Gelblum gathers abbreviated financial statement data for Zimt (Exhibit 1) and Oxbow (Exhibit 2) for this purpose.

Exhibit 1. Selected Financial Statement Estimates for Zimt AG (€ Millions)

Year ending 31 December	2009	2010*
Revenue	1,500	1,700
Operating income	135	153
Net income	66	75
31 December	**2009**	**2010***
Total assets	1,254	1,421
Shareholders' equity	660	735

*Estimates made prior to announcement of increased stake in Oxbow.

Exhibit 2. Selected Financial Statement Estimates for Oxbow Limited (€ Millions)

Year ending 31 December	2009	2010*
Revenue	1,200	1,350
Operating income	120	135
Net income	60	68
Dividends paid	20	22
31 December	**2009**	**2010***
Total assets	1,200	1,283
Shareholders' equity	660	706

*Estimates made prior to announcement of increased stake by Zimt.

7. In 2009, Zimt's earnings before taxes includes a contribution (in € millions) from its investment in Oxbow Limited *closest* to:

A. (€0.6) million.

B. (€1.0) million.

C. €2.0 million.

8. At 31 December 2010, Zimt's total assets balance would *most likely* be:

A. highest if Zimt is deemed to have control of Oxbow.

B. highest if Zimt is deemed to have significant influence over Oxbow.

C. unaffected by the accounting method used for the investment in Oxbow.

9. Based on Gelblum's estimates, if Zimt is deemed to have significant influence over Oxbow, its 2010 net income (in € millions) would be *closest* to:

A. €75.

B. €109.

C. €143.

10. Based on Gelblum's estimates, if Zimt is deemed to have joint control of Oxbow, and Zimt uses the proportionate consolidation method, its 31 December 2010 total liabilities (in € millions) will *most likely* be *closest* to:

A. €686.

B. €975.

C. €1,263.

11. Based on Gelblum's estimates, if Zimt is deemed to have control over Oxbow, its 2010 consolidated sales (in € millions) will be *closest* to:

   A. €1,700.

   B. €2,375.

   C. €3,050.

12. Based on Gelblum's estimates, Zimt's net income in 2010 will *most likely* be:

   A. highest if Zimt is deemed to have control of Oxbow.

   B. highest if Zimt is deemed to have significant influence over Oxbow.

   C. independent of the accounting method used for the investment in Oxbow.

The following information relates to Questions 13–18

Burton Howard, CFA, is an equity analyst with Maplewood Securities. Howard is preparing a research report on Confabulated Materials, SA, a publicly traded company based in France that complies with IFRS. As part of his analysis, Howard has assembled data gathered from the financial statement footnotes of Confabulated's 2009 Annual Report and from discussions with company management. Howard is concerned about the effect of this information on Confabulated's future earnings.

Information about Confabulated's investment portfolio for the years ended 31 December 2008 and 2009 is presented in Exhibit 1. As part of his research, Howard is considering the possible effect on reported income of Confabulated's accounting classification for fixed income investments.

Exhibit 1. Confabulated's Investment Portfolio (€ Thousands)

Characteristic	Bugle AG	Cathay Corp	Dumas SA
Classification	Available-for-sale	Held-to-maturity	Held-to-maturity
Cost*	€25,000	€40,000	€50,000
Market value, 31 December 2008	29,000	38,000	54,000
Market value, 31 December 2009	28,000	37,000	55,000

*All securities were acquired at par value.

In addition, Confabulated's annual report discusses a transaction under which receivables were securitized through a special purpose entity (SPE) for Confabulated's benefit.

13. The balance sheet carrying value of Confabulated's investment portfolio (in € thousands) at 31 December 2009 is *closest* to:

A. 112,000.

B. 115,000.

C. 118,000.

14. The balance sheet carrying value of Confabulated's investment portfolio at 31 December 2009 would have been higher if which of the securities had been reclassified as a held for trading security?

A. Bugle.

B. Cathay.

C. Dumas.

15. Compared to Confabulated's reported interest income in 2009, if Dumas had been classified as available-for-sale, the interest income would have been:

A. lower.

B. the same.

C. higher.

16. Compared to Confabulated's reported earnings before taxes in 2009, if Bugle had been classified as a held for trading security, the earnings before taxes (in € thousands) would have been:

A. the same.

B. €1,000 lower.

C. €3,000 higher.

17. Confabulated's reported interest income would be lower if the cost was the same but the par value (in € thousands) of:

A. Bugle was €28,000.

B. Cathay was €37,000.

C. Dumas was €55,000.

18. Confabulated's special purpose entity is *most likely* to be:

A. held off-balance sheet.

B. consolidated on Confabulated's financial statements.

C. consolidated on Confabulated's financial statements only if it is a "qualifying SPE."

The following information relates to Questions 19–24

BetterCare Hospitals, Inc. operates a chain of hospitals throughout the United States. The company has been expanding by acquiring local hospitals. Its largest acquisition, that of Statewide Medical, was made in 2001 under the pooling of interests method. BetterCare complies with US GAAP.

BetterCare is currently forming a 50/50 joint venture with Supreme Healthcare under which the companies will share control of several hospitals. BetterCare plans to use the equity method to account for the joint venture. Supreme Healthcare complies with IFRS and will use the proportionate consolidation method to account for the joint venture.

Erik Ohalin is an equity analyst who covers both companies. He has estimated the joint venture's financial information for 2010 in order to prepare his estimates of each company's earnings and financial performance. This information is presented in Exhibit 1.

Exhibit 1. Selected Financial Statement Forecasts for Joint Venture ($ Millions)

Year ending 31 December	2010
Revenue	1,430
Operating income	128
Net income	62
31 December	**2010**
Total assets	1,500
Shareholders' equity	740

Supreme Healthcare recently announced it had formed a special purpose entity through which it plans to sell up to $100 million of its accounts receivable. Supreme Healthcare has no voting interest in the SPE, but it is expected to absorb any losses that it may incur. Ohalin wants to estimate the impact this will have on Supreme Healthcare's consolidated financial statements.

19. Compared to accounting principles currently in use, the pooling method BetterCare used for its Statewide Medical acquisition has *most likely* caused its reported:

A. revenue to be higher.

B. total equity to be lower.

C. total assets to be higher.

20. Based on Ohalin's estimates, the amount of joint venture revenue (in $ millions) included on BetterCare's consolidated 2010 financial statements should be *closest* to:

   A. $0.

   B. $715.

   C. $1,430.

21. Based on Ohalin's estimates, the amount of joint venture net income included on the consolidated financial statements of each venturer will *most likely* be:

   A. higher for BetterCare.

   B. higher for Supreme Healthcare.

   C. the same for both BetterCare and Supreme Healthcare.

22. Based on Ohalin's estimates, the amount of the joint venture's 31 December 2010 total assets (in $ millions) that will be included on Supreme Healthcare's consolidated financial statements will be *closest* to:

   A. $0.

   B. $750.

   C. $1,500.

23. Based on Ohalin's estimates, the amount of joint venture shareholders' equity at 31 December 2010 included on the consolidated financial statements of each venturer will *most likely* be:

   A. higher for BetterCare.

   B. higher for Supreme Healthcare.

   C. the same for both BetterCare and Supreme Healthcare.

24. If Supreme Healthcare sells its receivables to the SPE, its consolidated financial results will *most likely* show:

   A. a higher revenue for 2010.

   B. the same cash balance at 31 December 2010.

   C. the same accounts receivable balance at 31 December 2010.

The following information relates to Questions 25–30

Percy Byron, CFA, is an equity analyst with a UK-based investment firm. One firm Byron follows is NinMount PLC, a UK-based company. On 31 December 2008, NinMount paid £320 million to purchase a 50 percent stake in Boswell Company. The excess of the purchase price over the fair value of Boswell's net assets was attributable to previously unrecorded licenses.

These licenses were estimated to have an economic life of six years. The fair value of Boswell's assets and liabilities other than licenses was equal to their recorded book values. NinMount and Boswell both use the pound sterling as their reporting currency and prepare their financial statements in accordance with IFRS.

Byron is concerned whether the investment should affect his "buy" rating on NinMount common stock. He knows NinMount could choose one of several accounting methods to report the results of its investment, but NinMount has not announced which method it will use. Byron forecasts that both companies' 2009 financial results (excluding any merger accounting adjustments) will be identical to those of 2008.

NinMount's and Boswell's condensed income statements for the year ended 31 December 2008, and condensed balance sheets at 31 December 2008, are presented in Exhibits 1 and 2, respectively.

Exhibit 1. NinMount PLC and Boswell Company Income Statements for the Year Ended 31 December 2008 (£ millions)

	NinMount	Boswell
Net sales	950	510
Cost of goods sold	(495)	(305)
Selling expenses	(50)	(15)
Administrative expenses	(136)	(49)
Depreciation & amortization expense	(102)	(92)
Interest expense	(42)	(32)
Income before taxes	125	17
Income tax expense	(50)	(7)
Net income	75	10

Exhibit 2. NinMount PLC and Boswell Company Balance Sheets at 31 December 2008 (£ millions)

	NinMount	Boswell
Cash	50	20
Receivables—net	70	45
Inventory	130	75
Total current assets	250	140
Property, plant, & equipment—net	1,570	930
Investment in Boswell	320	—
Total assets	2,140	1,070
Current liabilities	110	90

	NinMount	Boswell
Long-term debt	600	400
Total liabilities	710	490
Common stock	850	535
Retained earnings	580	45
Total equity	1,430	580
Total liabilities and equity	2,140	1,070

Note: Balance sheets reflect the purchase price paid by NinMount, but do not yet consider the impact of the accounting method choice.

25. NinMount's current ratio on 31 December 2008 *most likely* will be highest if the results of the acquisition are reported using:

A. the equity method.

B. consolidation with full goodwill.

C. consolidation with partial goodwill.

26. NinMount's long-term debt to equity ratio on 31 December 2008 *most likely* will be lowest if the results of the acquisition are reported using:

A. the equity method.

B. consolidation with full goodwill.

C. consolidation with partial goodwill.

27. Based on Byron's forecast, if NinMount deems it has acquired control of Boswell, NinMount's consolidated 2009 depreciation and amortization expense (in £ millions) will be *closest* to:

A. 102.

B. 148.

C. 204.

28. Based on Byron's forecast, NinMount's net profit margin for 2009 *most likely* will be highest if the results of the acquisition are reported using:

A. the equity method.

B. consolidation with full goodwill.

C. consolidation with partial goodwill.

29. Based on Byron's forecast, NinMount's 2009 return on beginning equity *most likely* will be the same under:

A. either of the consolidations, but different under the equity method.

B. the equity method, consolidation with full goodwill, and consolidation with partial goodwill.

C. none of the equity method, consolidation with full goodwill, or consolidation with partial goodwill.

30. Based on Byron's forecast, NinMount's 2009 total asset turnover ratio on beginning assets under the equity method is *most likely*:

A. lower than if the results are reported using consolidation.

B. the same as if the results are reported using consolidation.

C. higher than if the results are reported using consolidation.

Practice Problems

Developed by Elaine Henry, CFA (Coral Gables, USA), and Elizabeth A. Gordon (Philadelphia, USA).

The following information relates to Questions 1–7

Kensington plc, a hypothetical company based in the United Kingdom, offers its employees a defined benefit pension plan. Kensington complies with IFRS. The assumed discount rate that the company used in estimating the present value of its pension obligations was 5.48 percent. Information on Kensington's retirement plans is presented in Exhibit 1.

Exhibit 1. Kensington plc Defined Benefit Pension Plan

(in millions)	**2010**
Components of periodic benefit cost	
Service cost	£228
Net interest (income) expense	273
Remeasurements	18
Periodic pension cost	£483
Change in benefit obligation	
Benefit obligations at beginning of year	£28,416
Service cost	228
Interest cost	1,557
Benefits paid	–1,322
Actuarial gain or loss	0
Benefit obligations at end of year	£28,879
Change in plan assets	
Fair value of plan assets at beginning of year	£23,432
Actual return on plan assets	1,302
Employer contributions	693
Benefits paid	–1,322
Fair value of plan assets at end of year	£24,105
Funded status at beginning of year	–£4,984
Funded status at end of year	–£4,774

1. At year-end 2010, £28,879 million represents:

   A. the funded status of the plan.

   B. the defined benefit obligation.

   C. the fair value of the plan's assets.

2. For the year 2010, the net interest expense of £273 represents the interest cost on the:

   A. ending benefit obligation.

   B. beginning benefit obligation.

   C. beginning net pension obligation.

3. For the year 2010, the remeasurement component of Kensington's periodic pension cost represents:

   A. the change in the net pension obligation.

   B. actuarial gains and losses on the pension obligation.

   C. actual return on plan assets minus the amount of return on plan assets included in the net interest expense.

4. Which of the following is *closest* to the actual rate of return on beginning plan assets and the rate of return on beginning plan assets that is included in the interest income/expense calculation?

   A. The actual rate of return was 5.56 percent, and the rate included in interest income/expense was 5.48 percent.

   B. The actual rate of return was 1.17 percent, and the rate included in interest income/expense was 5.48 percent.

   C. Both the actual rate of return and the rate included in interest income/expense were 5.48 percent.

5. Which component of Kensington's periodic pension cost would be shown in OCI rather than P&L?

   A. Service cost

   B. Net interest (income) expense

   C. Remeasurements

6. The relationship between the periodic pension cost and the plan's funded status is *best* expressed in which of the following?

A. Periodic pension cost of –£483 = Ending funded status of –£4,774 – Employer contributions of £693 – Beginning funded status of –£4,984.

B. Periodic pension cost of £1,322 = Benefits paid of £1,322.

C. Periodic pension cost of £210 = Ending funded status of –£4,774 – Beginning funded status of –£4,984.

7. An adjustment to Kensington's statement of cash flows to reclassify the company's excess contribution for 2010 would *most likely* entail reclassifying £210 million (excluding income tax effects) as an outflow related to:

   A. investing activities rather than operating activities.

   B. financing activities rather than operating activities.

   C. operating activities rather than financing activities.

The following information relates to Questions 8–13

XYZ SA, a hypothetical company, offers its employees a defined benefit pension plan. Information on XYZ's retirement plans is presented in Exhibit 2. It also grants stock options to executives. Exhibit 3 contains information on the volatility assumptions used to value stock options.

Exhibit 2. XYZ SA Retirement Plan Information 2009

Employer contributions	1,000
Current service costs	200
Past service costs	120
Discount rate used to estimate plan liabilities	7.00%
Benefit obligation at beginning of year	42,000
Benefit obligation at end of year	41,720
Actuarial loss due to increase in plan obligation	460
Plan assets at beginning of year	39,000
Plan assets at end of year	38,700
Actual return on plan assets	2,700
Expected rate of return on plan assets	8.00%

Exhibit 3. XYZ SA Volatility Assumptions Used to Value Stock Option Grants

Grant Year	Weighted Average Expected Volatility

Grant Year	Weighted Average Expected Volatility
2009 valuation assumptions	
2005–2009	21.50%
2008 valuation assumptions	
2004–2008	23.00%

8. The retirement benefits paid during the year were *closest* to:

A. 280.

B. 3,000.

C. 4,000.

9. The total periodic pension cost is *closest* to:

A. 320.

B. 1,020.

C. 1,320.

10. The amount of periodic pension cost that would be reported in P&L under IFRS is *closest* to:

A. 20.

B. 530.

C. 1,020.

11. Assuming the company chooses not to immediately recognise the actuarial loss and assuming there is no amortisation of past service costs or actuarial gains and losses, the amount of periodic pension cost that would be reported in P&L under US GAAP is *closest* to:

A. 20.

B. 59.

C. 530.

12. Under IFRS, the amount of periodic pension cost that would be reported in OCI is *closest* to:

A. 20.

B. 490.

C. 1,020.

13. Compared to 2009 net income as reported, if XYZ had used the same expected volatility assumption for its 2009 option grants that it had used in 2008, its 2009 net income would have been:

A. lower.

B. higher.

C. the same.

The following information relates to Questions 14–19

Stereo Warehouse is a US retailer that offers employees a defined benefit pension plan and stock options as part of its compensation package. Stereo Warehouse prepares its financial statements in accordance with US GAAP.

Peter Friedland, CFA, is an equity analyst concerned with earnings quality. He is particularly interested in whether the discretionary assumptions the company is making regarding compensation plans are contributing to the recent earnings growth at Stereo Warehouse. He gathers information from the company's regulatory filings regarding the pension plan assumptions in Exhibit 4 and the assumptions related to option valuation in Exhibit 5.

Exhibit 4. Assumptions Used for Stereo Warehouse Defined Benefit Plan

	2009	2008	2007
Expected long-term rate of return on plan assets	6.06%	6.14%	6.79%
Discount rate	4.85	4.94	5.38
Estimated future salary increases	4.00	4.44	4.25
Inflation	3.00	2.72	2.45

Exhibit 5. Option Valuation Assumptions

	2009	2008	2007
Risk-free rate	4.6%	3.8%	2.4%
Expected life	5.0 yrs	4.5 yrs	5.0 yrs
Dividend yield	1.0%	0.0%	0.0%
Expected volatility	29%	31%	35%

14. Compared to the 2009 reported financial statements, if Stereo Warehouse had used the same expected long-term rate of return on plan assets assumption in 2009 as it used in 2007, its year-end 2009 pension obligation would *most likely* have been:

   A. lower.

   B. higher.

   C. the same.

15. Compared to the reported 2009 financial statements, if Stereo Warehouse had used the same discount rate as it used in 2007, it would have *most likely* reported lower:

   A. net income.

   B. total liabilities.

   C. cash flow from operating activities.

16. Compared to the assumptions Stereo Warehouse used to compute its periodic pension cost in 2008, earnings in 2009 were *most favorably* affected by the change in the:

   A. discount rate.

   B. estimated future salary increases.

   C. expected long-term rate of return on plan assets.

17. Compared to the pension assumptions Stereo Warehouse used in 2008, which of the following pairs of assumptions used in 2009 is *most likely* internally inconsistent?

   A. Estimated future salary increases, inflation

   B. Discount rate, estimated future salary increases

   C. Expected long-term rate of return on plan assets, discount rate

18. Compared to the reported 2009 financial statements, if Stereo Warehouse had used the 2007 expected volatility assumption to value its employee stock options, it would have *most likely* reported higher:

   A. net income.

   B. compensation expense.

   C. deferred compensation liability.

19. Compared to the assumptions Stereo Warehouse used to value stock options in 2008, earnings in 2009 were most favorably affected by the change in the:

   A. expected life.

   B. risk-free rate.

   C. dividend yield.

Practice Problems

The following information relates to Questions 1–6

Pedro Ruiz is an analyst for a credit rating agency. One of the companies he follows, Eurexim SA, is based in France and complies with International Financial Reporting Standards (IFRS). Ruiz has learned that Eurexim used EUR220 million of its own cash and borrowed an equal amount to open a subsidiary in Ukraine. The funds were converted into hryvnia (UAH) on 31 December 20X1 at an exchange rate of EUR1.00 = UAH6.70 and used to purchase UAH1,500 million in fixed assets and UAH300 of inventories.

Ruiz is concerned about the effect that the subsidiary's results might have on Eurexim's consolidated financial statements. He calls Eurexim's Chief Financial Officer, but learns little. Eurexim is not willing to share sales forecasts and has not even made a determination as to the subsidiary's functional currency.

Absent more useful information, Ruiz decides to explore various scenarios to determine the potential impact on Eurexim's consolidated financial statements. Ukraine is not currently in a hyperinflationary environment, but Ruiz is concerned that this situation could change. Ruiz also believes the euro will appreciate against the hryvnia for the foreseeable future.

1. If Ukraine's economy becomes highly inflationary, Eurexim will *most likely* translate inventory by:

A. restating for inflation and using the temporal method.

B. restating for inflation and using the current exchange rate.

C. using the temporal method with no restatement for inflation.

2. Given Ruiz's belief about the direction of exchange rates, Eurexim's gross profit margin would be *highest* if it accounts for the Ukraine subsidiary's inventory using:

A. FIFO and the temporal method.

B. FIFO and the current rate method.

C. weighted-average cost and the temporal method.

3. If the euro is chosen as the Ukraine subsidiary's functional currency, Eurexim will translate its fixed assets using the:

A. average rate for the reporting period.

B. rate in effect when the assets were purchased.

C. rate in effect at the end of the reporting period.

4. If the euro is chosen as the Ukraine subsidiary's functional currency, Eurexim will translate its accounts receivable using the:

   A. rate in effect at the transaction date.

   B. average rate for the reporting period.

   C. rate in effect at the end of the reporting period.

5. If the hryvnia is chosen as the Ukraine subsidiary's functional currency, Eurexim will translate its inventory using the:

   A. average rate for the reporting period.

   B. rate in effect at the end of the reporting period.

   C. rate in effect at the time the inventory was purchased.

6. Based on the information available and Ruiz's expectations regarding exchange rates, if the hryvnia is chosen as the Ukraine subsidiary's functional currency, Eurexim will *most likely* report:

   A. an addition to the cumulative translation adjustment.

   B. a translation gain or loss as a component of net income.

   C. a subtraction from the cumulative translation adjustment.

The following information relates to Questions 7–12

Consolidated Motors is a US-based corporation that sells mechanical engines and components used by electric utilities. Its Canadian subsidiary, Consol-Can, operates solely in Canada. It was created on 31 December 20X1, and Consolidated Motors determined at that time that it should use the US dollar as its functional currency.

Chief Financial Officer Monica Templeton was asked to explain to the board of directors how exchange rates affect the financial statements of both Consol-Can and the consolidated financial statements of Consolidated Motors. For the presentation, Templeton collects Consol-Can's balance sheets for the years ended 20X1 and 20X2 (Exhibit 1), as well as relevant exchange rate information (Exhibit 2).

Exhibit 1. Consol-Can Condensed Balance Sheet for Fiscal Years Ending 31 December (C$ millions)

Account	20X2	20X1
Cash	135	167

Account	20X2	20X1
Accounts receivable	98	—
Inventory	77	30
Fixed assets	100	100
Accumulated depreciation	(10)	—
Total assets	400	297
Accounts payable	77	22
Long-term debt	175	175
Common stock	100	100
Retained earnings	48	—
Total liabilities and shareholders' equity	400	297

Exhibit 2. Exchange Rate Information

	US$/C$
Rate on 31 December 20X1	0.86
Average rate in 20X2	0.92
Weighted-average rate for inventory purchases	0.92
Rate on 31 December 20X2	0.95

Templeton explains that Consol-Can uses the FIFO inventory accounting method and that purchases of C$300 million and the sell-through of that inventory occurred evenly throughout 20X2. Her presentation includes reporting the translated amounts in US dollars for each item, as well as associated translation-related gains and losses. The board responds with several questions.

- Would there be a reason to change the functional currency to the Canadian dollar?
- Would there be any translation effects for Consolidated Motors if the functional currency for Consol-Can were changed to the Canadian dollar?
- Would a change in the functional currency have any impact on financial statement ratios for the parent company?
- What would be the balance sheet exposure to translation effects if the functional currency were changed?

7. After translating Consol-Can's inventory and long-term debt into the parent company's currency (US$), the amounts reported on Consolidated Motor's financial statements on 31 December 20X2 would be *closest* to (in millions):

A. $71 for inventory and $161 for long-term debt.

B. $71 for inventory and $166 for long-term debt.

C. $73 for inventory and $166 for long-term debt.

8. After translating Consol-Can's 31 December 20X2 balance sheet into the parent company's currency (US$), the translated value of retained earnings will be *closest* to:

 A. $41 million.

 B. $44 million.

 C. $46 million.

9. In response to the board's first question, Templeton would *most likely* reply that such a change would be justified if:

 A. the inflation rate in the United States became hyperinflationary.

 B. management wanted to flow more of the gains through net income.

 C. Consol-Can were making autonomous decisions about operations, investing, and financing.

10. In response to the board's second question, Templeton should reply that if the change is made, the consolidated financial statements for Consolidated Motors would begin to recognize:

 A. realized gains and losses on monetary assets and liabilities.

 B. realized gains and losses on non-monetary assets and liabilities.

 C. unrealized gains and losses on non-monetary assets and liabilities.

11. In response to the board's third question, Templeton should note that the change will *most likely* affect:

 A. the cash ratio.

 B. fixed asset turnover.

 C. receivables turnover.

12. In response to the board's fourth question, the balance sheet exposure (in C$ millions) would be *closest* to:

 A. –19.

 B. 148.

 C. 400.

The following information relates to Questions 13–18

Romulus Corp. is a US-based company that prepares its financial statements in accordance with US GAAP. Romulus Corp. has two European subsidiaries: Julius and Augustus. Anthony Marks, CFA, is an analyst trying to forecast Romulus's 20X2 results. Marks has prepared separate forecasts for both Julius and Augustus, as well as for Romulus's other operations (prior to consolidating the results.) He is now considering the impact of currency translation on the results of both the subsidiaries and the parent company's consolidated financials. His research has provided the following insights:

- The results for Julius will be translated into US dollars using the current rate method.
- The results for Augustus will be translated into US dollars using the temporal method.
- Both Julius and Augustus use the FIFO method to account for inventory.
- Julius had year-end 20X1 inventory of €340 million. Marks believes Julius will report €2,300 in sales and €1,400 in cost of sales in 20X2.

Marks also forecasts the 20X2 year-end balance sheet for Julius (Exhibit 1). Data and forecasts related to euro/dollar exchange rates are presented in Exhibit 2.

Exhibit 1. Forecasted Balance Sheet Data for Julius, 31 December 20X2 (€ millions)

Cash	50
Accounts receivable	100
Inventory	700
Fixed assets	1,450
Total assets	2,300
Liabilities	700
Common stock	1,500
Retained earnings	100
Total liabilities and shareholder equity	2,300

Exhibit 2. Exchange Rates ($/€)

31 December 20X1	1.47
31 December 20X2	1.61
20X2 average	1.54
Rate when fixed assets were acquired	1.25

Rate when 20X1 inventory was acquired	1.39
Rate when 20X2 inventory was acquired	1.49

13. Based on the translation method being used for Julius, the subsidiary is *most likely:*

A. a sales outlet for Romulus's products.

B. a self-contained, independent operating entity.

C. using the US dollar as its functional currency.

14. To account for its foreign operations, Romulus has *most likely* designated the euro as the functional currency for:

A. Julius only.

B. Augustus only.

C. both Julius and Augustus.

15. When Romulus consolidates the results of Julius, any unrealized exchange rate holding gains on monetary assets should be:

A. reported as part of operating income.

B. reported as a non-operating item on the income statement.

C. reported directly to equity as part of the cumulative translation adjustment.

16. When Marks translates his forecasted balance sheet for Julius into US dollars, total assets as of 31 December 20X2 (dollars in millions) will be *closest* to:

A. $1,429.

B. $2,392.

C. $3,703.

17. When Marks converts his forecasted income statement data for Julius into US dollars, the 20X2 gross profit margin will be *closest* to:

A. 39.1%.

B. 40.9%.

C. 44.6%.

18. Relative to the gross margins the subsidiaries report in local currency, Romulus's consolidated gross margin *most likely*:

A. will not be distorted by currency translations.

B. would be distorted if Augustus were using the same translation method as Julius.

C. will be distorted because of the translation and inventory accounting methods Augustus is using.

The following information relates to Questions 19–24

Redline Products, Inc. is a US-based multinational with subsidiaries around the world. One such subsidiary, Acceletron, operates in Singapore, which has seen mild but not excessive rates of inflation. Acceletron was acquired in 2000 and has never paid a dividend. It records inventory using the FIFO method.

Chief Financial Officer Margot Villiers was asked by Redline's board of directors to explain how the functional currency selection and other accounting choices affect Redline's consolidated financial statements. Villiers gathers Acceletron's financial statements denominated in Singapore dollars (SGD) in Exhibit 1 and the US dollar/Singapore dollar exchange rates in Exhibit 2. She does not intend to identify the functional currency actually in use but rather to use Acceletron as an example of how the choice of functional currency affects the consolidated statements.

Exhibit 1. Selected Financial Data for Acceletron, 31 December 2007 (SGD millions)

Cash	SGD125
Accounts receivable	230
Inventory	500
Fixed assets	1,640
Accumulated depreciation	(205)
Total assets	SGD2,290
Accounts payable	185
Long-term debt	200
Common stock	620
Retained earnings	1,285
Total liabilities and equity	2,290
Total revenues	SGD4,800
Net income	SGD450

Exhibit 2. Exchange Rates Applicable to Acceletron

Exchange Rate in Effect at Specific Times	USD per SGD
Rate when first SGD1 billion of fixed assets were acquired	0.568
Rate when remaining SGD640 million of fixed assets were acquired	0.606
Rate when long-term debt was issued	0.588
31 December 2006	0.649
Weighted-average rate when inventory was acquired	0.654
Average rate in 2007	0.662
31 December 2007	0.671

19. Compared with using the Singapore dollar as Acceletron's functional currency for 2007, if the US dollar were the functional currency, it is *most likely* that Redline's consolidated:

A. inventories will be higher.

B. receivable turnover will be lower.

C. fixed asset turnover will be higher.

20. If the US dollar were chosen as the functional currency for Acceletron in 2007, Redline could reduce its balance sheet exposure to exchange rates by:

A. selling SGD30 million of fixed assets for cash.

B. issuing SGD30 million of long-term debt to buy fixed assets.

C. issuing SGD30 million in short-term debt to purchase marketable securities.

21. Redline's consolidated gross profit margin for 2007 would be *highest* if Acceletron accounted for inventory using:

A. FIFO, and its functional currency were the US dollar.

B. LIFO, and its functional currency were the US dollar.

C. FIFO, and its functional currency were the Singapore dollar.

22. If the current rate method is used to translate Acceletron's financial statements into US dollars, Redline's consolidated financial statements will *most likely* include Acceletron's:

A. USD3,178 million in revenues.

B. USD118 million in long-term debt.

C. negative translation adjustment to shareholder equity.

23. If Acceletron's financial statements are translated into US dollars using the temporal method, Redline's consolidated financial statements will *most likely* include Acceletron's:

A. USD336 million in inventory.

B. USD956 million in fixed assets.

C. USD152 million in accounts receivable.

24. When translating Acceletron's financial statements into US dollars, Redline is *least likely* to use an exchange rate of USD per SGD:

A. 0.671.

B. 0.588.

C. 0.654.

Practice Problems

The following information relates to Questions 1 through 4

Mike Martinez is an equity analyst who has been asked to analyze Stellar, Inc. by his supervisor, Dominic Anderson. Stellar exhibited strong earnings growth last year; however, Anderson is skeptical about the sustainability of the company's earnings. He wants Martinez to focus on Stellar's financial reporting quality and earnings quality.

After conducting a thorough review of the company's financial statements, Martinez concludes the following:

Conclusion 1	Although Stellar's financial statements adhere to generally accepted accounting principles (GAAP), Stellar understates earnings in periods when the company is performing well and overstates earnings in periods when the company is struggling.
Conclusion 2	Stellar most likely understated the value of amortizable intangibles when recording the acquisition of Solar, Inc. last year. No goodwill impairment charges have been taken since the acquisition.
Conclusion 3	Over time, the accruals component of Stellar's earnings is large relative to the cash component.
Conclusion 4	Stellar reported an unusually sharp decline in accounts receivable in the current year, and an increase in long-term trade receivables.

1. Based on Martinez's conclusions, Stellar's financial statements are *best* categorized as:

A. non-GAAP compliant.

B. GAAP compliant, but with earnings management.

C. GAAP compliant and decision useful, with sustainable and adequate returns.

2. Based on Conclusion 2, after the acquisition of Solar, Stellar's earnings are *most likely*:

A. understated.

B. fairly stated.

C. overstated.

3. In his follow-up analysis relating to Conclusion 3, Martinez should focus on Stellar's:

A. total accruals.

B. discretionary accruals.

C. non-discretionary accruals.

4. What will be the impact on Stellar in the current year if Martinez's belief in Conclusion 4 is correct? Compared with the previous year, Stellar's:

A. current ratio will increase.

B. days sales outstanding (DSO) will decrease.

C. accounts receivable turnover will decrease.

Practice Problems

The following information relates to Questions 1–8

Sergei Leenid, CFA, is a long-only fixed income portfolio manager for the Parliament Funds. He has developed a quantitative model, based on financial statement data, to predict changes in the credit ratings assigned to corporate bond issues. Before applying the model, Leenid first performs a screening process to exclude bonds that fail to meet certain criteria relative to their credit rating. Existing holdings that fail to pass the initial screen are individually reviewed for potential disposition. Bonds that pass the screening process are evaluated using the quantitative model to identify potential rating changes.

Leenid is concerned that a pending change in accounting rules could affect the results of the initial screening process. One current screen excludes bonds when the financial leverage ratio (equity multiplier) exceeds a given level and/or the interest coverage ratio falls below a given level for a given bond rating. For example, any "A" rated bond of a company with a financial leverage ratio exceeding 2.0 or an interest coverage ratio below 6.0 would fail the initial screening. The failing bonds are eliminated from further analysis using the quantitative model.

The new accounting rule would require substantially all leases to be capitalized on a company's balance sheets. To test whether the change in accounting rules will affect the output of the screening process, Leenid collects a random sample of "A" rated bonds issued by companies in the retail industry, which he believes will be among the industries most affected by the change.

Two of the companies, Silk Road Stores and Colorful Concepts, recently issued bonds with similar terms and interest rates. Leenid decides to thoroughly analyze the potential effects of the change on these two companies and begins by gathering information from their most recent annual financial statements (Exhibit 1).

After examining lease disclosures, Leenid estimates the average lease term for each company at 8 years with a fairly consistent lease expense over that time. He believes the leases should be capitalized using 6.5 percent, the rate at which both companies recently issued bonds.

Exhibit 1. Selected Financial Data for Silk Road Stores and Colorful Concepts

	Silk Road	Colorful Concepts
Revenue	3,945	7,049
EBIT	318	865
Interest expense	21	35
Income taxes	121	302

	Silk Road	Colorful Concepts
Net income	176	528
Average total assets	2,075	3,844
Average total equity	1,156	2,562
Lease expense	213	406

While examining the balance sheet for Colorful Concepts, Leenid also discovers that the company has a 204 ending asset balance (188 beginning) for investments in associates, primarily due to its 20 percent interest in the equity of Exotic Imports. Exotic Imports is a specialty retail chain and in the most recent year reported 1,230 in sales, 105 in net income, and had average total assets of 620.

1. If the accounting rules were to change, Silk Road's assets would increase by approximately:

   A. 1,297.

   B. 1,576.

   C. 1,704.

2. If the accounting rules were to change, Silk Road's interest coverage ratio would be *closest* to:

   A. 3.03.

   B. 3.50.

   C. 5.04.

3. If the accounting rules were to change, Silk Road's financial leverage ratio would be *closest* to:

   A. 1.37.

   B. 1.79.

   C. 2.92.

4. Will the change in accounting rules impact the result of the initial screening process for Colorful Concepts?

   A. It passes the screens now, but will not pass if the accounting rules change.

   B. It passes the screens now and will continue to pass if the accounting rules change.

   C. It fails the screens now and will continue to fail if the accounting rules change.

5. Based on Leenid's analysis of the results of the initial screening, relative to Colorful Concepts the bond rating of Silk Road should be:

A. lower.

B. higher.

C. the same.

6. Ignoring the potential impact of any accounting change and excluding the investment in associates, the net profit margin for Colorful Concepts would be *closest* to:

A. 6.0%.

B. 7.2%.

C. 7.5%.

7. Ignoring the impact of any accounting change, the asset turnover ratio for Colorful Concepts excluding the investments in associates would:

A. stay the same.

B. increase by 0.10.

C. decrease by 0.10.

8. Excluding the investments in associates would result in the interest coverage ratio for Colorful Concepts being:

A. lower.

B. higher.

C. the same.

The following information relates to Questions 9–15

Quentin Abay, CFA, is an analyst for a private equity firm interested in purchasing Bickchip Enterprises, a conglomerate. His first task is to determine the trends in ROE and the main drivers of the trends using DuPont analysis. To do so he gathers the data in Exhibit 1.

Exhibit 1. Selected Financial Data for Bickchip Enterprises (€ Thousands)

	2009	2008	2007
Revenue	72,448	66,487	55,781
Earnings before interest and tax	6,270	4,710	3,609
Earnings before tax	5,101	4,114	3,168
Net income	4,038	3,345	2,576
Asset turnover	0.79	0.76	0.68
Assets/Equity	3.09	3.38	3.43

After conducting the DuPont analysis, Abay believes that his firm could increase the ROE without operational changes. Further, Abay thinks that ROE could improve if the company divested segments that were generating the lowest returns on capital employed (total assets less non-interest-bearing liabilities). Segment EBIT margins in 2009 were 11 percent for Automation Equipment, 5 percent for Power and Industrial, and 8 percent for Medical Equipment. Other relevant segment information is presented in Exhibit 2.

Exhibit 2. Segment Data for Bickchip Enterprises (€ Thousands)

	Capital Employed			Capital Expenditures (Excluding Acquisitions)		
Operating Segments	**2009**	**2008**	**2007**	**2009**	**2008**	**2007**
Automation Equipment	10,705	6,384	5,647	700	743	616
Power and Industrial	15,805	13,195	12,100	900	849	634
Medical Equipment	22,870	22,985	22,587	908	824	749
	49,380	42,564	40,334	2,508	2,416	1,999

Abay is also concerned with earnings quality, so he intends to calculate Bickchip's cash-flow-based accruals ratio and the ratio of operating cash flow before interest and taxes to operating income. To do so, he prepares the information in Exhibit 3.

Exhibit 3. Earnings Quality Data for Bickchip Enterprises (€ Thousands)

	2009	**2008**	**2007**
Net income	4,038	3,345	2,576
Net cash flow provided by (used in) operating activity[a]	9,822	5,003	3,198
Net cash flow provided by (used in) investing activity	(10,068)	(4,315)	(5,052)
Net cash flow provided by (used in) financing activity[b]	(5,792)	1,540	(2,241)
Average net operating assets	43,192	45,373	40,421
[a] includes cash paid for taxes of:	(1,930)	(1,191)	(1,093)
[b] includes cash paid for interest of:	(1,169)	(596)	(441)

9. Over the three-year period presented in Exhibit 1, Bickchip's return on equity is *best* described as:

   A. stable.

   B. trending lower.

   C. trending higher.

10. Based on the DuPont analysis, Abay's belief regarding ROE is *most likely* based on:

   A. leverage.

   B. profit margins.

   C. asset turnover.

11. Based on Abay's criteria, the business segment *best* suited for divestiture is:

   A. medical equipment.

   B. power and industrial.

   C. automation equipment.

12. Bickchip's cash-flow-based accruals ratio in 2009 is *closest* to:

   A. 9.9%.

   B. 13.4%.

   C. 23.3%.

13. The cash-flow-based accruals ratios from 2007 to 2009 indicate:

   A. improving earnings quality.

   B. deteriorating earnings quality.

   C. no change in earnings quality.

14. The ratio of operating cash flow before interest and taxes to operating income for Bickchip for 2009 is *closest* to:

   A. 1.6.

   B. 1.9.

   C. 2.1.

15. Based on the ratios for operating cash flow before interest and taxes to operating income, Abay should conclude that:

   A. Bickchip's earnings are backed by cash flow.

   B. Bickchip's earnings are not backed by cash flow.

C. Abay can draw no conclusion due to the changes in the ratios over time.

The following information relates to Questions 16–21

Michael Wetstone is an equity analyst covering the software industry for a public pension fund. Prior to comparing the financial results of Software Services Inc. and PDQ GmbH, Wetstone discovers the need to make adjustments to their respective financial statements. The issues preventing comparability, using the financial statements as reported, are the sale of receivables and the impact of minority interests.

Software Services sold $267.5 million of finance receivables to a special purpose entity. PDQ does not securitize finance receivables. An abbreviated balance sheet for Software Services is presented in Exhibit 1.

Exhibit 1. Abbreviated Balance Sheet for Software Services ($ 000)

Year Ending:	31 December 2009
Total current assets	1,412,900
Total assets	3,610,600
Total current liabilities	1,276,300
Total liabilities	2,634,100
Total equity	976,500

A significant portion of PDQ's net income is explained by its 20 percent minority interest in Astana Systems. Wetstone collects certain data (Exhibit 2) related to both PDQ and Astana in order to estimate the financials of PDQ on a stand-alone basis.

Exhibit 2. Selected Financial Data Related to PDQ and Astana Systems

	PDQ (€ in 000)	Astana ($ in 000)
Earnings before tax (2009)	41,730	15,300
Income taxes (2009)	13,562	5,355
Net income (2009)	28,168	9,945
Market capitalization (recent)	563,355	298,350
Average $/€ exchange rate in 2009	1.55	
Current $/€ exchange rate	1.62	

16. Compared to holding securitized finance receivables on the balance sheet, treating them as sold had the effect of reducing Software Services' reported financial leverage by:

A. 6.8%.

B. 7.4%.

C. 9.2%.

17. Had the securitized finance receivables been held on the balance sheet, Software Services' ratio of liabilities to total capital would have been *closest* to:

A. 73.0%.

B. 74.8%.

C. 80.4%.

18. How much of PDQ's value can be explained by its equity stake in Astana?

A. 6.5%.

B. 10.6%.

C. 20.0%.

19. On a "solo" basis, PDQ's P/E ratio is *closest* to:

A. 19.6.

B. 21.0.

C. 24.5.

20. The adjusted financial statements were created during which phase of the financial analysis process?

A. Data collection.

B. Data processing.

C. Data interpretation.

21. The estimate of PDQ's solo value is crude because of:

A. the potential differences in accounting standards used by PDQ and Astana.

B. the differing risk characteristics of PDQ and Astana.

C. differences in liquidity and market efficiency where PDQ and Astana trade.