# Free Questions for CFA-Level-II by certsinside

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# Question 1

**Question Type: MultipleChoice**

Fashion Inc. is a major U .S . distributor of high quality women's jewelry and accessories. The company's growth in recent years has been moderately above the industry average. However, competition is intensifying as a number of overseas competitors have entered this mature market. Although Fashion has been a publicly held company for many years, members of senior management and their families control 20% of the outstanding common stock. Martin Silver, the Chief Executive Officer, has been under intense pressure from both internal and external large shareholders to find ways to increase the company's future growth.

Silver has consulted with the company's investment bankers concerning possible merger targets. The most promising merger target is Flavoring International, a distributor of a broad line of gourmet spices in the United States and numerous other countries. In recent years, Flavoring's earnings growth rate has been above competitors' and also has exceeded Fashion's experience. Superior income growth is projected to continue over at least the next five years. Silver is impressed with the appeal of the company's products to upscale customers, its strong operating and financial performance, and Flavoring's dynamic management team. He is contemplating retirement in three years and believes that Flavoring's younger, more aggressive senior managers could boost the combined company's growth through increasing Fashion's operating efficiency and expanding Fashion's product line in countries outside the United States. Alan Smith, who is Silver's key contact at the investment banking firm, indicates that a key appeal of this merger to Flavoring would be Fashion's greater financial flexibility and access to lower cost sources of financing for expansion of its products in new geographic areas. Fashion has a very attractive performance based stock option plan. Flavoring's incentive plan is entirely based on cash compensation for achieving performance goals. Additionally, the 80% of Fashion's stock not controlled by management interests is very widely held and trades actively. Flavoring became a publicly held company three years ago and doesn't trade as actively.

Silver has asked Smith to prepare a report summarizing key points favoring the acquisition and an acceptable acquisition price. In preparing his report, Smith relics on the following financial data on Fashion, Flavoring, and four recently acquired food and beverage companies.

**Exhibit 1: Financial and Market Data for Fashion, Inc. and Flavoring International**

| *Financial/Price Data* | *Fashion* | *Flavoring* |
|---|---|---|
| Sales | $400 million | $105 million |
| Net income | $80 million | $22 million |
| Cash Flow | $140 million | $42 million |
| Book Value | $320 million | $72 million |
| Number of common shares outstanding | 50 million | 20 million |
| Current market price of common stock | $30.50 | $20.00 |
| Recent market price range | $34–26 | $22–18 |

**Exhibit 2: Transaction Data for Food and Beverage Industry**

| *Valuation Variables* | *Jones Foods* | *Dale Inc.* | *Hill Brands* | *Lane Co.* | *Mean Multiple* |
|---|---|---|---|---|---|
| Acquisition stock price | $24 | $32 | $40 | $46 | — |
| Price/Sales per share | 5.0 | 3.7 | 4.0 | 3.8 | 4.13 |
| Price/Book Value per share | 6.9 | 5.5 | 5.8 | 5.6 | 5.95 |
| Price/Earnings per share | 20.0 | 22.1 | 18.0 | 19.0 | 19.78 |
| Price/Cash Flow per share | 11.8 | 13.0 | 10.5 | 11.0 | 11.58 |

If Fashion issues common stock at the current market price and uses the proceeds to acquire Flavoring's outstanding common stock, the bootstrap earnings effect on post merger earnings would most likely occur if Flavoring's acquisition price:

## Options:

**A-** is $20 or lower.

**B-** is $20 or higher.

**C-** is $20 or lower and Fashion's post merger P/E remains at the current level.

## Answer:

C

## Explanation:

The bootstrap effect will only occur when Fashion's P/E ratio is higher than Flavoring's and Fashion's P/E post merger does not decline. At the current market price of $30.50, Fashions P/E is 19.1 based on earnings per share of $1.60 ($80 million earnings/50 million shares). At its current market price of $20 and earnings per share of $1.10 ($22 million earnings/20 million shares), Flavoring's stock's P/E is 18.2x. Therefore, the combined earnings per share after the merger would be higher if Fashion issued stock at the current price and bought Flavoring at $20 or less per share. (Study Session 9, LOS 31.c)

# Question 2

**Question Type:** **MultipleChoice**

Fashion Inc. is a major U .S . distributor of high quality women's jewelry and accessories. The company's growth in recent years has been moderately above the industry average. However, competition is intensifying as a number of overseas competitors have entered this mature market. Although Fashion has been a publicly held company for many years, members of senior management and their families control 20% of the outstanding common stock. Martin Silver, the Chief Executive Officer, has been under intense pressure from both internal and external large shareholders to find ways to increase the company's future growth.

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The least likely reason that Flavoring's management would favor an acquisition by Fashion would be:

## Options:

**A-** Flavoring management's incentives.

**B-** opportunities to utilize Fashion's larger financial resources to increase, market share of both companies.

**C-** opportunities to utilize Fashion's financial resources to expand the combined company's product line into the higher volume moderately priced market segment.

## Answer:

C

## Explanation:

Opportunities to expand its products in different segments of the market for spices are not indicated in the vignette. Flavoring's management appears more interested in geographic expansion of its existing product line. (Study Session 9, LOS 31.b)

# Question 3

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Fashion Inc. is a major U .S . distributor of high quality women's jewelry and accessories. The company's growth in recent years has been moderately above the industry average. However, competition is intensifying as a number of overseas competitors have entered this mature market. Although Fashion has been a publicly held company for many years, members of senior management and their families control 20% of the outstanding common stock. Martin Silver, the Chief Executive Officer, has been under intense pressure from both internal and external large shareholders to find ways to increase the company's future growth.

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| Price/Cash Flow per share | 11.8 | 13.0 | 10.5 | 11.0 | 11.58 |

The strongest motivations for Fashion to acquire Flavoring would most likely be:

## Options:

**A-** the potential to increase Fashion's growth and market power.

**B-** the potential to create synergies and increase market power.

**C-** Fashion management's incentives and diversification.

## Answer:

C

## Explanation:

Management incentives are a key factor in light of Mr. Silvers desire to retire in three years and his interest in Flavoring management's capabilities to help guide the combined firm. Diversification is another key motivation as Flavoring's products are consumer based but serve a different market than Fashions focus on consumer accessories. Because the companies have different product lines, synergies in the form of cost savings or revenue enhancement are unlikely to occur. In addition, the companies are in very different industries making increased market power in either industry unlikely to occur as a result of the merger. (Study Session 9, LOS 31.b,d)

# Question 4

**Question Type:** **MultipleChoice**

GigaTech Inc. is a large U .S .-based technology conglomerate. The firm has business units in three primary categories: hardware manufacturing, software development, and consulting services. Because of the rapid pace of technological innovation, GigaTech must make capital investments every two to four years. The company has identified several potential investment opportunities for its hardware manufacturing division. The first of these opportunities, Tera Project, would replace a portion of GigaTech's microprocessor assembly equipment with new machinery expected to last three years. The current machinery has a book value of $120,000 and a market value of $195,000. Tcra Project would require purchasing machinery for $332,000, increasing current assets by 5190,000, and increasing current liabilities by $80,000. GigaTech has a tax rate of 40%. Additional pro forma information related to the Tera Project is provided in the following table:

| | *Existing Equipment* | *Tera Project* |
|---|---|---|
| Annual sales | $523,000 | $708,000 |
| Cash operating expenses | $352,000 | $440,000 |
| Annual depreciation | $40,000 | $110,667 |
| Accounting salvage value | $0 | $0 |
| Expected salvage value | $90,000 | $113,000 |

Analysts at GigaTech have noted that investment in the Tera Project can be delayed for up to nine months if managers at the company decide this is necessary. However, once the capital investment is made, the project will be necessary to maintain continuing operations. Tera Project can be scaled up with more equipment requiring less capital than the original investment if results are meeting expectations. In addition, the equipment used in Tera Project can be used in shift work if brief excess demand is expected.

GigaTech is also considering expanding its software development operations in India. Software development equipment must be continually replaced to maintain efficiency as newer and faster technology is developed. The company has identified two mutually exclusive potential expansion projects, Zeta and Sigma. Zeta requires investing in equipment with a 3-year life, while Sigma requires investing in equipment with a 2-year life. GigaTech has estimated real capital costs for the two projects at 10.58%. GigaTech expects inflation to be approximately 4.0% for the foreseeable future. Nominal cash flows and net present values for the Zeta and Sigma projects are provided in the following table:

| | *Annual Cash Flows* | | | | |
|---|---|---|---|---|---|
| *Project* | *0* | *1* | *2* | *3* | *NPV* |
| Zeta | –\$360,000 | \$250,000 | \$220,000 | \$190,000 | \$148,671 |
| Sigma | –\$470,000 | \$330,000 | \$390,000 | \$0 | \$111,853 |

Recently, GigaTechs board of directors has become concerned with the firm's capital budgeting decisions and has asked management to provide a detailed explanation of the capital budgeting process. After reviewing the report from management, the board makes the following comments in a memo:

* The capital rationing system being utilized is fundamentally flawed since, in some instances, projects that do not increase earnings per share are selected over projects that do increase earnings per share.

* The cash flow projections are flawed since they fail to include costs incurred in the search for projects or the economic consequences of increased competition resulting from highly profitable projects.

* We are making inappropriate investment decisions since the discount rate used to evaluate all potential projects is the firm's weighted average cost of capital.

Which of the following would best correct GigaTech's discount rate problem described in the board of director's memo?

## Options:

**A-** Use the firm's marginal cost of capital to evaluate all potential projects.

**B-** Use a beta specific to each potential project to determine the appropriate discount rate.

**C-** Use the cost of the firm's equity capital to discount the cash flows of all potential projects.

## Answer:

B

## Explanation:

When evaluating pocential capital investment projects, the discount rate should be adjusted for the risk of the project under consideration. This is frequently accomplished by determining a project beta and using this beta in the CAPM security market line equation: + [E( ) - ]. Project betas can be determined in a number of ways including using proxy firms with operations similar to the project under consideration, estimating an accounting beta, or through cross-sectional regression analysis. Whatever method used to determine the discount rate, it should be clear that the weighted average cost of capital (WACC) is only appropriate for projects with risk similar to the overall firm. If a project is more (less) risky than the overall firm, the discount rate used to evaluate the project should be greater (less) than rhe firm's WACC. (Study Session 8, LOS 27-e)

# Question 5

**Question Type:** **MultipleChoice**

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| | Annual Cash Flows | | | | |
|---|---|---|---|---|---|
| Project | 0 | 1 | 2 | 3 | NPV |
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* The cash flow projections are flawed since they fail to include costs incurred in the search for projects or the economic consequences of increased competition resulting from highly profitable projects.

* We are making inappropriate investment decisions since the discount rate used to evaluate all potential projects is the firm's weighted average cost of capital.

Determine whether the board of director's memo is correct with regard to its statements about GigaTech's capital rationing system and its method of projecting project cash flows.

## Options:

**A-** Only the statement regarding capital rationing is correct.

**B-** Only the statement regarding cash flow projections is correct.

**C-** Neither the statement regarding capital rationing nor the statement regarding cash flow projections is correct.

### Answer:

C

### Explanation:

The comments in the memo from GigaTech's board of directors are both incorrect. Earnings per share (EPS) is not a suitable criteria to evaluate capital budgeting projects. Under capital rationing, a firm selects the projects that increase the value of the firm by the greatest amount (i.e., have the highest NPV) subject to the capital constraints of the firm's budget. It is perfectly possible that projects that increase EPS will not get selected. For example, if a project has an NPV of $80 and increases EPS by $0.50 and a second project has an NPV of $200 but will initially reduce EPS by $0.20, the firm should select the second project (if its capital budget will allow it) since it adds more value. The capital budgeting process should not consider sunk costs (i.e., past costs that do not affect the cash flows of the project) such as costs to find investment projects. The cash flow projections should consider the economic impact from increased competition resulting from highly profitable investment projects. (Study Session 8. LOS 27-c)

## Question 6

**Question Type: MultipleChoice**

GigaTech Inc. is a large U .S .-based technology conglomerate. The firm has business units in three primary categories: hardware manufacturing, software development, and consulting services. Because of the rapid pace of technological innovation, GigaTech must make capital investments every two to four years. The company has identified several potential investment opportunities for its hardware manufacturing division. The first of these opportunities, Tera Project, would replace a portion of GigaTech's microprocessor assembly equipment with new machinery expected to last three years. The current machinery has a book value of $120,000 and a market value of $195,000. Tcra Project would require purchasing machinery for $332,000, increasing current assets by 5190,000, and increasing current liabilities by $80,000. GigaTech has a tax rate of 40%. Additional pro forma information related to the Tera Project is provided in the following table:

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| | *Annual Cash Flows* | | | | |
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Using the least common multiple of lives approach, determine whether the Zeta Project or the Sigma Project will increase the value of GigaTech by a greater amount.

## Options:

**A-** Zeta Project.

**B-** Sigma Project.

**C-** Both projects increase GigaTech's value by the same amount.

## Answer:

B

## Explanation:

The least common multiple of lives approach requires estimating the least common denominator between two mutually exclusive projects with unequal lives. Since the Zeta and Sigma projects have lives of 3 and 2, the least common multiple is 6. The cash flows must be stated over a 6-year period, repeating the cash flow pattern as often as necessary (twice for Zeta and three times for Sigma). The cash flows are then discounted to And rhe net present value (NPV). The project with the highest NPV is selected. The cash flows are as follows:

| | Year | | | | | | |
|---|---|---|---|---|---|---|---|
| | 0 | 1 | 2 | 3 | 4 | 5 | 6 |
| Zeta Project | –360,000 | 250,000 | 220,000 | 190,000 | | | |
| | | | | –360,000 | 250,000 | 220,000 | 190,000 |
| Total | –360,000 | 250,000 | 220,000 | –170,000 | 250,000 | 220,000 | 190,000 |
| | | | | | | | |
| Sigma Project | –470,000 | 330,000 | 390,000 | | | | |
| | | | –470,000 | 330,000 | 390,000 | | |
| | | | | | –470,000 | 330,000 | 390,000 |
| Total | –470,000 | 330,000 | -80,000 | 330,000 | –80,000 | 330,000 | 390,000 |

Before calculating the NPV of each project, the cost of capital must be restated in nominal terms since the cash flow projections are stated in nominal terms. The nominal cost of capital is equal to 15-0% = (1 + O.1058)(l + 0.04). The NPV of each project is calculated as follows:

$$NPV_{zeta} = -360{,}000 + \frac{250{,}000}{1.15} + \frac{220{,}000}{1.15^2} + \frac{-170{,}000}{1.15^3} + \frac{250{,}000}{1.15^4} + \frac{220{,}000}{1.15^5} + \frac{190{,}000}{1.15^6}$$

$$= 246{,}425$$

$$NPV_{Sigma} = -470{,}000 + \frac{330{,}000}{1.15} + \frac{-80{,}000}{1.15^2} + \frac{330{,}000}{1.15^3} + \frac{-80{,}000}{1.15^4} + \frac{330{,}000}{1.15^5} + \frac{390{,}000}{1.15^6}$$

Since its NPV is greater, GigaTcch should select the Sigma project. (Study Session 8, LOS 27.c)

# Question 7

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* We are making inappropriate investment decisions since the discount rate used to evaluate all potential projects is the firm's weighted average cost of capital.

Which of the following is least likely to be a real option available to GigaTech with regard to the Tera Project?

## Options:

A- Abandonment option.

**B-** Expansion option.

**C-** Flexibility option.

## Answer:

A

## Explanation:

Once the Tera Project is begun, the project will be necessary for continuing operations. This is likely a result of the replacement nature of the project. If the equipment necessary for GigaTech's operations is replaced with newer equipment, abandoning the project is not really an option. Management does have the option of scaling up the project after initiation, which is known as an expansion option. Management can also wait up to nine months to make a decision on the Tera Project, giving them a timing option (note that this is not one of the answer choices). Finally, the equipment used in the Tera Project can support additional shifts if demand for GigaTech's products temporarily exceeds supply, giving them a flexibility option (specifically a production-flexibility option). (Study Session 8, LOS 27-f)

# Question 8

**Question Type: MultipleChoice**

GigaTech Inc. is a large U .S .-based technology conglomerate. The firm has business units in three primary categories: hardware manufacturing, software development, and consulting services. Because of the rapid pace of technological innovation, GigaTech must make capital investments every two to four years. The company has identified several potential investment opportunities for its hardware manufacturing division. The first of these opportunities, Tera Project, would replace a portion of GigaTech's microprocessor assembly equipment with new machinery expected to last three years. The current machinery has a book value of $120,000 and a market value of $195,000. Tcra Project would require purchasing machinery for $332,000, increasing current assets by 5190,000, and increasing current liabilities by $80,000. GigaTech has a tax rate of 40%. Additional pro forma information related to the Tera Project is provided in the following table:

| | *Existing Equipment* | *Tera Project* |
|---|---:|---:|
| Annual sales | $523,000 | $708,000 |
| Cash operating expenses | $352,000 | $440,000 |
| Annual depreciation | $40,000 | $110,667 |
| Accounting salvage value | $0 | $0 |
| Expected salvage value | $90,000 | $113,000 |

Analysts at GigaTech have noted that investment in the Tera Project can be delayed for up to nine months if managers at the company decide this is necessary. However, once the capital investment is made, the project will be necessary to maintain continuing operations. Tera Project can be scaled up with more equipment requiring less capital than the original investment if results are meeting expectations. In addition, the equipment used in Tera Project can be used in shift work if brief excess demand is expected.

GigaTech is also considering expanding its software development operations in India. Software development equipment must be continually replaced to maintain efficiency as newer and faster technology is developed. The company has identified two mutually exclusive potential expansion projects, Zeta and Sigma. Zeta requires investing in equipment with a 3-year life, while Sigma requires investing in equipment with a 2-year life. GigaTech has estimated real capital costs for the two projects at 10.58%. GigaTech expects inflation to be approximately 4.0% for the foreseeable future. Nominal cash flows and net present values for the Zeta and Sigma projects are provided in the following table:

| | Annual Cash Flows | | | | |
|---|---|---|---|---|---|
| *Project* | *0* | *1* | *2* | *3* | *NPV* |
| Zeta | –$360,000 | $250,000 | $220,000 | $190,000 | $148,671 |
| Sigma | –$470,000 | $330,000 | $390,000 | $0 | $111,853 |

Recently, GigaTechs board of directors has become concerned with the firm's capital budgeting decisions and has asked management to provide a detailed explanation of the capital budgeting process. After reviewing the report from management, the board makes the following comments in a memo:

* The capital rationing system being utilized is fundamentally flawed since, in some instances, projects that do not increase earnings per share are selected over projects that do increase earnings per share.

* The cash flow projections are flawed since they fail to include costs incurred in the search for projects or the economic consequences of increased competition resulting from highly profitable projects.

* We are making inappropriate investment decisions since the discount rate used to evaluate all potential projects is the firm's weighted average cost of capital.

Which of the following best describes how GigaTech should implement scenario analysis to analyze the Tera Project?

### Options:

**A-** Generate a base case, high, and low estimate of NPV by changing only the most sensitive cash flow variable.

**B-** Generate a base case, high, and low estimate of NPV by changing only the discount rate applicable to the project.

**C-** Generate a base case, high, and low estimate of NPV by simultaneously changing sales, expense, and discount rate assumptions for each case.

### Answer:

C

### Explanation:

In scenario analysis, the analyst simultaneously changes several key variables to generate several different scenarios. Generally three scenarios are created, worst case, most likely, and optimistic. For the worst case scenario, for example, the analyst will use the slowest growth in sales, highest growth in expenses, and highest discount rate to derive an NPV under the worst of all possible situations. A similar approach is used to generate the optimistic scenario, but the best possible growth in each of the variables is used. The most likely is simply what the analyst thinks are the most reasonable assumptions for the discounted cash flow forecast under normal conditions. Using the different cases, the analyst can assess the risk of the project. (Study Session 8, LOS 27.d)

## Question 9

**Question Type:** MultipleChoice

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| | *Annual Cash Flows* | | | | |
|---|---|---|---|---|---|
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Assuming that working capital will be recaptured at the end of the project, which of the following is closest to the final period after-tax cash flow for the Tera Project?

## Options:

**A-** $196,467.

**B-** $210,267.

**C-** $219,467.

## Answer:

B

## Explanation:

The final period cash flow will include the project cash flows, the return of net working capital, and the after-tax sale of fixed capital used in the project. Because Tera is a replacement project, the incremental cash flows must be calculated. In other words, we are concerned with the additional sales and costs derived from the new equipment.

incremental sales = 708,000 - 523,000 = $185,000

incremental cash expenses = 440,000 - 352,000 = $88,000

incremental depreciation = 110,667 - 40,000 = $70,667 project cash flows = (185,000 - 88,000 - 70,667) x (1 - 0.40) + 70,667 - $86,467

return of net working capital = $110,000

after-tax sale of equipment = (113,000 - 90,000) - 0.40((113,000 - 90,000) - (0 - 0)] = $13,800

total cash flow in final period = 86,467 + 110,000 + 13,800 = $210,267

Note that the tax adjustment takes into account the difference becween the expected salvage value and the accounting salvage value (which happened to be zero in this case). (Study Session 8, LOS 27.a)

# Question 10

**Question Type:** **MultipleChoice**

Engineered Packaging Inc. (EPI) is a manufacturer of industrial and consumer packaging products. The company's products include composite and plastic rigid packaging, flexible packaging, as well as metal and plastic ends and closures. In January 2008, EPI entered into a joint venture with BMI Enterprises. EPI contributed ownership of five plants, while BMI contributed a new manufacturing technology. The joint venture is known as EP/BM LLC . EPI owns 50% of EP/BM LLC and uses the equity method to account for its investment. The following information for 2008 is provided:

| *In Millions, Year End 2008* | *EPI* | *EP/BM LLC* |
|---|---|---|
| Revenue | $3,115 | $421 |
| Cost of goods sold | $2,580 | $295 |
| SG&A | $316 | $50 |
| Interest expense | $47 | $8 |
| Equity in earnings of EP/BM | $22 | |
| Pretax income | $194 | $68 |
| Income tax | $60 | $24 |
| Net income | $134 | $44 |

| *In Millions, December 31, 2008* | *EPI* | *EP/BM LLC* |
|---|---|---|
| **Assets** | | |
| Cash | $118 | $13 |
| Accounts receivable | $390 | $50 |
| Inventory | $314 | $41 |
| Property | $1,007 | $131 |
| Investment | $38 | |
| Total | $1,867 | $235 |

| *Liabilities and Equity* | | |
|---|---|---|
| Accounts payable | $274 | $35 |
| Long-term debt | $719 | $125 |

In January 2009, EPI decides to sell its interest in EP/BM LLC . This is the fifth divesture in the last five years. Which of the following statements is least likely regarding this sale? The divestiture:

## Options:

**A-** may be signaling a poor operating choice and prior bad acquisitions.

**B-** could be used to manage earnings by lowering the company's overall debt level.

**C-** is sending a positive signal that management is able to sell assets at a good price.

## Answer:

C

## Explanation:

Divestitures should be a rare event. A divestiture usually sends a negative signal. It is unlikely that investors want management to sell profitable assets. The other statements are all accurate. (Study Session 9, LOS 31.o,p)

# Question 11

**Question Type:** MultipleChoice

Engineered Packaging Inc. (EPI) is a manufacturer of industrial and consumer packaging products. The company's products include composite and plastic rigid packaging, flexible packaging, as well as metal and plastic ends and closures. In January 2008, EPI entered into a joint venture with BMI Enterprises. EPI contributed ownership of five plants, while BMI contributed a new manufacturing technology. The joint venture is known as EP/BM LLC . EPI owns 50% of EP/BM LLC and uses the equity method to account for its investment. The following information for 2008 is provided:

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| Cash | $118 | $13 |
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| Inventory | $314 | $41 |
| Property | $1,007 | $131 |
| Investment | $38 | |
| Total | $1,867 | $235 |

| *Liabilities and Equity* | | |
|---|---|---|
| Accounts payable | $274 | $35 |
| Long-term debt | $719 | $125 |

For this question only, assume EPI increases its ownership of the joint venture to over 50% in 2009. In this case, LPI should:

## Options:

**A-** report its investment at fair value.

**B-** use the acquisition method unless circumstances indicate that EPI is unable to exercise control over the joint venture.

**C-** use the uniting-of-interest method.

## Answer:

B

## Explanation:

Accounting for an equity investment depends on the investor's ability to significantly influence or control the investee. The acquisition method is used to account for a business combination, usually defined as an ownership interest of over 50%. However, the degree of ownership is used only as a practical guideline. (Study Session 5> LOS 21.a)