

Question 1

L2EQ-TB0042-1412

LOS: LOS-8810

Lesson Reference: Lesson 1: The Scope of Private Company Valuation and Definitions (Standards of value)

Difficulty: medium

The value that an investor considers, on the basis of an evaluation or available facts, to be the “true” or “real” value that will become the market value when other investors reach the same conclusion is a measure of value best described as:

- ☐ Investment value.
- ☐ Fair value.
- ☒ Intrinsic value.

Rationale

This Answer is Correct

Investment value refers to the value to a particular investor based on the investor's investment requirements and expectations, largely dependent on the investor's situation and potential synergies with the firm being valued. Fair value relates to an arm's-length transaction and is usually used in financial reporting.

Question 2

L2R38TB-AC014-1512

LOS: LOS-8790

Lesson Reference: Lesson 1: The Scope of Private Company Valuation and Definitions (Standards of value)

Difficulty: medium

Which of the following company-specific factors would *most likely* prevent a private company from going public?

- ☒ Size.
- ☐ Stage in lifecycle.
- ☐ Depth of management.

Rationale

✔ Size.

Going public is expensive due to initial distribution costs and on an ongoing basis due to compliance and reporting requirements. Therefore, smaller companies often choose to remain private. Depth of management may be of concern in the IPO process, but firms usually pay consultants and investment banks to handle such matters if they are of appropriate size to do so.

Rationale

✘ Stage in lifecycle.

Going public is expensive due to initial distribution costs and on an ongoing basis due to compliance and reporting requirements. Therefore, smaller companies often choose to remain private. Depth of management may be of concern in the IPO process, but firms usually pay consultants and investment banks to handle such matters if they are of appropriate size to do so.

Rationale

✘ Depth of management.

Going public is expensive due to initial distribution costs and on an ongoing basis due to compliance and reporting requirements. Therefore, smaller companies often choose to remain private. Depth of management may be of concern in the IPO process, but firms usually pay consultants and investment banks to handle such matters if they are of appropriate size to do so.

Question 3

L2EQ-TB0040-1412

LOS: LOS-8790

Lesson Reference: Lesson 1: The Scope of Private Company Valuation and Definitions (Standards of value)

Difficulty: medium

Larry Underhill, CFA, is an equity analyst who has been asked by a colleague about the differences between public company and private company valuation, specifically with regards to agency costs. Larry should reply that agency costs:

- ☒ Tend to be lower for private companies than public companies.
- ☐ Tend to be lower for public companies than private companies.
- ☐ Tend to be similar for public companies and private companies.

Rationale

This Answer is Correct

Private companies tend to have more overlap between ownership and management in that company shares are more often held by company management than for public companies. This will reduce the agency cost of management acting on behalf of shareholders since they are the same entity.

Question 4

L2EQ-TBB226-1412

LOS: LOS-8840

Lesson Reference: Lesson 3: Private Company Valuation Approaches: (1) Income Approach

Difficulty: medium

The excess earnings method for valuing a private company applies a cost of capital charge to:

- ☐ Fixed assets only.
- ☐ Working capital only.
- ☒ Both fixed assets and working capital.

Rationale

This Answer is Correct

The excess earnings views the earnings of the company in excess of the required return from both working capital and fixed assets as an intangible revenue stream that should be capitalized when valuing the private company.

Question 5

L200-PQ0038-1412

LOS: LOS-8900

Lesson Reference: Lesson 5: Valuation Discounts and Premiums, and Business Valuation Standards and Practices

Difficulty: medium

Valuation standards that have been developed by private equity managers suffer from the following drawbacks except which one?

- ☐ Compliance with these standards is at the discretion of the appraisers.
- ☒ There is significant homogeneity of company valuations.
- ☐ Differing definitions of value result in materially different conclusions of value.

Rationale

This Answer is Correct

Due to the significant heterogeneity (not homogeneity) of valuations, the application of technical guidance offered by valuation standards is limited.

Question 6

L2EQ-TBX118-1502

LOS: LOS-8890

Lesson Reference: Lesson 5: Valuation Discounts and Premiums, and Business Valuation Standards and Practices

Difficulty: easy

Which of the following values for the shares of a company is *most likely* to be highest?

- ☒ Synergistic buyer.
- ☐ Financial buyer.
- ☐ As if freely traded.

Rationale

This Answer is Correct

The valuation for a synergistic buyer will reflect both the synergies from combining the business with other businesses and a control premium. A financial buyer will have no value associated with synergies because they will operate the company on a stand-alone basis. A valuation for the company as if freely traded would be from a minority interest point of view without any synergy or control premium.

Question 7

L2R38TB-AC012-1512

LOS: LOS-8790

Lesson Reference: Lesson 1: The Scope of Private Company Valuation and Definitions (Standards of value)

Difficulty: medium

A firm acquiring a target could *most likely* justify paying a controlling interest premium in the acquisition of:

- ☐ public companies only.
- ☐ privately held companies only.
- ☒ both private and public companies.

Rationale

 **public companies only.**

Although valuation of a controlling interest would certainly apply to acquisition of a private company, a private equity fund interested in taking a public company private may also value a controlling interest. In addition, a public company interested in acquiring a target, private or public, with strategic value may also desire a controlling interest.

Rationale

 **privately held companies only.**

Although valuation of a controlling interest would certainly apply to acquisition of a private company, a private equity fund interested in taking a public company private may also value a controlling interest. In addition, a public company interested in acquiring a target, private or public, with strategic value may also desire a controlling interest.

Rationale

 **both private and public companies.**

Although valuation of a controlling interest would certainly apply to acquisition of a private company, a private equity fund interested in taking a public company private may also value a controlling interest. In addition, a public company interested in acquiring a target, private or public, with strategic value may also desire a controlling interest.

Question 8

L2R38TB-AC021-1512

LOS: LOS-8860

Lesson Reference: Lesson 3: Private Company Valuation Approaches: (1) Income Approach

Difficulty: medium

Of the following, fair market value would *most likely* be the outcome of a valuation performed for economic benefits on a:

- ☐ standalone basis using an acquirer's cost of capital.
- ☒ standalone basis using a market-derived required return.
- ☐ portfolio basis including strategic benefits in the cash flows.

Rationale

standalone basis using an acquirer's cost of capital.

Fair market value has other considerations, but one consideration is that it be to a market of all investors. Some of those investors would not have strategic benefits (e.g., synergies) to add to cash flow. Cash flows would be discounted using a market-derived return rather than the acquirer's return because fair market value assumes a market of all investors.

Rationale

standalone basis using a market-derived required return.

Fair market value has other considerations, but one consideration is that it be to a market of all investors. Some of those investors would not have strategic benefits (e.g., synergies) to add to cash flow. Cash flows would be discounted using a market-derived return rather than the acquirer's return because fair market value assumes a market of all investors.

Rationale

portfolio basis including strategic benefits in the cash flows.

Fair market value has other considerations, but one consideration is that it be to a market of all investors. Some of those investors would not have strategic benefits (e.g., synergies) to add to cash flow. Cash flows would be discounted using a market-derived return rather than the acquirer's return because fair market value assumes a market of all investors.

Question 9

L2R38TB-AC011-1512

LOS: LOS-8890

Lesson Reference: Lesson 5: Valuation Discounts and Premiums, and Business Valuation Standards and Practices

Difficulty: medium

A valuator used discounted free cash to equity valuation to estimate a value of \$80 million for Coco Company's equity. The firm is privately owned by one person and the shares are untraded. The valuator has checked data and estimates that the average discount for lack of marketability is 30 percent and the average discount for lack of control is 20 percent. An investor has asked the valuator to estimate the price that he would have to pay to buy from the owner a 10 percent interest in Coco Company. The price that the valuator will suggest is *closest to*:

- ☐ \$3.5 million.
- ☐ \$4.0 million.
- ☒ \$4.5 million.

Rationale

✘ **\$3.5 million.**

The 10 percent stake will be a noncontrolling, non-marketable position. Therefore, the price paid should reflect discounts for lack of marketability and the lack of control. The calculation of the value of a 10 percent stake is as follows:

$$\begin{aligned}\text{Total discount} &= 1 - (1 - \text{DLOC})(1 - \text{DLOM}) = 1 - (1 - 0.2)(1 - 0.3) = 44\% \\ \text{Value at 10 percent stake} &= \text{Total value of equity} \times (1 - \text{Total discount}) \times 0.10 \\ &= \$80 \text{ million} \times (1 - 0.44) \times 0.10 = \$4.48 \text{ million}\end{aligned}$$

Rationale

✘ **\$4.0 million.**

The 10 percent stake will be a noncontrolling, non-marketable position. Therefore, the price paid should reflect discounts for lack of marketability and the lack of control. The calculation of the value of a 10 percent stake is as follows:

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Rationale

✔ **\$4.5 million.**

The 10 percent stake will be a noncontrolling, non-marketable position. Therefore, the price paid should reflect discounts for lack of marketability and the lack of control. The calculation of the value of a 10 percent stake is as follows:

$$\begin{aligned}\text{Total discount} &= 1 - (1 - \text{DLOC})(1 - \text{DL0M}) = 1 - (1 - 0.2)(1 - 0.3) = 0.44 \\ \text{Value at 10 percent stake} &= \text{Total value of equity} \times (1 - \text{Total discount}) \times 0.10 \\ &= \$80 \text{ million} \times (1 - 0.44) \times 0.10 = \$4.48 \text{ million}\end{aligned}$$

Question 10

L2EQ-PQ3713-1411

LOS: LOS-8890

Lesson Reference: Lesson 5: Valuation Discounts and Premiums, and Business Valuation Standards and Practices

Difficulty: medium

When quantifying the lack of marketability discount, which of the following types of data would result in a marketability discount that is understated?

- ☒ Restricted stock grants
- ☐ IPOs
- ☐ Put options

Rationale

 **This Answer is Correct**

A discount for lack of marketability based on values of unregistered shares would underestimate the true discount because these shares will enjoy ready marketability in the near term, while there is no such guarantee for private company shares.

Post-IPO prices tend to be higher than pre-IPO prices due to other factors besides just the greater marketability (e.g., due to lower risk and greater certainty regarding future cash flows). Therefore, a DLOM based on the differences between pre- and post-IPO prices would overestimate the true discount.

Put option prices primarily reflect the cost of downside protection (not the price of attaining marketability). Using put option prices to estimate the DLOM would overestimate the true discount.

Question 11

L2EQ-PQ3703-1411

LOS: LOS-8840

Lesson Reference: Lesson 3: Private Company Valuation Approaches: (1) Income Approach

Difficulty: medium

An analyst gathered the following information regarding Darius Investments:

Current year FCFF = \$5.2 million

Expected growth rate in FCFF for the next 3 years = 14%

Long-term constant growth rate from Year 4 onwards = 6%

WACC during the high-growth phase = 18%

WACC during the mature phase = 11%

The value of the firm today is *closest* to:

- ☒ \$114 million
- ☐ \$56 million
- ☐ \$136 million

Rationale

 **This Answer is Correct**

$$\text{FCFF}_1 = \$5.2\text{m} \times 1.14 = \$5.928\text{m}$$

$$\text{FCFF}_2 = \$5.2\text{m} \times 1.14^2 = \$6.7579\text{m}$$

$$\text{FCFF}_3 = \$5.2\text{m} \times 1.14^3 = \$7.7040\text{m}$$

$$\text{FCFF}_4 = \$7.7040\text{m} \times 1.06 = \$8.1662\text{m}$$

$$\text{Terminal value at the end of Year 3} = \$8.1662\text{m} / (0.11 - 0.06) = \$163.324 \text{ million}$$

Value of the firm today can be calculated as:

[CF] [2ND] [CE|C]

[ENTER] [↓]

5.928 [ENTER] [↓] [↓]

6.7579 [ENTER] [↓] [↓]

171.028 [ENTER] [NPV]

18 [ENTER] [↓] [CPT]

NPV = \$113.97 million

Question 12

L2EQ-PQ3708-1411

LOS: LOS-8790

Lesson Reference: Lesson 1: The Scope of Private Company Valuation and Definitions (Standards of value)

Difficulty: medium

Which of the following *most likely* has a positive impact on private company valuation relative to public company valuation?

- ☐ Quality of management.
- ☐ Concentration of control.
- ☒ Overlap of shareholders and management.

Rationale

✔ **This Answer is Correct**

Generally speaking:

- Private companies are owned and operated by the same people so agency issues are less of a problem than in public companies.
- Private companies are less likely to be able to attract highly-skilled managers.
- Private company ownership tends to be concentrated in a few hands, which can lead to perquisites and other benefits to owners at the expense of other shareholders.

Question 13

L2EQ-TB0041-1412

LOS: LOS-8800

Lesson Reference: Lesson 1: The Scope of Private Company Valuation and Definitions (Standards of value)

Difficulty: medium

Valuations of private businesses or equity interests therein fall into three groups: transaction related, compliance related, and litigation related. Valuations performed during the process of bankruptcy are *most likely* to fall into:

- ☒ Transaction related.
- ☐ Compliance related.
- ☐ Litigation related.

Rationale

This Answer is Correct

Transactions-related valuations encompass events affecting the ownership or financing of the business and will include the assessment as to whether a company is more valuable as a going concern or in liquidation when the company has filed for bankruptcy protection.

Question 14

L2R38TB-AC025-1512

LOS: LOS-8870

Lesson Reference: Lesson 4: Private Company Valuation Approaches: (2) Market Approach and (3) Asset-Based Approach

Difficulty: medium

Davis Sokol is using the guideline public company method (GPCM) to appraise Cedarific, Inc., a small closely held company. The market value of invested capital to EBITDA ratio for publicly-traded firms with similar size and risk has consistently averaged 8.2x, but the acquirer in a recent control-related acquisition adjusted its bid up by 30 percent. Cedarific's market value of debt is \$425 million and its EBITDA is \$125 million. Cedarific has 20 million shares outstanding. Based on this information, Sokol's estimated price per share for Cedarific in a control-related acquisition should be *closest to*:

- ☒ \$39
- ☐ \$45
- ☐ \$67

Rationale

✔ \$39

Using the market multiple for similar firms in the industry, Sokol's estimate of total firm value is \$1,025 million ($\$125 \text{ million} \times 8.2$). The estimated equity value is equal to the total firm less debt, which comes to \$600 million ($\$1,025 - 425$). Therefore, the estimated per share value before any control adjustment is \$30 ($\$600/20$). With the control adjustment of 30 percent, Sokol's estimate of the acquisition price per share is \$39 ($\30×1.30).

Rationale

✘ \$45

Using the market multiple for similar firms in the industry, Sokol's estimate of total firm value is \$1,025 million ($\$125 \text{ million} \times 8.2$). The estimated equity value is equal to the total firm less debt, which comes to \$600 million ($\$1,025 - 425$). Therefore, the estimated per share value before any control adjustment is \$30 ($\$600/20$). With the control adjustment of 30 percent, Sokol's estimate of the acquisition price per share is \$39 ($\30×1.30).

Rationale

✘ \$67

Using the market multiple for similar firms in the industry, Sokol's estimate of total firm value is \$1,025 million ($\$125 \text{ million} \times 8.2$). The estimated equity value is equal to the total firm less debt, which comes to \$600 million ($\$1,025 - 425$). Therefore, the estimated per share value before any control adjustment is \$30 ($\$600/20$). With the control adjustment of 30 percent, Sokol's estimate of the acquisition price per share is \$39 ($\30×1.30).

Question 15

L2EQ-PQ3701-1411

LOS: LOS-8830

Lesson Reference: Lesson 2: Private Company Valuation: Earnings Normalization and Cash Flow Estimation Issues

Difficulty: medium

Paul Jenkins is valuing Rose Inc., a private manufacturing company. He gathers the following information regarding the company:

Rose Inc.	
Operating Income after Taxes	Reported (\$)
Revenues	7,565,500
Less: Cost of goods sold	4,387,990
Gross profit	3,177,510
Less: Selling, general, and admin. expenses	2,450,600
EBITDA	726,910
Less: Depreciation and amortization	430,000
Earnings before interest and taxes	296,910
Less: Pro forma taxes @ 40%	118,764
Operating income after taxes	178,146

The following information is also available:

- Daniela Castano is the principal shareholder and CEO of Rose Inc. Her compensation for the year was \$1.5 million, which was included in the company's selling, general, and administrative expenses (SG&A). Paul believes that a market-based compensation expense of \$2 million is suitable for a CEO for this company.
- Daniela's brother, Juan Diaz, provided consultancy services to the company for \$10,000. These expenses were included in the company's SG&A. However, Paul believes that a suitable market-based compensation expense for such consultancy is \$15,000.
- The company incurred expenses amounting to \$300,000 on a farmhouse, which Paul does not consider necessary for the core operations of the company. \$200,000 worth of expenses was included in SG&A, while \$100,000 was included in depreciation expense.
- Daniela recently took a personal holiday for which she charged the company \$4,000. These are included in the company's SG&A.

The company's normalized operating income after taxes is *closest* to:

- ☐ -\$4,090
- ☒ \$57,546
- ☐ \$52,746

Rationale

✔ This Answer is Correct

Adjusted SG&A = $\$2,450,600 + (\$2,000,000 - \$1,500,000) + (\$15,000 - \$10,000) - \$200,000 - \$4,000 = \$2,751,600$

Adjusted depreciation expense = $\$430,000 - \$100,000 = \$330,000$

Rose Inc	
Operating Income after Taxes	Normalized (\$)
Revenues	7,565,500
Less: Cost of goods sold	4,387,990
Gross profit	3,177,510
Less: Selling, general, and admin. expenses	2,751,600
EBITDA	425,910
Less: Depreciation and amortization	330,000
Earnings before interest and taxes	95,910
Less: Pro forma taxes @ 40%	38,364
Operating income after taxes	57,546

Question 16

L2R38TB-AC008-1512

LOS: LOS-8850

Lesson Reference: Lesson 3: Private Company Valuation Approaches: (1) Income Approach

Difficulty: medium

Kim Higgins has projected a private company's free cash flow to equity and free cash to the firm and now she wants to determine a discount rate to use. Higgins has estimated the following data:

- Risk-free rate of 3.0 percent.
- Equity risk premium of 4.5 percent.
- Beta based on publicly traded companies in the same industry is 1.4.
- Small size premium for the private company of 2.0 percent.
- Company-specific risk premium of 1.0 percent (reflects owner's key man status).
- Industry risk premium of 1.5 percent.
- The optimal debt to total capital level is 33 percent and after-tax debt cost of 6.0 percent.

In comparing the required return to discount the free cash flows to equity using the expanded CAPM approach to the required return using the build-up approach, Higgins will *most likely* determine that the discount rate calculated using the expanded CAPM is higher by:

- ☒ 0.3 percent.
- ☐ 1.2 percent.
- ☐ 3.8 percent.

Rationale

✔ **0.3 percent.**

The required return using the expanded CAPM is calculated as follows:

$$\begin{aligned} r_e &= r_f + \beta(\text{Equity risk premium}) + \text{Small stock premium} + \text{Company - specific premium} \\ &= 3.0 + 1.4(4.5) + 2.0 + 1.0 = 12.3 \end{aligned}$$

The required return using the build-up method is calculated as follows:

$$\begin{aligned} r_e &= r_f + \text{Equity risk premium} + \text{Small stock premium} + \text{Company - specific premium} + \\ &= 3.0 + 4.5 + 2.0 + 1.0 + 1.5 = 12.0 \end{aligned}$$

Because we have FCFE, we are not finding the CAPM.

Rationale

✘ **1.2 percent.**

The required return using the expanded CAPM is calculated as follows:

$$\begin{aligned} r_e &= r_f + \beta(\text{Equity risk premium}) + \text{Small stock premium} + \text{Company - specific premium} \\ &= 3.0 + 1.4(4.5) + 2.0 + 1.0 = 12.3 \end{aligned}$$

The required return using the build-up method is calculated as follows:

$$\begin{aligned} r_e &= r_f + \text{Equity risk premium} + \text{Small stock premium} + \text{Company - specific premium} + \\ &= 3.0 + 4.5 + 2.0 + 1.0 + 1.5 = 12.0 \end{aligned}$$

Because we have FCFE, we are not finding the CAPM.

Rationale

✖ 3.8 percent.

The required return using the expanded CAPM is calculated as follows:

$$\begin{aligned} r_e &= r_f + \beta(\text{Equity risk premium}) + \text{Small stock premium} + \text{Company - specific premium} \\ &= 3.0 + 1.4(4.5) + 2.0 + 1.0 = 12.3 \end{aligned}$$

The required return using the build-up method is calculated as follows:

$$\begin{aligned} r_e &= r_f + \text{Equity risk premium} + \text{Small stock premium} + \text{Company - specific premium} + \\ &= 3.0 + 4.5 + 2.0 + 1.0 + 1.5 = 12.0 \end{aligned}$$

Because we have FCFE, we are not finding the CAPM.

Question 17

L2R38TB-ITEMSET-AC001-1512

LOS: LOS-8840

LOS: LOS-8870

LOS: LOS-8860

Lesson Reference: Lesson 3: Private Company Valuation Approaches: (1) Income Approach

Difficulty: N/A

Use the following information to answer the next 3 questions:

Barlow Van Lines (BVL) has operated as a family-owned moving company since its inception in 1958. At first it was local only, but after receiving permission to become national in 1981, BVL expanded exponentially to its current level of 7,200 moves last year and annual revenues of \$43.2 million. Aaron Barlow, Barlow's chief executive and founder, recently asked Davis Saenz, his chief financial officer, to begin the process of finding an acquirer for the company.

Grand Star Partners recently expressed an interest in adding Barlow Van Lines to its portfolio of companies. Saenz believes that Grand Star would most likely hold BVL for 3 to 5 years while it rehabilitates company management and integrates financial and operating systems, and then sell to another trucking company as a strategic acquisition.

For his analysis, Saenz's has estimated that BVL's operating revenue will grow in line with the country's long-term GDP growth rate of 3.5 percent. The country's GDP growth has recently been below the 3.5 percent, but the expectation is that the country is rebounding from its recent slow growth. Saenz further assumes a tax rate of 20 percent and a size-adjusted required return (WACC) of 12 percent using market value of debt and the build-up approach for his analysis.

Additional projection data prepared by Saenz appears in Exhibit 1.

Exhibit 1: Barlow Van Lines Operating Income Forecast Assumptions Percentage of Sales

Gross profit margin	53
Depreciation	3
SG&A expenses*	17
Working capital investment	5
Net new fixed capital expenditures	6

*The 17 percent for SG&A does *not* include the depreciation of 3 percent.

Barlow was pleased with Saenz's analysis, but made two comments:

1. "I believe a market-based approach to finding value might be better than an intrinsic value analysis at this point."
2. "You should discount whatever free cash flow value you find to reflect industry risk because trucking is subject to ludicrous government regulation."

Barlow further points out that two of BVL's peers, both of which have publicly-traded shares, have sold recently in strategic acquisitions.

i.

The value of Barlow Van Lines using a free cash flow to the firm valuation approach will be *closest to*:

- ☐ \$40 million.
- ☐ \$65 million.
- ☒ \$95 million.

Rationale

✔ This Answer is Correct

It will first be necessary to calculate next year's FCFF, which will be done using the formula for finding FCFF when starting with next year's EBIT:

$$\text{FCFF} = \text{EBIT} (1 - t) + \text{Dep} - \text{WCI} - \text{FCI}$$

Each input will have to be calculated. EBIT is found by building a projected income statement for the next year:

	(000s)
Revenues (\$43.2 million \times 1.035)	\$44,712
Gross profit (GP margin of 53 percent \times \$44,712)	23,697
SG&A expense (17 percent \times \$44,712)	7,601
Depreciation expense (3 percent \times \$44,712)	<u>1,341</u>
EBIT	\$14,755

The remaining inputs (in 000s) are as follows:

$$\text{Depreciation (Dep)} = \$1,341 (0.03 \times \$44,712)$$

$$\text{Working capital investment (WCI)} = \$2,236 (0.05 \times \$44,712)$$

$$\text{Capital spending (FCI)} = \$2,683 (0.06 \times \$44,712)$$

Therefore, the projected next period FCFF (in millions) is calculated as follows:

$$\text{FCFF} = \text{EBIT} (1 - t) + \text{Dep} - \text{WCI} - \text{FCI} = \$14.755(1 - 0.20) + 1.341 - 2.236 - 2.683 =$$

Next, we can calculate firm value using a constant growth model:

$$V_F = \frac{\text{FCFF}_1}{\text{WACC} - g} = \frac{\$8.226 \text{ million}}{0.12 - 0.035} \cong \$96.8 \text{ million}$$

Rationale

✔ This Answer is Correct

It will first be necessary to calculate next year's FCFF, which will be done using the formula for finding FCFF when starting with next year's EBIT:

$$\text{FCFF} = \text{EBIT} (1 - t) + \text{Dep} - \text{WCI} - \text{FCI}$$

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Next, we can calculate firm value using a constant growth model:

$$V_F = \frac{\text{FCFF}_1}{\text{WACC} - g} = \frac{\$8.226 \text{ million}}{0.12 - 0.035} \cong \$96.8 \text{ million}$$

Rationale

✔ This Answer is Correct

It will first be necessary to calculate next year's FCFF, which will be done using the formula for finding FCFF when starting with next year's EBIT:

$$\text{FCFF} = \text{EBIT} (1 - t) + \text{Dep} - \text{WCI} - \text{FCI}$$

Each input will have to be calculated. EBIT is found by building a projected income statement for the next year:

	(000s)
Revenues (\$43.2 million \times 1.035)	\$44,712
Gross profit (GP margin of 53 percent \times \$44,712)	23,697
SG&A expense (17 percent \times \$44,712)	7,601

	(000s)
Depreciation expense (3 percent × \$44,712)	<u>1,341</u>
EBIT	\$14,755

The remaining inputs (in 000s) are as follows:

$$\text{Depreciation (Dep)} = \$1,341 \text{ (} 0.03 \times \$44,712 \text{)}$$

$$\text{Working capital investment (WCI)} = \$2,236 \text{ (} 0.05 \times \$44,712 \text{)}$$

$$\text{Capital spending (FCI)} = \$2,683 \text{ (} 0.06 \times \$44,712 \text{)}$$

Therefore, the projected next period FCFF (in millions) is calculated as follows:

$$\text{FCFF} = \text{EBIT} (1 - t) + \text{Dep} - \text{WCI} - \text{FCI} = \$14.755(1 - 0.20) + 1.341 - 2.236 - 2.683 =$$

Next, we can calculate firm value using a constant growth model:

$$V_F = \frac{\text{FCFF}_1}{\text{WACC} - g} = \frac{\$8.226 \text{ million}}{0.12 - 0.035} \cong \$96.8 \text{ million}$$

ii.

The *best* reason for Barlow to suggest a market-based approach to valuation in his first comment is:

- ☐ the country is only just rebounding from slow growth.
- ☐ there is no evidence that BVL's peers are undervalued.
- ☒ that recently sold peers included strategic acquisition value.

Rationale

✗ This Answer is Incorrect

Strategic acquisition value would be reflected in prices paid for BVL's peers. This would be a more realistic value than intrinsic value. Although Grand Star should earn the benefit from making the operations more efficient, Barlow may as well benefit from the strategic value of his firm to others.

Rationale

✗ This Answer is Incorrect

Strategic acquisition value would be reflected in prices paid for BVL's peers. This would be a more realistic value than intrinsic value. Although Grand Star should earn the benefit from making the operations more efficient, Barlow may as well benefit from the strategic value of his firm to others.

Rationale

✗ This Answer is Incorrect

Strategic acquisition value would be reflected in prices paid for BVL's peers. This would be a more realistic value than intrinsic value. Although Grand Star should earn the benefit from making the operations more efficient, Barlow may as well benefit from the strategic value of his firm to others.

iii.

If Saenz followed the recommendation in Barlow's second comment, BVL's value would *most likely* be:

- ☐ overstated.
- ☒ understated.
- ☐ properly stated.

Rationale

This Answer is Incorrect

The build-up approach Saenz used to find the 12 percent WACC has an industry risk premium already included. If Saenz takes an additional discount off his total firm value, then he will be double counting the industry risk and the result will be an understated value for BVL.

Rationale

This Answer is Incorrect

The build-up approach Saenz used to find the 12 percent WACC has an industry risk premium already included. If Saenz takes an additional discount off his total firm value, then he will be double counting the industry risk and the result will be an understated value for BVL.

Rationale

This Answer is Incorrect

The build-up approach Saenz used to find the 12 percent WACC has an industry risk premium already included. If Saenz takes an additional discount off his total firm value, then he will be double counting the industry risk and the result will be an understated value for BVL.

Question 18

L2EQ-PQ3704-1411

LOS: LOS-8840

Lesson Reference: Lesson 3: Private Company Valuation Approaches: (1) Income Approach

Difficulty: medium

Martha Harriot wants to value the stock of Jupiter Inc. and decides to use the capitalized cash flow method. She believes that free cash flow to the firm (FCFF) will be \$8.95 million next year. Further, she estimates the weighted average cost of capital to be 12% and the growth rate in FCFF to be 4% annually. Given that the company has a debt-to-equity ratio of 40% and that it has 2 million shares outstanding, its price per share is *closest to*:

- ☐ \$67.125
- ☐ \$33.56
- ☒ \$39.96

Rationale

✔ This Answer is Correct

Value of the firm = $FCFF_1 / (WACC - g)$

Value of the firm = $\$8.95m / (0.12 - 0.04) = \111.875 million

$W_d = 0.4 / 1.4 = 0.286$

$W_e = 1 - 0.286 = 0.714$

Amount of equity = $\$111.875m \times 0.7143 = \79.91 million

Value per share = $\$79.91m / 2m = \39.96

Question 19

L2R38TB-AC015-1512

LOS: LOS-8800

Lesson Reference: Lesson 1: The Scope of Private Company Valuation and Definitions (Standards of value)

Difficulty: medium

The company-related factor to be categorized as an agency issue would *most likely* be:

- ☒ management has a controlling ownership.
- ☐ management quality and depth.
- ☐ information quality.

Rationale

☒ **management has a controlling ownership.**

Agency issues relate to conflicts of interest between owners and managers. Therefore, when owners are the managers, they have unrestricted access to the firm's assets (often to its detriment) that lead to a value placed on control of the firm.

Rationale

☐ **management quality and depth.**

Agency issues relate to conflicts of interest between owners and managers. Therefore, when owners are the managers, they have unrestricted access to the firm's assets (often to its detriment) that lead to a value placed on control of the firm.

Rationale

☐ **information quality.**

Agency issues relate to conflicts of interest between owners and managers. Therefore, when owners are the managers, they have unrestricted access to the firm's assets (often to its detriment) that lead to a value placed on control of the firm.

Question 20

L2EQ-PQ3702-1411

LOS: LOS-8830

Lesson Reference: Lesson 2: Private Company Valuation: Earnings Normalization and Cash Flow Estimation Issues

Difficulty: medium

Suzanne Williams is valuing Sun Corporation (SC), a private manufacturing company. She gathers the following information regarding the company:

Sun Corporation (SC)

Operating Income after Taxes (Normalized) 2010 (\$)

Revenues	10,560,500
Less: Cost of goods sold	6,336,300
Gross profit	4,224,200
Less: Selling, general, and admin. expenses	2,850,600
EBITDA	1,373,600
Less: Depreciation and amortization	380,000
Earnings before interest and taxes	993,600
Less: Pro forma taxes @ 40%	397,440
Operating income after taxes	596,160

Suzanne decides to estimate SC's FCFF for the next year and makes the following assumptions:

- Long-term growth rate in revenue = 8%
- Gross profit margin = 40%
- Depreciation as a percentage of revenue = 3.75%
- SG&A expenses are likely to remain at their normalized level of 2010
- Investment in working capital = 18% of the increase in revenue
- Investment in fixed capital = Depreciation expense plus 5% of incremental revenue
- Taxes would be remain at the same level

The company's FCFF for 2011 is *closest* to:

- ☒ \$575,990
- ☐ \$1,003,690
- ☐ \$148,290

Rationale

✓ This Answer is Correct

Sun Corporation (SC)	
Operating Income after Taxes (Normalized)	2011 (\$)

Revenues ($= 10,560,500 \times 1.08$)	11,405,340.00
Less: Cost of goods sold [$= 11,405,340 \times (1 - 40\%)$]	6,843,204.00
Gross profit	4,562,136.00
Less: Selling, general, and admin. expenses	2,850,600.00
EBITDA	1,711,536.00
Less: Depreciation and amortization ($= 11,405,340 \times 3.75\%$)	427,700.25
Earnings before interest and taxes	1,283,835.75
Less: Pro forma taxes @ 40%	513,534.30
Operating income after taxes	770,301.45
Plus: Depreciation and amortization 427,700.25	
Less: Capital expenditures [$= 427,700.25 + [5\% (11,405,340 - 10,560,500)]$]	469,942.25
Less: Increase in working capital [$= 0.18 (11,405,340 - 10,560,500)$]	152,071.20
Free cash flow to the firm	575,988.25

Question 21

L2R38TB-AC016-1512

LOS: LOS-8810

Lesson Reference: Lesson 1: The Scope of Private Company Valuation and Definitions (Standards of value)

Difficulty: medium

The value standard *most likely* to consider the asset's synergies (i.e., strategic value to a particular investor) and unique value to a particular investor is:

- ☐ fair value.
- ☒ investment value.
- ☐ fair market value.

Rationale

 **fair value.**

Investment value considers the value of an asset to a particular investor, which will likely apply to private company valuation and consider the asset's strategic value (i.e., synergies) for that investor.

Rationale

 **investment value.**

Investment value considers the value of an asset to a particular investor, which will likely apply to private company valuation and consider the asset's strategic value (i.e., synergies) for that investor.

Rationale

 **fair market value.**

Investment value considers the value of an asset to a particular investor, which will likely apply to private company valuation and consider the asset's strategic value (i.e., synergies) for that investor.

Question 22

L2R38TB-AC007-1512

LOS: LOS-8830

Lesson Reference: Lesson 2: Private Company Valuation: Earnings Normalization and Cash Flow Estimation Issues

Difficulty: medium

Sarah Jones wishes to determine free cash flow for PIK Industries. In the past year, PIK's revenues were \$60 million and Jones has projected that revenues will increase 5 percent per year in the long term. She has made adjustments and determined the following:

- Gross profit margin is 30 percent and is expected to remain at this level.
- SG&A expenses were \$4.4 million in the past year. Due to eliminating redundant staff, these are expected to not grow in the next two years.
- Depreciation, which has been 1.5 percent of revenues, will remain at this same percentage.
- The increase in working capital has equaled 10 percent of the change in revenues (e.g., if revenues rise \$X from one year to the next, additional working capital of $0.10 \times \$X$ is needed).
- Capital expenditures will equal depreciation plus 2.5 percent of the incremental revenues.
- Interest expense was \$2 million last year and is expected to remain at this level.
- The projected tax rate is 40 percent.

Based on this information, Jones' projected free cash flow to the firm (FCFF) for the next year will be *closest to*:

- ☒ \$7,575,000
- ☐ \$9,450,000
- ☐ \$11,625,000

Rationale

☒ **\$7,575,000**

The FCFF can be calculated starting with EBIT or net income. For ease, we will use EBIT as our starting point and the FCFF can be found using the following formula:

$$\text{FCFF} = \text{EBIT}(1 - t) + \text{Dep} - \text{WCI} - \text{FCI}$$

The actual calculation of each input and the FCFF is as follows:

Revenues ($\$60,000,000 \times 1.05$)	\$63,000,000
Gross profit ($0.30 \times \text{Revenues}$)	18,900,000
SG&A	4,400,000
Depreciation ($0.015 \times \text{Revenues}$)	<u>945,000</u>
Projected EBIT	\$13,555,000
Taxes on EBIT (40 percent)	<u>5,422,000</u>

Operating income after tax	\$8,133,000
Plus: Depreciation	945,000
Less: Capital expenditures (\$945,000 + 0.025 × \$3,000,000)	1,020,000
Less: Increase in working capital (0.10 × \$3,000,000)	<u>300,000</u>
Free cash flow to the firm	\$7,758,000

The \$7,758,000 is closest to the \$7,575,000 listed in the answer choices.

Rationale

✗ **\$9,450,000**

The FCFF can be calculated starting with EBIT or net income. For ease, we will use EBIT as our starting point and the FCFF can be found using the following formula:

$$\text{FCFF} = \text{EBIT}(1 - t) + \text{Dep} - \text{WCI} - \text{FCI}$$

The actual calculation of each input and the FCFF is as follows:

Revenues (\$60,000,000 × 1.05)	\$63,000,000
Gross profit (0.30 × Revenues)	18,900,000
SG&A	4,400,000
Depreciation (0.015 × Revenues)	<u>945,000</u>
Projected EBIT	\$13,555,000
Taxes on EBIT (40 percent)	<u>5,422,000</u>
Operating income after tax	\$8,133,000
Plus: Depreciation	945,000
Less: Capital expenditures (\$945,000 + 0.025 × \$3,000,000)	1,020,000
Less: Increase in working capital (0.10 × \$3,000,000)	<u>300,000</u>
Free cash flow to the firm	\$7,758,000

The \$7,758,000 is closest to the \$7,575,000 listed in the answer choices.

Rationale

✗ **\$11,625,000**

The FCFF can be calculated starting with EBIT or net income. For ease, we will use EBIT as our starting point and the FCFF can be found using the following formula:

$$\text{FCFF} = \text{EBIT}(1 - t) + \text{Dep} - \text{WCI} - \text{FCI}$$

The actual calculation of each input and the FCFF is as follows:

Revenues ($\$60,000,000 \times 1.05$)	\$63,000,000
Gross profit ($0.30 \times \text{Revenues}$)	18,900,000
SG&A	4,400,000
Depreciation ($0.015 \times \text{Revenues}$)	<u>945,000</u>
Projected EBIT	\$13,555,000
Taxes on EBIT (40 percent)	<u>5,422,000</u>
Operating income after tax	\$8,133,000
Plus: Depreciation	945,000
Less: Capital expenditures ($\$945,000 + 0.025 \times \$3,000,000$)	1,020,000
Less: Increase in working capital ($0.10 \times \$3,000,000$)	<u>300,000</u>
Free cash flow to the firm	\$7,758,000

The \$7,758,000 is closest to the \$7,575,000 listed in the answer choices.

Question 23

L2EQ-TBB227-1412

LOS: LOS-8850

Lesson Reference: Lesson 3: Private Company Valuation Approaches: (1) Income Approach

Difficulty: medium

When estimating the required rate of return for private company valuation models, for which of the following risk factors is an adjustment *least likely* to be required relative to discount rates used for public companies?

- ☐ Small-company risk.
- ☒ Market risk.
- ☐ Projection risk.

Rationale

This Answer is Correct

When valuing private companies, the discount rate should be adjusted for the small stock premium associated with private companies and any projection risk due to a lack of information regarding the company's business model or operations relative to a similar public company. Market risk is considered in a similar fashion for both public and private securities, and the resulting discount is adjusted for differences in risk due to size and projection risk.

Question 24

L2R38TB-AC024-1512

LOS: LOS-8840

Lesson Reference: Lesson 3: Private Company Valuation Approaches: (1) Income Approach

Difficulty: medium

For the next year, Pember Company's normalized cash flow from operations is estimated to be \$15.8 million, and fixed capital expenditures are estimated to be \$2.5 million. The firm is expected to borrow \$0.8 million in the next year. Total debt now stands at \$10 million at a market rate of 7 percent, and represents 10 percent of the capital structure. Cost of equity capital was estimated by an outside consultant to be 12.5 percent. Pember considers interest costs a financing expense, and operates under a 30 percent tax rate. The company is in the mature phase of its existence, in an industry expected to have free cash flow growth in line with the country's GDP growth of 2.5 percent per year. Based on this information, the total value of the firm using the capitalized cash flow method will be *closest to*:

- ☐ \$139 million.
- ☐ \$141 million.
- ☒ \$149 million.

Rationale

✗ **\$139 million.**

Since the total firm value is being sought, we need to find free cash flow to the firm (FCFF) and then capitalize it by the difference between the WACC and the growth rate. The FCFF and WACC are calculated as follows:

$$\begin{aligned}\text{FCFF} &= [\text{EBIT}(1 - t) + \text{Dep} - \text{WCI}] - \text{FCI} = [\text{CFO} + \text{I}(1 - t)] - \text{FCI} \\ &= \$15.8 + (10 \times 0.07)(1 - 0.30) - 2.5 = \$13.79\end{aligned}$$

$$\text{WACC} = w_{ad}(1 - t) + w_{ec} = 0.10(0.07)(1 - 0.30) + 0.90(0.125) = 0.1174$$

Using the capitalized cash flow method, the total value of the firm is calculated as follows:

$$V_F = \frac{\text{FCFF}_1}{\text{WACC} - g} = \frac{\$13.79}{0.1174 - 0.025} = \$149.2 \text{ million}$$

Rationale

✗ **\$141 million.**

Since the total firm value is being sought, we need to find free cash flow to the firm (FCFF) and then capitalize it by the difference between the WACC and the growth rate. The FCFF and WACC are calculated as follows:

$$\begin{aligned}
 \text{FCFF} &= [\text{EBIT}(1 - t) + \text{Dep} - \text{WCI}] - \text{FCI} = [\text{CFO} + \text{I}(1 - t)] - \text{FCI} \\
 &= \$15.8 + (10 \times 0.07)(1 - 0.30) - 2.5 = \$13.79 \\
 \text{WACC} &= w_d d(1 - t) + w_c c = 0.10(0.07)(1 - 0.30) + 0.90(0.125) = 0.1174
 \end{aligned}$$

Using the capitalized cash flow method, the total value of the firm is calculated as follows:

$$V_F = \frac{\text{FCFF}_1}{\text{WACC} - g} = \frac{\$13.79}{0.1174 - 0.025} = \$149.2 \text{ million}$$

Rationale

✔ **\$149 million.**

Since the total firm value is being sought, we need to find free cash flow to the firm (FCFF) and then capitalize it by the difference between the WACC and the growth rate. The FCFF and WACC are calculated as follows:

$$\begin{aligned}
 \text{FCFF} &= [\text{EBIT}(1 - t) + \text{Dep} - \text{WCI}] - \text{FCI} = [\text{CFO} + \text{I}(1 - t)] - \text{FCI} \\
 &= \$15.8 + (10 \times 0.07)(1 - 0.30) - 2.5 = \$13.79 \\
 \text{WACC} &= w_d d(1 - t) + w_c c = 0.10(0.07)(1 - 0.30) + 0.90(0.125) = 0.1174
 \end{aligned}$$

Using the capitalized cash flow method, the total value of the firm is calculated as follows:

$$V_F = \frac{\text{FCFF}_1}{\text{WACC} - g} = \frac{\$13.79}{0.1174 - 0.025} = \$149.2 \text{ million}$$

Question 25

L200-PQ0037-1412

LOS: LOS-8870

Lesson Reference: Lesson 4: Private Company Valuation Approaches: (2) Market Approach and (3) Asset-Based Approach

Difficulty: medium

For a large and privately held company, which of the following valuation methods would a private equity manager be unlikely to use?

- ☐ EBITDA multiples
- ☐ EBIT multiples
- ☒ Net income multiples

Rationale

This Answer is Correct

For large and mature private companies, EBITDA or EBIT multiples are quite popular. However, net income multiples are more commonly used for smaller private companies.

Question 26

L2R38TB-AC018-1512

LOS: LOS-8830

Lesson Reference: Lesson 2: Private Company Valuation: Earnings Normalization and Cash Flow Estimation Issues

Difficulty: medium

When a privately held company has an affiliated entity from which it leases real estate, an acquirer's *best* course of action is to:

- ☐ assume the lease has been entered at fair value.
- ☒ replace the lease expenses recorded with a market-based lease expense.
 - remove the lease expense associated with the affiliated entity from the income statement and record an entry on the balance sheet for the fair market value of the asset.
- ☐ statement and record an entry on the balance sheet for the fair market value of the asset.

Rationale

 **assume the lease has been entered at fair value.**


A market-based lease expense should replace the lease expenses paid to the affiliated entity in order to avoid transfer of revenue and expenses to the affiliated company and better reflect the economic value of the operating assets to the acquirer.

Rationale

 **replace the lease expenses recorded with a market-based lease expense.**

A market-based lease expense should replace the lease expenses paid to the affiliated entity in order to avoid transfer of revenue and expenses to the affiliated company and better reflect the economic value of the operating assets to the acquirer.

Rationale

 **remove the lease expense associated with the affiliated entity from the income statement and record an entry on the balance sheet for the fair market value of the asset.**

A market-based lease expense should replace the lease expenses paid to the affiliated entity in order to avoid transfer of revenue and expenses to the affiliated company and better reflect the economic value of the operating assets to the acquirer.

Question 27

L2R38TB-AC010-1512

LOS: LOS-8870

Lesson Reference: Lesson 4: Private Company Valuation Approaches: (2) Market Approach and (3) Asset-Based Approach

Difficulty: medium

Kim Higgins wants to verify the reasonableness of her total firm and equity valuation she found for the private company. Her work showed total firm value \$7.6 million and equity of \$5.0 to \$5.4 million.

Higgins will use the guideline public company method based on market value of invested capital (MVIC) to normalized EBITDA. The MVIC-EBITDA multiple is 10x for public companies in the same industry as the private company she is valuing. Higgins decides to use a 20 percent adjustment downward to that multiple based on differing risk for the private company and because the public companies are generally quite large compared to the private company.

Higgins estimates that the private company's adjusted EBITDA is \$750,000 and that its debt has a market value of \$2.6 million. In trying to determine whether a control premium is warranted, she has only found one transaction in the industry and this occurred several years ago when stock prices were quite high. That takeover was a stock-for-stock merger and the control premium was 5 percent. Higgins is unaware of any strategic buyers for the private company.

Based on this information, Higgins will estimate the private company's equity value is *closest to*:

- ☐ \$6.3 million.
- ☐ \$6.0 million.
- ☒ \$3.4 million.

Rationale

 **\$6.3 million.**

Higgins will start with the 10 MVIC-EBITDA multiple and adjust it downward to 8 (reflects the 20 percent downward adjustment). She should not adjust the multiple for a control premium because there is little evidence that one is warranted. The previous transaction was several years ago and it appears the acquiring firm may have been using its overpriced shares. In addition, she knows of no strategic buyers. Thus, she will use the 8 multiple to find total firm value and then find equity value by subtracting the market value of the debt from the firm value. The calculations are as follows:

$$\begin{aligned}\text{Firm value (V}_F\text{)} &= \text{MVIC multiple} \times \text{EBITDA} = 8 \times \$750,000 = \$6,000,000 \\ V_E &= V_F - V_D = \$6.0 \text{ million} - 2.6 \text{ million} = \$3.4 \text{ million}\end{aligned}$$

Rationale

✗ \$6.0 million.

Higgins will start with the 10 MVIC-EBITDA multiple and adjust it downward to 8 (reflects the 20 percent downward adjustment). She should not adjust the multiple for a control premium because there is little evidence that one is warranted. The previous transaction was several years ago and it appears the acquiring firm may have been using its overpriced shares. In addition, she knows of no strategic buyers. Thus, she will use the 8 multiple to find total firm value and then find equity value by subtracting the market value of the debt from the firm value. The calculations are as follows:

$$\begin{aligned}\text{Firm value (V}_F\text{)} &= \text{MVIC multiple} \times \text{EBITDA} = 8 \times \$750,000 = \$6,000,000 \\ \text{V}_E &= \text{V}_F - \text{V}_D = \$6.0 \text{ million} - 2.6 \text{ million} = \$3.4 \text{ million}\end{aligned}$$

Rationale

✓ \$3.4 million.

Higgins will start with the 10 MVIC-EBITDA multiple and adjust it downward to 8 (reflects the 20 percent downward adjustment). She should not adjust the multiple for a control premium because there is little evidence that one is warranted. The previous transaction was several years ago and it appears the acquiring firm may have been using its overpriced shares. In addition, she knows of no strategic buyers. Thus, she will use the 8 multiple to find total firm value and then find equity value by subtracting the market value of the debt from the firm value. The calculations are as follows:

$$\begin{aligned}\text{Firm value (V}_F\text{)} &= \text{MVIC multiple} \times \text{EBITDA} = 8 \times \$750,000 = \$6,000,000 \\ \text{V}_E &= \text{V}_F - \text{V}_D = \$6.0 \text{ million} - 2.6 \text{ million} = \$3.4 \text{ million}\end{aligned}$$

Question 28

L2EQ-TB0043-1412

LOS: LOS-8820

Lesson Reference: Lesson 2: Private Company Valuation: Earnings Normalization and Cash Flow Estimation Issues

Difficulty: medium

Valuing an asset based on price multiples from sales of assets viewed as similar to the subject asset is part of which approach to private company valuation?

- ☐ Income approach.
- ☒ Market approach.
- ☐ Asset-based approach.

Rationale

This Answer is Correct

The income approach values an asset as the present value of the income expected from it.

The asset-based approach values a private company based on the values of the underlying assets of the entity less the value of any related liabilities.

Question 29

L2R38TB-AC017-1512

LOS: LOS-8810

Lesson Reference: Lesson 1: The Scope of Private Company Valuation and Definitions (Standards of value)

Difficulty: medium

The valuation premise that results in the lowest valuation will *most likely* be:

- ☐ assemblage of assets.
- ☐ orderly disposition.
- ☒ forced liquidation.

Rationale

 **assemblage of assets.**

Forced liquidation results from urgency for the seller to accept an immediately available (i.e., lower) price rather than waiting for a price that better reflects the seller's definition of value (i.e., higher price).

Rationale

 **orderly disposition.**

Forced liquidation results from urgency for the seller to accept an immediately available (i.e., lower) price rather than waiting for a price that better reflects the seller's definition of value (i.e., higher price).

Rationale

 **forced liquidation.**

Forced liquidation results from urgency for the seller to accept an immediately available (i.e., lower) price rather than waiting for a price that better reflects the seller's definition of value (i.e., higher price).

Question 30

L2EQ-ITEMSET-PQ3705-1411

LOS: LOS-8830

Lesson Reference: Lesson 3: Private Company Valuation Approaches: (1) Income Approach

Use the following information to answer the next 2 questions:

Gifts and More (G&M) is a small private business that deals in gift items. The company has \$18,000 in working capital requirements and fixed assets with a fair value of \$190,000. G&M's required returns on working capital, fixed assets, and intangible assets are estimated as 2.5%, 8%, and 12%, respectively. Normalized earnings for the year just ended amounted to \$91,000 and residual income is expected to grow at 3% per year.

i.

The company's excess earnings are *closest* to:

- ☐ \$84,810
- ☒ \$75,350
- ☐ \$81,650

Rationale

✔ This Answer is Correct

Excess earnings = Normalized earnings – Required return on fixed assets – Required return on working capital

$$\text{Excess earnings} = \$91,000 - (\$190,000 \times 0.08) - (\$18,000 \times 0.025) = \$75,350$$

ii.

The value of the firm is *closest* to:

- ☒ \$1,070,340
- ☐ \$1,045,220
- ☐ \$862,340

Rationale

✔ This Answer is Correct

$$\text{Value of intangible assets} = (75,350 \times 1.03) / (0.12 - 0.03) = \$862,338.8889$$

Firm value = Value of fixed assets + Value of working capital + Value of intangible assets

$$\text{Firm value} = \$190,000 + \$18,000 + \$862,338.89 = \$1,070,338.89$$

Question 31

L2EQ-TBX117-1502

LOS: LOS-8880

Lesson Reference: Lesson 4: Private Company Valuation Approaches: (2) Market Approach and (3) Asset-Based Approach

Difficulty: easy

A private company in financial distress would *most likely* be appropriately valued using the:

- ☐ Income approach.
- ☐ Market approach.
- ☒ Asset approach.

Rationale

This Answer is Correct

The asset approach values a company as the fair value of the assets of the company minus the fair value of the liabilities. As such, it does not treat the company as a going concern and is most appropriate for liquidation values in times of financial distress.

Question 32

L2R38TB-AC022-1512

LOS: LOS-8860

Lesson Reference: Lesson 3: Private Company Valuation Approaches: (1) Income Approach

Difficulty: medium

Which of the following would most likely be included in the build-up approach but not in the expanded CAPM approach to determine required return for use in discounting cash flows under the income-based approaches?

- ☒ Industry risk premium.
- ☐ Size premium/discount.
- ☐ Projection risk premium.

Rationale

☒ Industry risk premium.

An industry premium is specific to the build-up approach rather than to expanded CAPM. Size and projection risk adjustments may be included in either approach, although a size premium may not be justified for expanded CAPM where a guideline public company has risks similar to the target.

Rationale

☐ Size premium/discount.

An industry premium is specific to the build-up approach rather than to expanded CAPM. Size and projection risk adjustments may be included in either approach, although a size premium may not be justified for expanded CAPM where a guideline public company has risks similar to the target.

Rationale

☐ Projection risk premium.

An industry premium is specific to the build-up approach rather than to expanded CAPM. Size and projection risk adjustments may be included in either approach, although a size premium may not be justified for expanded CAPM where a guideline public company has risks similar to the target.

Question 33

L2EQ-PQ3712-1411

LOS: LOS-8880

Lesson Reference: Lesson 4: Private Company Valuation Approaches: (2) Market Approach and (3) Asset-Based Approach

Difficulty: medium

Which of the following approaches to private company valuation typically yields the lowest value for a company?

- ☒ Asset-based approach
- ☐ Income approach
- ☐ Market approach

Rationale

✔ Asset-based approach

The asset-based approach looks at the market value of the net assets of the company and ignores any future growth in earnings. This may be appropriate for a liquidation situation, but for a company that is a going concern, this approach is likely to give the lowest value of the company compared to the other methods, which reflect the future growth prospects of the company.

Rationale

✘ Income approach

The asset-based approach looks at the market value of the net assets of the company and ignores any future growth in earnings. This may be appropriate for a liquidation situation, but for a company that is a going concern, this approach is likely to give the lowest value of the company compared to the other methods, which reflect the future growth prospects of the company.

Rationale

✘ Market approach

The asset-based approach looks at the market value of the net assets of the company and ignores any future growth in earnings. This may be appropriate for a liquidation situation, but for a company that is a going concern, this approach is likely to give the lowest value of the company compared to the other methods, which reflect the future growth prospects of the company.

Question 34

L2R38TB-AC020-1512

LOS: LOS-8880

Lesson Reference: Lesson 4: Private Company Valuation Approaches: (2) Market Approach and (3) Asset-Based Approach

Difficulty: medium

Which valuation approach is *most likely* to be used to value a formerly going concern in liquidation?

- ☒ Asset-based approach.
- ☐ Market-based approach.
- ☐ Income-based approach.

Rationale

Asset-based approach.

The asset-based approach uses the firm's assets as the basis for value under the non-ongoing concern premise. Several value standards may be applicable under this approach.

Rationale

Market-based approach.

The asset-based approach uses the firm's assets as the basis for value under the non-ongoing concern premise. Several value standards may be applicable under this approach.

Rationale

Income-based approach.

The asset-based approach uses the firm's assets as the basis for value under the non-ongoing concern premise. Several value standards may be applicable under this approach.

Question 35

L2EQ-TBB228-1412

LOS: LOS-8870

Lesson Reference: Lesson 4: Private Company Valuation Approaches: (2) Market Approach and (3) Asset-Based Approach

Difficulty: medium

Which of the following methods of private company valuation is *least likely* to be from a control perspective?

- ☐ Free cash flow.
- ☐ Guideline transactions method.
- ☒ Guideline public-company method.

Rationale

This Answer is Correct

The free cash flow method is from a control perspective, since it assumes the investor has access to all the discretionary cash flows of the firm. The guideline transactions method is also from a control perspective, since it is based on price multiples from the acquisition of similar companies. The guideline public-company method simply looks at the price multiples of similar public traded companies, which will not include a control premium.

Question 36

L2R38TB-AC019-1512

LOS: LOS-8830

Lesson Reference: Lesson 2: Private Company Valuation: Earnings Normalization and Cash Flow Estimation Issues

Difficulty: medium

Which of the following will the owner of a private company *most likely* overestimate in order to receive a higher valuation as an acquisition target?

- ☐ Capital needs.
- ☐ Goodwill impairment.
- ☒ Predictability of cash flows.

Rationale

 **Capital needs.**

Unpredictable cash flows relate to greater operating risk, a higher discount rate, and a lower valuation.

Rationale

 **Goodwill impairment.**

Unpredictable cash flows relate to greater operating risk, a higher discount rate, and a lower valuation.

Rationale

 **Predictability of cash flows.**

Unpredictable cash flows relate to greater operating risk, a higher discount rate, and a lower valuation.

Question 37

L2R38TB-ITEMSET-AC004-1512

LOS: LOS-8820

LOS: LOS-8870

LOS: LOS-8830

Lesson Reference: Lesson 2: Private Company Valuation: Earnings Normalization and Cash Flow Estimation Issues

Difficulty: medium

Use the following information to answer the next 3 questions:

Astrid Hagebak, an analyst for Gold Star Partners (GSP), is evaluating several potential portfolio acquisitions. GSP typically holds portfolio investments for 3–5 years, develops management and financial processes that add value, and then attempts to sell them to another company with a strategic interest. During the course of her investigation, Hagebak selects Sharma Corporation, a family-owned maker of lotions with approximately \$625 million in annual operating revenues, for further analysis.

Sharma has a large manufacturing facility with excellent warehouse space in a major metropolitan area. It has access to both highway and rail transportation for its products. Her supervisor suggested they consider free cash flow valuation because it was the most theoretically sound. Hagebak agrees and she makes the following additional comments about potential valuation approaches:

Comment 1: “Free cash flow models are theoretically sound, and we would not have to account for synergies if we use an intrinsic value method.”

Comment 2: “If we use the prior transactions method, we would have to normalize operating earnings before we apply the multiple.”

Comment 3: “We would only have to apply the control discount if we used the guideline public company method.”

“Gold Star has an excellent database of our previous acquisitions that we can draw upon,” Hagebak said. She then continued, “And in this database we've even found four or so guideline companies in this industry.”

Sharma's owner is an older gentleman interested in retiring who would like to receive a fair value for the firm or, otherwise, he will pass it along to his son and daughter. Hagebak's initial analysis indicated that the owner and his children are paid approximately \$2 million in combined salaries above the median for their positions at public companies. In addition, Sharma's owner and children enjoy the use of non-operating property owned in the company with value of approximately \$10 million. This non-operating property generated an additional \$1.5 million in maintenance and repair expense and \$334,000 in depreciation expense in the most recent year just ended. Both the salary expense and property-related expenses are included in SG&A on Sharma's income statement. The firm has \$40 million in debt outstanding at 10 percent interest per year.

Ultimately, Hagebak compiled the information in Exhibit 1 based on the year end actual results just reported by Sharma. Sharma's profit margin is 58 percent and it has a tax rate is 30 percent. Hagebak has opted to not make any adjustment to interest expense for her analysis.

Exhibit 1: Most Recent Year Income Statement Items

Selling, general and administrative	\$93,750,000
Depreciation and Amortization	8,334,000

i.

Which of Hagebak's comments on valuation methods is *most likely* correct?

- ☐ Comment 1.
- ☒ Comment 2.
- ☐ Comment 3.

Rationale

✔ This Answer is Correct

Comment 2 correctly identifies the need for normalizing operating earnings as required for any of the intrinsic value or market value approaches. Synergies should be considered in the forecast period and terminal value of an intrinsic value method (reference Comment 1). A control premium (not discount) should be added (not subtracted) to a valuation developed using the guideline public company (reference Comment 3).

Rationale

✔ This Answer is Correct

Comment 2 correctly identifies the need for normalizing operating earnings as required for any of the intrinsic value or market value approaches. Synergies should be considered in the forecast period and terminal value of an intrinsic value method (reference Comment 1). A control premium (not discount) should be added (not subtracted) to a valuation developed using the guideline public company (reference Comment 3).

Rationale

✔ This Answer is Correct

Comment 2 correctly identifies the need for normalizing operating earnings as required for any of the intrinsic value or market value approaches. Synergies should be considered in the forecast period and terminal value of an intrinsic value method (reference Comment 1). A control premium (not discount) should be added (not subtracted) to a valuation developed using the guideline public company (reference Comment 3).

ii.

Which market value method would Hagebak *most likely* consider?

- ☐ Prior transactions method (PTM).
- ☒ Guideline transactions method (GTM).
- ☐ Guideline public companies method (GPCM).

Rationale

This Answer is Incorrect

Hagebak would most likely attempt valuation using GTM. She has a database of completed transactions for similar companies in the same industry. Because the database is reflecting acquisitions of control positions, she would not have to estimate the control or synergy premiums as with GPCM. Additionally, PTM applies to transactions that have already occurred in the target company's stock and is often only relevant when assessing a minority position.

Rationale

This Answer is Incorrect

Hagebak would most likely attempt valuation using GTM. She has a database of completed transactions for similar companies in the same industry. Because the database is reflecting acquisitions of control positions, she would not have to estimate the control or synergy premiums as with GPCM. Additionally, PTM applies to transactions that have already occurred in the target company's stock and is often only relevant when assessing a minority position.

Rationale

This Answer is Incorrect

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iii.

Hagebak's estimate of Sharma's normalized after-tax operating income for the year just ended will be *closest to*:

- ☐ \$105.2 million.
- ☐ \$179.5 million.
- ☒ \$185.0 million.

Rationale

This Answer is Incorrect

Sharma's normalized after-tax pro forma operating income is calculated as follows:

Revenues	\$625,000,000	
Cost of goods sold	<u>262,500,000</u>	Revenues \times (1 – 0.58)
Gross profit	362,500,000	
Selling, general, and administrative expense	<u>90,250,000</u>	Note 1
EBITDA	272,250,000	
Depreciation and amortization	<u>8,000,000</u>	Note 2
EBIT	264,250,000	
Tax expense	<u>79,275,000</u>	EBIT \times 0.30
Operating income after tax	\$184,975,000	

Note 1: \$93,750,000 in SG&A expense should be reduced by \$3.5 million (\$2 million salary differential + \$1.5 million non-operating property expenses).

Note 2: Depreciation and amortization would be reduced by \$334,000 depreciation on the non-operating property.

Rationale

✖ This Answer is Incorrect

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Cost of goods sold	<u>262,500,000</u>	Revenues \times (1 – 0.58)
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Note 2: Depreciation and amortization would be reduced by \$334,000 depreciation on the non-operating property.

Rationale

✖ This Answer is Incorrect

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Tax expense	<u>79,275,000</u>	EBIT \times 0.30
Operating income after tax	\$184,975,000	

Note 1: \$93,750,000 in SG&A expense should be reduced by \$3.5 million (\$2 million salary differential + \$1.5 million non-operating property expenses).

Note 2: Depreciation and amortization would be reduced by \$334,000 depreciation on the non-operating property.

Question 38

L2EQ-PQ3714-1411

LOS: LOS-8890

Lesson Reference: Lesson 5: Valuation Discounts and Premiums, and Business Valuation Standards and Practices

Difficulty: medium

If the DLOM for GiantCorp. is given as 6% and the total discount is given as 9.76%, then the value of control premium is *closest* to:

☐ 3.91%

☐ 4.00%

☒ 4.17%

Rationale

✔ This Answer is Correct

$$\text{Total discount} = 1 - (1 - \text{DLOM})(1 - \text{DLOC})$$

$$0.0976 = 1 - (1 - 0.06)(1 - \text{DLOC})$$

$$(1 - 0.06)(1 - \text{DLOC}) = 1 - 0.0976$$

$$1 - \text{DLOC} = 0.9024/0.94$$

$$\text{DLOC} = 1 - 0.96$$

$$\text{DLOC} = 0.04 \text{ or } 4\%$$

$$\text{DLOC} = 1 - [1/(1 + \text{Control Premium})]$$

$$0.04 = 1 - [1/(1 + \text{Control Premium})]$$

$$1/(1 + \text{Control Premium}) = 0.96$$

$$1 = 0.96(1 + \text{Control Premium})$$

$$1 = 0.96 + 0.96 \times \text{Control Premium}$$

$$\text{Control Premium} = (1 - 0.96)/0.96$$

$$\text{Control Premium} = 0.04167 \text{ or } 4.167\%$$

Question 39

L2EQ-PQ3707-1411

LOS: LOS-8870

Lesson Reference: Lesson 4: Private Company Valuation Approaches: (2) Market Approach and (3) Asset-Based Approach

Difficulty: medium

Sharon wants to value the equity of Moon Corporation (MC), a private company, using the GPCM. The stock is currently trading at \$45 per share. She gathers the following information regarding comparable public companies in the same industry as MC:

- Average MVIC-EBITDA multiple = 7.2
- An upward adjustment of 30% to the average comparable public company MVIC-EBITDA ratio is required to reflect the relative risk and growth characteristics of MC.
- Based on past acquisitions of public companies in the industry, a 20% premium for control is considered appropriate.

Sharon also obtains the following information regarding MC:

- Normalized EBITDA = 22.50 million
- Market value of debt = \$114 million
- Normalized D/E ratio = 0.6

Given that the company has 3 million common shares outstanding, the stock is *most likely*:

- ☐ Undervalued
- ☐ Fairly valued
- ☒ Overvalued

Rationale

✔ This Answer is Correct

Adjustment to the MVIC-EBITDA ratio = $7.2 \times 1.30 = 9.36$

Premium for control = $20\% \times 0.625 = 12.5\%$

Adjustment to the MVIC-EBITDA ratio = $9.36 \times 1.125 = 10.53$

Market value of invested capital = $\$22.50\text{m} \times 10.53 = \236.925 million

Market value of equity = $\$236.925\text{m} - \$114\text{m} = \$122.925 \text{ million}$

Market price per share = $\$122.925\text{m} / 3\text{m} = \40.975

Question 40

L2EQ-TB0044-1412

LOS: LOS-8830

Lesson Reference: Lesson 2: Private Company Valuation: Earnings Normalization and Cash Flow Estimation Issues

Difficulty: medium

Jimmy Newbub, CFA, is an equity analyst carrying out the valuation of a private equity company, Valentino Corporation. He has estimated that should the company be acquired, the current management team would be replaced with a management team that would have a normalized compensation expense of \$700,000 versus the current management compensation of \$2.5 million contained in selling, general and administrative expenses (SG&A). Newbub estimates that certain other expenses contained in the current SG&A expenses of the company are linked to perquisites enjoyed by the current management, which could also be removed under a new management structure, totally \$300,000. Valentino currently has operating income of \$15 million. The normalized operating earnings of Valentino will be closest to:

- ☒ \$17.1 million.
- ☐ \$17.8 million.
- ☐ \$18.5 million.

Rationale

 **This Answer is Correct**

Normalized operating earnings = \$15 million + \$2.5 million – \$0.7 million + \$0.3 million = \$17.1 million.

Question 41

L2R38TB-AC026-1512

LOS: LOS-8880

Lesson Reference: Lesson 4: Private Company Valuation Approaches: (2) Market Approach and (3) Asset-Based Approach

Difficulty: medium

Alphanumeric HFT is a high-frequency trading fund with unpaid carried interest. An analyst determining the value for possible takeover of Alphanumeric HFT by another fund has decided to use the assets approach to determine Alphanumeric's value. Although the two companies would have strategic value, the potential buyer wishes the analyst to only provide the current asset value for takeover purposes. Having the unpaid carried interest would *most likely*:

- ☐ increase the value to the acquirer.
- ☒ decrease the value to the acquirer.
- ☐ have no effect on the value to the acquirer.

Rationale

 **increase the value to the acquirer.**

Carried interest is profit due to the general partner after return to investors of contributed capital and meeting the return hurdle rate (i.e., a liability). As such, it reduces the asset value to an acquirer.

Rationale

 **decrease the value to the acquirer.**

Carried interest is profit due to the general partner after return to investors of contributed capital and meeting the return hurdle rate (i.e., a liability). As such, it reduces the asset value to an acquirer.

Rationale

 **have no effect on the value to the acquirer.**

Carried interest is profit due to the general partner after return to investors of contributed capital and meeting the return hurdle rate (i.e., a liability). As such, it reduces the asset value to an acquirer.

Question 42

L2R38TB-AC023-1512

LOS: LOS-8850

Lesson Reference: Lesson 3: Private Company Valuation Approaches: (1) Income Approach

Difficulty: medium

An adjustment for cash flow projections based on information of uncertain validity could *best* be described as:

- ☐ acquisition risk.
- ☒ projection risk.
- ☐ size risk.

Rationale

acquisition risk.

Projection risk occurs when the uncertainty of cash flow projections increases due to lack of information or poor information. In many cases, this risk can be factored into the discount rate for calculating the present value of cash flows.

Rationale

projection risk.

Projection risk occurs when the uncertainty of cash flow projections increases due to lack of information or poor information. In many cases, this risk can be factored into the discount rate for calculating the present value of cash flows.

Rationale

size risk.

Projection risk occurs when the uncertainty of cash flow projections increases due to lack of information or poor information. In many cases, this risk can be factored into the discount rate for calculating the present value of cash flows.

Question 43

L2R38TB-AC013-1512

LOS: LOS-8790

Lesson Reference: Lesson 1: The Scope of Private Company Valuation and Definitions (Standards of value)

Difficulty: medium

Lack of marketability discounts *most likely* apply to the shares of:

- ☐ public companies only.
- ☐ privately held companies only.
- ☒ both private and public companies.

Rationale

 **public companies only.**

Shares of a privately held company would certainly be subject to lack of marketability discounts, especially if they were not listed on public exchanges. Shares of a publicly held company could also be subject to lack of marketability discounts if subject to certain restrictions (e.g., contractual restrictions or Rule 144 regulations).

Rationale

 **privately held companies only.**

Shares of a privately held company would certainly be subject to lack of marketability discounts, especially if they were not listed on public exchanges. Shares of a publicly held company could also be subject to lack of marketability discounts if subject to certain restrictions (e.g., contractual restrictions or Rule 144 regulations).

Rationale

 **both private and public companies.**

Shares of a privately held company would certainly be subject to lack of marketability discounts, especially if they were not listed on public exchanges. Shares of a publicly held company could also be subject to lack of marketability discounts if subject to certain restrictions (e.g., contractual restrictions or Rule 144 regulations).

Question 44

L2R38TB-AC009-1512

LOS: LOS-8840

Lesson Reference: Lesson 3: Private Company Valuation Approaches: (1) Income Approach

Difficulty: medium

Kim Higgins has projected a private company's free cash flow to equity to be \$490,000 and its free cash to the firm to be \$550,000. Using the build-up approach, she has determined that the required rate of return on equity is 12 percent. She estimates that the optimal debt to total capital level is 30 percent, the cost of debt is 8.0 percent, and the market value of the existing debt is \$2.2 million. The company's incremental tax rate is 25 percent and the long-term growth rate is 3.0 percent. The value of the firm is *closest to*:

- ☐ \$5.0 million.
- ☐ \$5.4 million.
- ☒ \$7.6 million.

Rationale

✗ **\$5.0 million.**

First, the WACC is needed and it is calculated as follows:

$$\begin{aligned}\text{WACC} &= r_e \left(\frac{\text{Equity}}{\text{Total capital}} \right) + r_d(1 - \text{Tax rate}) \left(\frac{\text{Debt}}{\text{Total capital}} \right) \\ &= 0.12(0.70) + 0.08(1 - 0.25) (0.30) = 10.2\end{aligned}$$

Now the value of the firm is found as follows:

$$V_F = \frac{\text{FCFF}_1}{\text{WACC} - g} = \frac{\$550,000}{0.102 - 0.03} = \$7,638,889$$

Although not asked for, the value of equity can be found using either of the following:

$$\begin{aligned}V_E &= V_F - V_D = \$7.64 \text{ million} - 2.2 \text{ million} = \$5.44 \text{ million} \\ V_E &= \frac{\text{FCFE}_1}{r_e - g} = \frac{\$490,000}{0.12 - 0.03} = \$5.44 \text{ million}\end{aligned}$$

Rationale

✗ **\$5.4 million.**

First, the WACC is needed and it is calculated as follows:

$$\begin{aligned}\text{WACC} &= r_e \left(\frac{\text{Equity}}{\text{Total capital}} \right) + r_d(1 - \text{Tax rate}) \left(\frac{\text{Debt}}{\text{Total capital}} \right) \\ &= 0.12(0.70) + 0.08(1 - 0.25) (0.30) = 10.2\end{aligned}$$

Now the value of the firm is found as follows:

$$V_F = \frac{FCFF_1}{WACC - g} = \frac{\$550,000}{0.102 - 0.03} = \$7,638,889$$

Although not asked for, the value of equity can be found using either of the following:

$$V_E = V_F - V_D = \$7.64 \text{ million} - 2.2 \text{ million} = \$5.44 \text{ million}$$

$$V_E = \frac{FCFE_1}{r_e - g} = \frac{\$490,000}{0.12 - 0.03} = \$5.44 \text{ million}$$

Rationale

✔ **\$7.6 million.**

First, the WACC is needed and it is calculated as follows:

$$\begin{aligned} WACC &= r_e \left(\frac{\text{Equity}}{\text{Total capital}} \right) + r_d(1 - \text{Tax rate}) \left(\frac{\text{Debt}}{\text{Total capital}} \right) \\ &= 0.12(0.70) + 0.08(1 - 0.25)(0.30) = 10.2 \end{aligned}$$

Now the value of the firm is found as follows:

$$V_F = \frac{FCFF_1}{WACC - g} = \frac{\$550,000}{0.102 - 0.03} = \$7,638,889$$

Although not asked for, the value of equity can be found using either of the following:

$$V_E = V_F - V_D = \$7.64 \text{ million} - 2.2 \text{ million} = \$5.44 \text{ million}$$

$$V_E = \frac{FCFE_1}{r_e - g} = \frac{\$490,000}{0.12 - 0.03} = \$5.44 \text{ million}$$