

Question #1 of 145

Which of the following statements about the three-stage FCFE model is *most* accurate?

- A) There is a transition period where the growth rate is stable.
 - B) There is a final phase when growth rate starts to decline.
 - C) There is a transition period where the growth rate declines.
-

Question #2 of 145

A firm's free cash flow to the firm (FCFF) in the most recent year is \$80M and is expected to grow at 3% per year forever. If the firm has \$100M in debt financing and its weighted average cost of capital is 10%. The value of the firm's equity using the single-stage FCFF model is:

- A) \$1,177M.
 - B) \$1,077M.
 - C) \$1,043M.
-

Question #3 of 145

Terminal value in multi-stage free cash flow valuation models is often calculated as the present value of:

- A) a constant growth model's price as of the beginning of the last stage.
 - B) free cash flow divided by the growth rate.
 - C) a two-stage valuation model's price.
-

Question #4 of 145

A firm has:

- Free cash flow to the firm = \$4.0 million.
- Weighted average cost of capital = 10%.
- Total debt = \$30.0 million.
- Long-term expected growth rate = 5%.
- Value of the firm = \$50.00 per share.

What will happen to the value of the firm if the weighted average cost of capital increases to 12%?

- A)** The value will decrease.
 - B)** The value will remain the same.
 - C)** The value will increase.
-

Question #5 of 145

If a firm is valued using FCFF, the relevant discount rate is the:

- A)** before-tax cost of equity.
 - B)** before-tax weighted average cost of capital.
 - C)** after-tax weighted average cost of capital.
-

Question #6 of 145

The repayment of a significant amount of outstanding debt will cause free cash flow to equity (FCFE) to:

- A)** remain the same.
 - B)** increase.
 - C)** decrease.
-

Question #7 of 145

The following information is derived from the financial records of Brown Company for the year ended December 31, 2004:

Sales	\$3,400,000
Cost of Goods Sold (COGS)	(2,100,000)
Depreciation	(300,000)
Interest Paid	(200,000)
Gain on Sale of Old Equipment	400,000
Income Taxes Paid	(300,000)
Net Income	\$900,000

- Brown issued bonds on June 30, 2004 and received proceeds of \$4,000,000.
- Old equipment with a book value of \$2,000,000 was sold on August 15, 2004 for \$2,400,000 cash.
- Brown purchased land for a new factory on September 30, 2004 for \$3,000,000, issuing a \$2,000,000 note and paying the balance in cash.

Cash flow from operations less capital expenditures is:

- A)** \$200,000.
- B)** \$6,200,000.
- C)** \$2,200,000.

Question #8 of 145

Mark Washington, CFA, uses a two-stage free cash flow to equity (FCFE) discount model to value Texas Van Lines. His analysis yields an extremely low value, which he believes is incorrect. Which of the following is *least likely* to be a cause of this suspect valuation estimate?

- A)** The cost of equity estimate in the stable growth period is too high for a stable firm.
- B)** Earnings are temporarily depressed because of a one-time extraordinary accounting charge in the most recent fiscal year.

- C) The forecast of working capital as a percentage of revenues in the stable growth period is not large enough to maintain the long-term sustainable growth rate.
-

Question #9 of 145

An increase in financial leverage will cause free cash flow to equity (FCFE) to:

- A) increase in the year the borrowing occurred.
B) decrease in the year the borrowing occurred.
C) decrease or increase, depending on its circumstances.
-

Question #10 of 145

The following table provides background information on a per share basis for TOY Inc. in the year 0:

Current Information:	Year 0
Earnings	\$5.00
Capital Expenditures	\$2.40
Depreciation	\$1.80
Change in Working Capital	\$1.70

TOY Inc.'s target debt ratio is 30% and has a required rate of return of 12%. Earnings, capital expenditures, depreciation, and working capital are all expected to grow by 5% a year in the future. Assume that capital expenditures and working capital are financed at the target debt ratio.

In year 0, what is the free cashflow to equity (FCFE) for TOY Inc.?

- A) \$3.39.
B) \$2.70.
C) \$4.31.
-

Question #11 of 145

The one-stage (stable growth) free cash flow models assume:

- A) the required rate of return exceeds the growth rate.
 - B) a constant growth rate for n years and a high growth rate forever thereafter.
 - C) the required rate of return is less than the growth rate.
-

Question #12 of 145

In five years, a firm is expected to be operating in a stage of its life cycle wherein its expected growth rate is 5%, indefinitely; its required rate of return on equity is 11%; its weighted average cost of capital is 9%; and the free cash flow to equity in year 6 will be \$5.25 per share. What is its projected terminal value at the end of year 5?

- A) \$131.25.
 - B) \$51.93.
 - C) \$87.50.
-

Question #13 of 145

Free cash flow (FCF) approaches are the *best* source of value when:

- A) a firm is paying a dividend that is higher than the industry average.
 - B) FCFs track profitability closely over the analyst's forecast horizon.
 - C) a firm has preferred stock.
-

Harrisburg Tire Company (HTC) forecasts the following for 2013:

- Earnings (net income) = \$600M.
- Dividends = \$120M.
- Interest expense = \$400M.
- Tax rate = 40.0%.

- Depreciation = \$500M.
- Capital spending = \$800M.
- Total assets = \$10B (book value and market value).
- Debt = \$4B (book value and market value).
- Equity = \$6B (book value and market value).
- Target debt to asset ratio = 0.40.
- Shares outstanding = 2.0 billion

The firm's working capital needs are negligible, and HTC plans to continue to operate with the current capital structure. The tire industry demand is highly dependent on demand for new automobiles. Individual companies in the industry don't have much influence on the design of automobiles and have very little ability to affect their business environment. The demand for new automobiles is highly cyclical but demand forecast errors tend to be low.

Question #14 of 145

The firm's earnings growth rate is *most accurately* estimated as:

- A) 6.4%.
 - B) 4.8%.
 - C) 8.0%.
-

Question #15 of 145

The 2013 forecasted free cash flow to equity is:

- A) \$420M.
 - B) \$300M.
 - C) \$340M.
-

Question #16 of 145

If the total market value of equity is \$6.0 billion and the growth rate is 8.0%, the cost of equity based on the stable growth FCFE model is *closest* to:

- A) 7.0%.
 - B) 15.0%.
 - C) 14.0%.
-

Question #17 of 145

The beta for HTC is 1.056, the risk-free rate is 5.0% and the market risk premium is 10.0%. The weighted average cost of capital for HTC is *closest* to:

- A) 11.74%.
 - B) 13.34%.
 - C) 15.56%.
-

Question #18 of 145

The most appropriate strategy formulation style for HTC is:

- A) Shaping
 - B) Classical
 - C) Adaptive
-

Question #19 of 145

FCFE for 2013 is \$400.0 million; and HTC took on an additional debt of \$40.0 million while repaying existing debt of \$60.0 million. The growth rate for FCFF is 5.0% and the WACC is 11.5%. The value of the firm calculated using the stable growth model is *most* accurately described as:

- A) greater than the market value of the firm by \$0.7 billion.
 - B) less than the market value of the firm by \$7.5 billion.
 - C) less than the market value of the firm by \$3.3 billion.
-

Ashley Winters, CFA, has been hired to value Goliath Communications, a company that is currently experiencing rapid growth and expansion. Winters is an expert in the communications industry and has had extensive experience in valuing similar firms. She is convinced that a value for the equity of Goliath can be reliably obtained through the use of a three-stage free cash flow to equity (FCFE) model with declining growth in the second stage. Based on up-to-date financial statements, she has determined that the current FCFE per share is \$0.90. Winters has prepared a forecast of expected growth rates in FCFE as follows:

Stage 1:	10.5% for years 1 through 3
Stage 2:	8.5% in year 4, 6.5% in year 5, 5.0% in year 6
Stage 3:	3.0% in year 7 and thereafter

Moreover, she has determined that the company has a beta of 1.8. The current risk-free rate is 3.0%, and the equity risk premium is 5.0%.

Other financial information:

Outstanding shares	10 million
Tax rate	40.0%
Interest expense	\$750,000
Net borrowing	-\$100,000
Cost of debt	7.5%
Debt-to-equity ratio	25.0%
Estimated growth rate for the firm	4.0%

Question #20 of 145

The required return of equity is *closest* to:

- A) 9.0%.
- B) 12.00%
- C) 6.6%.

Question #21 of 145

The terminal value in year 6 is *closest* to:

- A) \$16.86.
 - B) \$25.29.
 - C) \$21.68.
-

Question #22 of 145

The per-share value Winters should assign to Goliath's equity is *closest* to:

- A) \$13.55.
 - B) \$20.24.
 - C) \$16.87.
-

Question #23 of 145

The free cash flow to the firm (FCFF) is *closest* to:

- A) \$9.55 million.
 - B) \$9.35 million.
 - C) \$9.45 million.
-

Question #24 of 145

The weighted average cost of capital (WACC) is *closest* to:

- A) 11.1%.
- B) 10.5%.
- C) 10.9%.

Question #25 of 145

The value of the firm, based on the constant growth model, is *closest* to:

- A) \$124 million.
 - B) \$140 million.
 - C) \$153 million.
-

Question #26 of 145

A firm currently has sales per share of \$10.00, and expects sales to grow by 25% next year. The net profit margin is expected to be 15%. Fixed capital investment net of depreciation is projected to be 65% of the sales increase, and working capital requirements are 15% of the projected sales increase. Debt will finance 45% of the investments in net capital and working capital. The company has an 11% required rate of return on equity. What is the firm's expected free cash flow to equity (FCFE) per share next year under these assumptions?

- A) \$0.38.
 - B) \$1.88.
 - C) \$0.77.
-

Question #27 of 145

The difference between free cash flow to equity (FCFE) and free cash flow to the firm (FCFF) is:

- A) earnings before interest and taxes (EBIT) less taxes.
 - B) before-tax interest and net borrowing.
 - C) after-tax interest and net borrowing.
-

Starshah Industries competes in a high-growth, emerging technology sector that is facing increasing competitive pressures. So far, the firm has been performing well, earning \$4.55 per

share in 2004. Investment requirements were high, with capital expenditures of \$1.75 per share, depreciation expense of \$1.05, and a net investment in working capital that year of \$1.00 per share. However, despite Starshah's high growth rate and impressive profitability, Starshah's Chairman, Lorenzo di Stefano, has become concerned about the impact that a slowdown in expected growth may have on the firm's valuation.

Di Stefano asked Starshah's Director of Strategic Planning, Keisha Simmons, to make a presentation to Starshah's board at the end of 2004 about the future growth of the firm. The news was sobering. Simmons told the board members that Starshah could expect two more years of rapid growth, during which time earnings per share could be expected to rise 45% per year with 30% annual increases in capital spending and depreciation. During this high-growth period, Simmons estimates that the required return on equity for Starshah will be 25%. Starshah consistently maintains a target debt ratio of 0.25.

After the near-term spurt of high growth, however, she and her group expect Starshah to move eventually to a stable growth period. During the stable growth period, free cash flow to equity (FCFE) will rise only 5% per year and the annual return to shareholders will decline to 10%.

The strategy group expects the transitional period between high-growth and mature growth to last five years. During that time, capital expenditures will rise only 8% per year, with depreciation rising 13% per year. The growth in earnings should drop by eight percentage points per year, hitting 5% in the fifth year. During this transition, the expected return to shareholders will be 15% per year.

Throughout the high-growth and transitional growth periods, Simmons expects Starshah to be able to limit increases in the investment in working capital to 20 cents per year. In her analysis, the investment in working capital will peak in 2010, declining a dime to \$2.10 per share in 2011.

After Simmons' presentation, the board debated what to do about the incipient slowdown in Starshah's growth. A majority of the board argued in favor of moving to offset this slowdown in organic growth through a new emphasis on growth by acquisition.

One potential target is TPX. TPX's current and expected FCFE: \$425,000 in 2004, \$500,000 in 2005, \$600,000 the following year, and \$700,000 in 2007. After that, Starshah expects FCFE at TPX to grow 3% per year indefinitely. Starshah would require a return on its equity investment of 20% per year in the high-growth stage and 12% per year in the stable growth stage.

Di Stefano and Simmons had a somber meeting the day after the board presentation. But despite the bleak news about future years, di Stefano had convinced himself it was worth staying around through the high-growth and transitional periods. He pointed out to Simmons that, if Simmons' projections were correct, the value of Starshah's stock would be in excess of

\$450 per share by the time the company hit the stable-growth phase. Di Stefano was very pleased with what that implied for the value of his stock options.

Simmons had done the same calculations herself, but she also realized that if required rates of return in 2012 rose from the very modest 10% she used in her board projections to only 15%, that would cut the terminal value of Starshah's stock in 2011 to only half the level di Stefano was counting on. She considered that valuation too small to make the wait worthwhile. Simmons said nothing to di Stefano, but planned to look for another job.

Question #28 of 145

Which of the following FCFE models is *best* suited to analyzing TPX?

- A) Two-stage FCFE model.
 - B) Stable growth FCFE model.
 - C) Three-stage FCFE model.
-

Question #29 of 145

The FCFE for Starshah at the end of the transition period in 2011 is *closest* to:

- A) \$23.42.
 - B) \$21.89.
 - C) \$20.62.
-

Question #30 of 145

Regarding di Stefano's and Simmons' statements about the terminal value of Starshah stock in 2011:

- A) both are correct.
- B) only Simmons is correct.
- C) only di Stefano is correct.

Question #31 of 145

Assuming Simmons is right that the required return on Starshah equity rises to 15% in 2012 and beyond, what is the value of Starshah stock at the end of 2004?

- A) \$111.35.
 - B) \$63.71.
 - C) \$117.49.
-

Question #32 of 145

What is the *maximum* amount that Starshah would be willing to pay for TPX (in millions)?

- A) \$5.874.
 - B) \$6.941.
 - C) \$5.102.
-

Question #33 of 145

Which of the following FCFE models is *best* suited to analyzing Starshah Industries?

- A) Two-stage FCFE model.
 - B) Stable growth FCFE model.
 - C) Three-stage FCFE model.
-

Question #34 of 145

Which of the following statements regarding the FCFF models is *most* accurate? The two-stage FCFF model is more useful than the stable-growth FCFF model when the firm is growing at a rate:

- A) significantly higher than that of the overall economy.
 - B) significantly lower than that of the overall economy.
 - C) not significantly higher than that of the overall economy.
-

Question #35 of 145

If the investment in fixed capital and working capital offset each other, free cash flow to the firm (FCFF) may be proxied by:

- A) net income plus non-cash charges plus after-tax interest.
 - B) earnings before interest and taxes (EBIT).
 - C) net income plus after-tax interest.
-

Question #36 of 145

Using the stable growth free cash flow to the firm (FCFF) model, what is the value of Quality Builders under the assumptions contained in the table below?

Quality Builders Free Cash Flow to the Firm Year 0	
EBIT	\$500
Depreciation	\$200
Capital Spending	\$300
Working Capital Additions	\$30
Tax Rate	40%
Assumed Constant Growth Rate in Free Cash Flow	5%
Weighted-average Cost of Capital	11%

- A) \$2,975.00.
- B) \$6,475.00.
- C) \$2,833.33.

Question #37 of 145

Which of the following is *most* useful in analyzing firms that have high leverage and high growth?

- A) Stable-growth free cash flow to the firm (FCFF) model.
- B) Two-stage free cash flow to the firm (FCFF) model.
- C) Two-stage free cash flow to equity (FCFE) model.

Question #38 of 145

SOX Inc. expects high growth in the next 4 years before slowing to a stable future growth of 3%. The firm is assumed to pay no dividends in the near future and has the following forecasted free cash flow to equity (FCFE) information on a per share basis in the high-growth period:

	Year 1	Year 2	Year 3	Year 4
FCFE	\$3.05	\$4.10	\$5.24	\$6.71

High-growth period assumptions:

- SOX Inc.'s target debt ratio is 40% and a beta of 1.3.
- The long-term Treasury Bond Rate is 4.0%, and the expected equity risk premium is 6%.

Stable-growth period assumptions:

- SOX Inc.'s target debt ratio is 40% and a beta of 1.0.
- The long-term Treasury Bond Rate is 4.0% and the expected equity risk premium is 6%.
- Capital expenditures are assumed to equal depreciation.
- In year 5, earnings are \$8.10 per share while the change in working capital is \$2.00 per share.
- Earnings and working capital are expected to grow by 3% a year in the future.

In year 5, what is the free cash flow to equity (FCFE) for SOX Inc.?

- A) \$6.10.
- B) \$6.90.

C) \$7.30.

An analyst has prepared the following scenarios for Schneider Inc.:

Scenario 1 Assumptions:

- Tax Rate is 40%.
- Weighted average cost of capital (WACC) = 12.0%.
- Constant growth rate in free cash flow (FCF) = 3.0%.
- Year 0, free cash flow to the firm (FCFF) = \$30.0 million
- Target debt ratio = 10.0%.

Scenario 2 Assumptions:

- Tax Rate is 40.0%.
- Expenses before interest and taxes (EBIT), capital expenditures, and depreciation will grow at 20.0% for the next three years.
- After three years, the growth in EBIT will be 2.0%, and capital expenditure and depreciation will offset each other.
- Weighted average cost of capital (WACC) = 12.0%
- Target debt ratio = 10.0%.

Scenario 2 FCFF (in \$ millions)	Year 0	Year 1	Year 2	Year 3	Year 4
EBIT	\$45.00	\$54.00	\$64.80	\$77.76	\$79.70
Capital Expenditures	18.00	21.60	25.92	31.10	
Depreciation	12.00	14.40	17.28	20.74	
Change in Working Capital	6.00	6.30	6.60	7.20	7.20
FCFF		18.90	23.64	29.09	40.62

Other financial items for Schneider Inc.:

Estimated market value of debt = \$35.0 million

Cost of debt = 5.0%

Shares outstanding = 20 million.

Question #39 of 145

Given the assumptions contained in Scenario 1, the value of the firm is *most* accurately estimated as:

- A) \$333 million
 - B) \$250 million.
 - C) \$343 million.
-

Question #40 of 145

In Scenario 2, the year 0 free cash flow to the firm (FCFF) is *closest* to:

- A) \$16 million.
 - B) \$27 million.
 - C) \$15 million.
-

Question #41 of 145

In Scenario 2, the present value of the terminal value is *closest* to:

- A) \$258 million.
 - B) \$289 million.
 - C) \$347 million.
-

Question #42 of 145

In Scenario 2, the value of the firm is *closest* to:

- A) \$321 million.
- B) \$315 million.
- C) \$346 million.

Question #43 of 145

The cost of equity for Schneider Inc. is *closest* to:

- A) 11.3%.
 - B) 5.8%.
 - C) 13.0%.
-

Question #44 of 145

The market value of Scheider Inc.'s stock is:

- A) \$17.50 per share.
 - B) \$15.75 per share
 - C) \$31.50 per share.
-

Question #45 of 145

Which of the following free cash flow to equity (FCFE) models is *most* suited to analyze firms in an industry with significant barriers to entry?

- A) FCFE Perpetuity Model.
 - B) Stable Growth FCFE Model.
 - C) Two-stage FCFE Model.
-

Question #46 of 145

In the stable-growth FCFE model, an extremely low value can result from all of the following *EXCEPT*:

- A) the expected growth rate is too high for a stable firm.

- B)** the required rate of return is too high for a stable firm.
 - C)** capital expenditures are too high relative to depreciation.
-

Question #47 of 145

A firm has projected free cash flow to equity next year of \$1.25 per share, \$1.55 in two years, and a terminal value of \$90.00 two years from now, as well. Given the firm's cost of equity of 12%, a weighted average cost of capital of 14%, and total outstanding debt of \$30.00 per share, what is the current value of equity?

- A)** \$71.74.
 - B)** \$41.54.
 - C)** \$74.10.
-

Question #48 of 145

Free cash flow to the firm valuation uses which discount rate?

- A)** Cost of equity.
 - B)** Weighted average cost of capital.
 - C)** After-tax cost of debt.
-

Question #49 of 145

A control perspective is most consistent with which of the following valuation approaches?

- A)** Dividends.
 - B)** Price to enterprise value.
 - C)** Free cash flow (FCF).
-

Question #50 of 145

What is the *most likely* reason that you get an extremely low value from the three-stage FCFE model? Capital expenditures are significantly:

- A) less than depreciation during the high-growth phase.
- B) higher than depreciation in the stable-growth phase.
- C) higher than depreciation during the high-growth phase.

TOY, Inc. is a company that manufactures dolls, games, and other items to entertain children.

The following table provides background information for TOY, Inc. on a per share basis in the year 0:

Current Information	Year 0
Earnings	\$5.00
Capital Expenditures	\$2.40
Depreciation	\$1.80
Change in Working Capital	\$1.70
Cost of equity	12.0%
Target debt ratio	30.0%
Market value of stock	\$56.00
Shares outstanding	5.0 million
Interest expense	\$7.2 million
Cash & short-term investments	\$40.0 million
Tax rate	37.5%

Earnings, capital expenditures, depreciation, and working capital are all expected to grow by 5.0% per year in the future.

Question #51 of 145

In year 1, the forecasted free cash flow to equity (FCFE) for TOY, Inc. is *closest* to:

- A) \$4.53.

- B) \$4.31.
 - C) \$3.56.
-

Question #52 of 145

The value of TOY, Inc.'s stock given the above assumptions, is *closest* to:

- A) \$61.57.
 - B) \$50.86.
 - C) \$64.71.
-

Question #53 of 145

Comparing the current market value of TOY to our estimate of the stock's current market value, it is *most likely* that at the current market price of \$56.00, TOY Inc. stock is:

- A) undervalued.
 - B) fairly valued.
 - C) overvalued.
-

Question #54 of 145

Senior management of TOY Inc. is considering selling the company to a rival firm that has offered \$450 million. If the current market price represents the fair value of equity and TOY Inc. maintains its target capital structure, the bid represents a price that is:

- A) about the same total value of the firm.
 - B) less than the total value of the firm.
 - C) greater than the total value of the firm.
-

Question #55 of 145

The EV/EBITDA ratio for TOY Inc. is *closest* to:

- A) 4.3x
 - B) 6.4x.
 - C) 7.1x
-

Question #56 of 145

One year later the enterprise value increased by 5.0% while the EBITDA is \$59.0 million. If the EV/EBITDA for the industry is 7.0x, relative to its peers, TOY is *most likely*.

- A) fairly valued.
 - B) undervalued.
 - C) overvalued.
-

Question #57 of 145

Industrial Light currently has:

- Expected free cash flow to the firm in one year = \$4.0 million.
- Cost of equity = 12%.
- Weighted average cost of capital = 10%.
- Total debt = \$30.0 million.
- Long-term expected growth rate = 5%.

What is the value of equity?

- A) \$44,440,000.
 - B) \$80,000,000.
 - C) \$50,000,000.
-

Question #58 of 145

Optimal capital structure is the mix of debt and equity that will maximize the value of the firm and minimize:

- A) the amount of taxable profit reported.
 - B) agency costs of equity.
 - C) the firm's cost of capital.
-

Question #59 of 145

Which of the following is *least likely* to change as the firm changes leverage?

- A) Free cash flows to equity (FCFE).
 - B) Free cash flows to firm (FCFF).
 - C) Weighted average cost of capital (WACC).
-

Question #60 of 145

A firm's free cash flow to equity (FCFE) in the most recent year is \$50M and is expected to grow at 5% per year forever. If its shareholders require a return of 12%, the value of the firm's equity using the single-stage FCFE model is:

- A) \$417M.
 - B) \$714M.
 - C) \$750M.
-

Question #61 of 145

On a per share basis for a firm:

- Sales are \$10.00.
- Earnings per share (EPS) is \$4.00.
- Depreciation is \$3.00.
- After-tax interest is \$2.40.
- Investment in working capital is \$1.50.
- Investment in fixed capital is \$2.00.

What is the firm's expected free cash flow to the firm (FCFF) per share?

- A)** \$7.50.
 - B)** \$5.90.
 - C)** \$2.90.
-

Question #62 of 145

Which of the following types of companies is the two-stage free cash flow to equity (FCFE) model best suited for? Companies:

- A)** in high growth industries that will face increasing competitive pressures over time, leading to a gradual decline in growth to a stable level.
 - B)** growing at a rate similar to or less than the nominal growth rate of the economy.
 - C)** with patents or firms in an industry with significant barriers to entry.
-

The following information was collected from the financial statements of Hiller GmbH, a German consulting company, for the year ending December 31, 2013:

- Earnings per share = €4.50.
- Capital Expenditures per share = €3.00.
- Depreciation per share = €2.75.
- Increase in working capital per share = €0.75.
- Debt financing ratio = 30.0%.
- Cost of equity = 12.0%.
- Cost of debt = 6.0%.
- Tax rate = 30.0%.

- Outstanding shares = 100 million.
- New debt borrowing = €15.0 million.
- Debt repayment = €30.0 million.
- Interest expense = €7.1 million.

The financial leverage for the firm is expected to be stable. Hiller uses IFRS accounting standards and records interest expense as cash flow from financing (CFF).

Two analysts are valuing Hiller stock; both are basing their analysis on FCFE approaches.

Analyst #1 remarks: "Hiller is a relatively mature company; a constant growth model is the better approach."

Analyst #1 estimates FCFE based on the information above and a growth rate of 5.0%.

Analyst #2 states: "Hiller just acquired a rival that should change their growth pattern. I think a three stage growth model based on industry growth patterns should be used."

Analyst #2 estimates FCFE per share as €3.85. Growth rate estimates are listed below, and from year 7 and thereafter the estimated growth rate is 3.0%.

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7+
Growth rates	12.5%	12.5%	12.5%	8.0%	6.5%	5.0%	3.0%

Question #63 of 145

The FCFE based on Analyst #1's estimates for the base-year is *closest* to:

- A) €3.00.
- B) €4.85.
- C) €3.80.

Question #64 of 145

Using the stable-growth FCFE model as suggested by Analyst #1, the value of Hiller stock is *closest* to:

- A) €51.58.
 - B) €57.00.
 - C) €54.29.
-

Question #65 of 145

Based on Analyst #2's estimates, the sum of the terminal value plus the FCFE for year 6 is *closest* to:

- A) €82.40.
 - B) €75.80.
 - C) €60.70.
-

Question #66 of 145

Based on Analyst #2's estimates, the value of Hiller stock is *closest* to:

- A) €57.00.
 - B) €59.70.
 - C) €60.70.
-

Question #67 of 145

The appropriate discount rate for valuing Hiller on a free cash flow basis is *closest* to:

- A) 9.66%.
 - B) 6.54%.
 - C) 12.00%.
-

Question #68 of 145

If Hiller's total free cash flow to equity is €380 million and the growth rate of the firm is 3.5%, the value of Hiller (Firm) using the stable growth model is *closest* to:

- A) €6.7 billion.
 - B) €4.8 billion.
 - C) €8.9 billion.
-

Question #69 of 145

A common approach to forecasting free cash flows is to:

- A) project net income and expected capital expenditures.
 - B) calculate historical free cash flow and apply an expected growth rate.
 - C) project earnings before interest and taxes (EBIT) and expected capital expenditures.
-

Question #70 of 145

The three-stage FCFE model might result in an extremely high value if:

- A) the growth rate in the stable-period is too low.
 - B) the growth rate in the stable-period is too high.
 - C) the growth rate in the stable-period is equal to that of GNP.
-

Michael Ballmer is an equity analyst with New Horizon Research. The firm has historically relied on dividend and residual income valuation models to value equity, but the firm's director of research, Doug Leads, has decided that the firm needs to incorporate free cash flow valuations into its practices. Therefore, Leads decides to send Ballmer to a seminar on free cash flow valuation.

Upon his return from the convention, Ballmer is excited to share his newfound knowledge with his co-workers. Ballmer is asked to give a debriefing to New Horizon's team of equity analysts,

where he makes the following statements:

- Statement 1: Free cash flow to the firm is the amount of the firm's cash flow that is free for the firm to use in making investments after cash operating expenses have been covered.
- Statement 2: Free cash flow to equity, then, is the amount of the firm's cash flow that is free for equity holders after covering cash operating expenses, working capital and fixed capital investments, interest principal payments to bondholders, and required dividend payments.
- Statement 3: One of the benefits of free cash flow valuation is that the value of the firm and the value of equity can be found by discounting free cash flow to the firm and free cash flow to equity, respectively, by the WACC.

As part of his presentation, Ballmer includes a short example of how to calculate free cash flow to equity. The figures from his example are included below.

Example Balance Sheet

	20X2	20X1
Cash	\$632	\$245
Accounts receivable	\$208	\$105
Inventory	\$8,249	\$8,209
Current assets	\$9,089	\$8,559
Gross PPE	\$22,499	\$22,722
Accumulated depreciation	(\$3,251)	(\$2,875)
Total assets	\$28,337	\$28,406
Accounts payable	\$4,864	\$4,543
Short-term debt	\$2,491	\$2,996
Current liabilities	\$7,355	\$7,539
Long-term debt	\$4,528	\$5,039
Common stock	\$729	\$735
Retained earnings	\$15,725	\$15,093
Total liabilities and owner's equity	\$28,337	\$28,406

Example Cash Flow From Operations

	20X2	20X1
Net income	\$1,783	\$2,195
Depreciation	\$376	\$267
WCInv	(\$178)	\$357
Cash flow from operations	\$2,337	\$2,819

After discussing the calculation of free cash flow to the firm and free cash flow to equity from historical information, Ballmer proceeds to explain the major approaches for forecasting free cash flow. He focuses his discussion on forecasting the components of free cash flow as this method is more flexible. During his presentation, several of the analysts notice that the formula for forecasting free cash flow to equity does not include net borrowing. They bring this to Ballmer's attention, and he states that he will look into the formula and send out an updated presentation after the meeting.

A week after the meeting, Jonathan Hodges approached Ballmer regarding two issues he had while applying free cash flow based valuations. The first issue that Hodges had was that he calculated the equity value of a firm using both free cash flow to equity based and dividend-based valuations and arrived at different values. The second issue that Hodges came across was the effect of a change in a firm's target leverage on FCFE. One of the firms that Hodges was analyzing may reduce leverage, and Hodges needs to know if this will affect his valuation.

Question #71 of 145

Regarding statements 1 and 2, are Ballmer's interpretations of free cash flow to the firm (FCFF) and free cash flow to equity (FCFE) CORRECT?

- A) No, only one interpretation is correct.
- B) Yes, both interpretations are correct.
- C) No, neither interpretation is correct.

Question #72 of 145

Is Ballmer's third statement regarding the computation of firm value and equity value CORRECT?

- A) No, free cash flow to equity should be discounted at the required return on equity.
 - B) Yes.
 - C) No, both free cash flow to the firm and free cash flow to equity should be discounted at the required rate of return on equity.
-

Question #73 of 145

Based on Figure 1 and Figure 2, the 20X2 free cash flow to equity (FCFE) for Ballmer's example firm is:

- A) \$1,544.
 - B) \$1,693.
 - C) \$1,010.
-

Question #74 of 145

Which of the following statements regarding forecasting FCFE using the components of free cash flow method and net borrowing is *most* accurate?

- A) The target debt-to-asset ratio accounts for the financing of new investment in fixed capital and working capital.
 - B) Net income already accounts for interest expense; therefore, net borrowing is not needed.
 - C) Investment in fixed capital and net borrowing are assumed to offset each other.
-

Question #75 of 145

Should dividend-based and free cash flow from equity (FCFE) based valuations result in different equity values for a firm?

- A) Yes, dividend-based valuations would be higher for firms with large, consistent dividends.
 - B) No, both models should result in the same value.
 - C) Yes, the free cash flow from equity valuation would be higher if there were a premium associated with control of the firm.
-

Question #76 of 145

Which of the following statements regarding the effect a decrease in leverage has on a firm's free cash flow from equity (FCFE) is *most* accurate?

- A) Current year FCFE decreases, but future FCFE will be increased.
 - B) FCFE is unaffected by changes in leverage.
 - C) Current year FCFE increases, but future FCFE will be reduced.
-

Question #77 of 145

Free cash flow to the firm is equal to cash flow from operations minus fixed capital investment:

- A) plus after-tax interest expense.
 - B) minus after-tax interest expense.
 - C) minus pre-tax interest expense.
-

Question #78 of 145

Dividends paid out to the shareholders:

- A) may be higher than free cash flow to equity FCFE.
 - B) are always less than free cash flow to equity (FCFE).
 - C) are always equal to free cash flow to equity (FCFE).
-

Question #79 of 145

Which of the following types of company is the E-Model, a three-stage free cash flow to equity (FCFE) Model, best suited for? Companies:

- A) in high growth industries that will face increasing competitive pressures over time, leading to a gradual decline in growth to a stable level.
- B) growing at a rate similar to or less than the nominal growth rate of the economy.
- C) with patents or firms in an industry with significant barriers to entry.

Question #80 of 145

In forecasting free cash flows it is *most* common to assume that:

- A) the firm capital structure is static.
- B) the firm has no non-cash expenses.
- C) historical levels of free cash flow will persist.

Question #81 of 145

If the investment in fixed capital and working capital offset each other, free cash flow to the firm (FCFF) may be proxied by:

- A) earnings before interest and taxes (EBIT).
- B) after-tax EBIT plus non-cash charges.
- C) net income plus after-tax interest.

Question #82 of 145

The two-stage FCFE model is suitable for valuing firms that:

- A)** are in an industry with significant barriers to entry.
- B)** have moderate growth in the initial phase that declines gradually to a stable rate.
- C)** have very high but declining growth rate in the initial stage.
-

Question #83 of 145

SOX, Inc., expects high growth in the next 4 years before slowing to a stable future growth of 3%. The firm is assumed to pay no dividends in the near future and has the following forecasted free cash flow to equity (FCFE) information on a per share basis in the high-growth period:

	Year 1	Year 2	Year 3	Year 4
FCFE	\$3.05	\$4.10	\$5.24	\$6.71

High-growth period assumptions:

- SOX, Inc.'s, target debt ratio is 40% and a beta of 1.3.
- The long-term Treasury Bond Rate is 4.0%, and the expected equity risk premium is 6%.

Stable-growth period assumptions:

- SOX, Inc.'s, target debt ratio is 40% and a beta of 1.0.
- The long-term Treasury Bond Rate is 4.0% and the expected equity risk premium is 6%.
- Capital expenditures are assumed to equal depreciation.
- In year 5, earnings are \$8.10 per share while the change in working capital is \$2.00 per share.
- Earnings and working capital are expected to grow by 3% a year in the future.

What is the present value on a per share basis for SOX, Inc.?

- A)** \$70.49.
- B)** \$64.24.
- C)** \$77.15.
-

Question #84 of 145

Valuation with free cash flow to equity and free cash flow to the firm:

- A) both use the cost of equity.
 - B) use different discount rates.
 - C) both use the after-tax cost of debt.
-

Question #85 of 145

Which of the following free cash flow to the firm (FCFF) models is *most* suited to analyze firms that are growing at a faster rate than the overall economy?

- A) Two-stage FCFF model.
 - B) No growth FCFF model.
 - C) High growth FCFF model.
-

Question #86 of 145

In computing free cash flow, the most significant non-cash expense is usually:

- A) capital expenditures.
 - B) depreciation.
 - C) deferred taxes.
-

Question #87 of 145

Free cash flow to equity valuation uses which discount rate?

- A) Weighted average cost of capital.
 - B) Cost of equity.
 - C) After-tax cost of debt.
-

Question #88 of 145

The difference between the value estimate produced by the dividend discount model (DDM) and the one produced by the free cash flow to equity (FCFE) model can be accounted for by which of the following?

- A) The value in controlling the firm's dividend policy.
 - B) Different estimates of model risk.
 - C) Different sales forecast.
-

Question #89 of 145

The value of stock under the two-stage FCFE model will be equal to:

- A) present value (PV) of FCFE during the extraordinary growth and transitional periods plus the PV of terminal value.
 - B) present value (PV) of FCFE during the extraordinary growth period plus the terminal value.
 - C) present value (PV) of FCFE during the extraordinary growth period plus the PV of terminal value.
-

Question #90 of 145

Industrial Light currently has:

- Free cash flow to equity = \$4.0 million.
- Cost of equity = 12%.
- Weighted average cost of capital = 10%.
- Total debt = \$30.0 million.
- Long-term expected growth rate = 5%.

What is the value of equity?

- A) \$27,142,857.
- B) \$57,142,857.

C) \$60,000,000.

Question #91 of 145

Terminal value in a multi-stage free cash flow to equity (FCFE) valuation model is often calculated as the present value of:

- A) FCFE divided by the total of required rate on equity minus growth.
 - B) free cash flow divided by the growth rate.
 - C) a two-stage valuation model's price.
-

Question #92 of 145

Free cash flow (FCF) approaches are the *best* source of value when:

- A) dividends are paid but do not reflect the company's capacity to pay dividends.
 - B) a firm has no preferred stock.
 - C) a firm has significant minority interest.
-

Question #93 of 145

Assuming that the investment in fixed capital and working capital offset each other, free cash flow to the firm (FCFF) may be proxied by net income if:

- A) non-cash charges and interest charges are zero.
 - B) non-cash charges and interest charges are equal.
 - C) earnings before interest and taxes (EBIT) equals depreciation.
-

Question #94 of 145

The estimate of value from FCFE models will always be different than the value obtained using DDM, if:

- A) FCFE is higher than dividends.
 - B) FCFE is higher than dividends, and the excess is invested in zero NPV projects.
 - C) FCFE is greater than dividends, and the excess is not invested in zero NPV projects.
-

Question #95 of 145

In forecasting free cash flows it is common to assume that investment in working capital:

- A) is greater than fixed capital investment during a growth phase.
 - B) will equal fixed capital investment.
 - C) will be financed using the target debt ratio.
-

Question #96 of 145

The primary difference between the three-stage DDM and the FCFE model is:

- A) cost of equity.
 - B) the definition of cash flows.
 - C) growth rate assumptions.
-

Question #97 of 145

The ownership perspective implicit in the free cash flow to equity valuation approach is of:

- A) control.
 - B) a preferred stockholder.
 - C) a minority position.
-

Question #98 of 145

In the two-stage FCFE model, the required rate of return for calculating terminal value should be:

- A) equal to the average required rate of return for the industry.
 - B) lower than the required rate of return used for the high-growth phase.
 - C) higher than the required rate of return used for the high-growth phase.
-

Question #99 of 145

A firm in stable growth phase should have:

- A) a required rate of return close to the market rate of return and capital expenditures that are not too large relative to depreciation expense.
 - B) capital expenditures that are less than the depreciation expense.
 - C) a growth rate higher than that of the economy and a required rate of return that is greater than the market rate of return.
-

Question #100 of 145

Free cash flow to the firm (FCFF) adjusts earnings before interest and taxes (EBIT) by:

- A) adding taxes, deducting depreciation, and adding back the investments in fixed capital and working capital.
 - B) deducting taxes, adding back depreciation, and deducting the investments in fixed capital and working capital.
 - C) subtracting investments in fixed capital and working capital.
-

The following information was collected from the financial statements of Bankers Industrial Corp (BIC) for the year ended December 31, 2013.

- Earnings before interest and taxes (EBIT) = \$6.00 million.

- Capital expenditures = \$1.25 million.
- Depreciation expense = \$0.63 million.
- Working capital additions = \$0.59 million.
- Cost of debt = 10.50%.
- Cost of equity = 16.00%.
- Stable growth rate for FCFF = 7.00%.
- Stable growth rate for FCFE = 10.00%.
- Market value of debt = \$20.00 million.
- Book value of debt = \$22.50 million.
- Outstanding shares = 500,000.
- Interest expense = \$2.00 million.
- New Debt borrowing = \$3.30 million.
- Debt repayment = \$2.85 million.
- Growth rates for two-stage growth model for FCFE:
 - 25.0% for Years 1-3.
 - 6.0% for Years 4 and thereafter.

BIC is currently operating at their target debt ratio of 40.00%. The firm's tax rate is 40.00%.

Question #101 of 145

The free cash flow to the firm (FCFF) for the current year is *closest* to:

- A) \$2.39 million.
 - B) \$3.57 million.
 - C) \$2.31 million.
-

Question #102 of 145

The appropriate discount rate to apply in valuing BIC using FCFF is *closest* to:

- A) 13.8%.
 - B) 16.0%.
 - C) 12.1%.
-

Question #103 of 145

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

- A) \$38 million.
 - B) \$50 million.
 - C) \$47 million.
-

Question #104 of 145

If the estimated value of the firm is \$50.0 million, the value per share of BIC stock should be *closest* to:

- A) \$28.
 - B) \$30.
 - C) \$60.
-

Question #105 of 145

If the estimated value of the free cash to the firm (FCFF) for year 0 is \$2.4 million, the value per share of BIC stock, based on the stable growth model, is *closest* to:

- A) \$39
 - B) \$61
 - C) \$55
-

Question #106 of 145

The current market price of BIC is \$62.50 per share, and the current year's FCFE is \$1.75 million. Using a two-stage growth model to find the estimated the firm's value, the current market price BIC is most accurately described as:

- A) overvalued.
 - B) fairly valued.
 - C) undervalued.
-

Question #107 of 145

www.ombookcentre.in

An analyst has prepared the following scenarios for Schneider, Inc.:

Scenario 1 Assumptions:

- Tax rate is 40%.
- Weighted average cost of capital (WACC) = 12%.
- Constant growth rate in free cash flow = 3%.
- Last year, free cash flow to the firm (FCFF) = \$30.
- Target debt ratio = 10%.

Scenario 2 Assumptions:

- Tax rate is 40%.
- Expenses before interest and taxes (EBIT), capital expenditures, and depreciation will grow at 15% for the next three years.
- After three years, the growth in EBIT will be 2%, and capital expenditure and depreciation will offset each other.
- WACC during high growth stage = 20%.
- WACC during stable growth stage = 12%.
- Target debt ratio = 10%.

Scenario 2 FCFF	Year 0(last year)	Year 1	Year 2	Year 3	Year 4
EBIT	\$15.00	\$17.25	\$19.84	\$22.81	\$23.27
Capital Expenditures	6.00	6.90	7.94	9.13	
Depreciation	4.00	4.60	5.29	6.08	
Change in Working Capital	2.00	2.10	2.20	2.40	2.40
FCFF		5.95	7.06	8.25	11.56

Assuming that Schneider, Inc., slightly increases its financial leverage, what should happen to its firm value? The firm value should:

- A)** increase due to the additional value of interest tax shields.
- B)** not change because financial leverage has no relationship with firm value.
- C)** decline due to the increase in risk.

Question #108 of 145

The stable-growth free cash flow to the firm (FCFF) model is *most* useful in valuing firms that:

- A)** have capital expenditures that are significantly higher than depreciation.
- B)** have capital expenditures that are not significantly higher than depreciation.
- C)** are growing at a rate significantly lower than that of the overall economy.

Beachwood Builders merged with Country Point Homes in December 31, 1992. Both companies were builders of mid-scale and luxury homes in their respective markets. In 2004, because of tax considerations and the need to segment the businesses between mid-scale and luxury homes, Beachwood decided to spin-off Country Point, its luxury home subsidiary, to its common shareholders. Beachwood retained Bernheim Securities to value the spin-off of Country Point as of December 31, 2004.

When the books closed on 2004, Beachwood had \$140 million in debt outstanding due in 2012 at a coupon rate of 8%, a spread of 2% above the current risk free rate. Beachwood also had 5 million common shares outstanding. It pays no dividends, has no preferred shareholders, and faces a tax rate of 30%. When valuing common stock, Bernheim's valuation models utilize a market risk premium of 11%.

The common equity allocated to Country Point for the spin-off was \$55.6 million as of December 31, 2004. There was no long-term debt allocated from Beachwood.

The Managing Director in charge of Bernheim's construction group, Denzel Johnson, is prepping for the valuation presentation for Beachwood's board with Cara Nguyen, one of the firm's associates. Nguyen tells Johnson that Bernheim estimated Country Point's net income at \$10 million in 2004, growing \$5 million per year through 2008. Based on Nguyen's calculations, Country Point will be worth \$223.7 million in 2008. Nguyen decided to use a cost of equity for Country Point in the valuation equal to its return on equity at the end of 2004 (rounded to the nearest percentage point).

Nguyen also gives Johnson the table she obtained from Beachwood projecting depreciation (the only non-cash charge) and capital expenditures:

\$(in millions)	2004	2005	2006	2007	2008
Depreciation	5	6	5	6	5
Capital	7	8	9	10	12

Expenditures					
--------------	--	--	--	--	--

Looking at the numbers, Johnson tells Nguyen, "Country Point's free cash flow (FCF) will be \$25 million in 2006." Nguyen adds, "That's FCF to the Firm (FCFF). FCF to Equity (FCFE) will be lower."

Question #109 of 145

Regarding the statements by Johnson and Nguyen about FCF in 2006:

- A) only Johnson is incorrect.
- B) both are incorrect.
- C) only Nguyen is incorrect.

Question #110 of 145

If FCInv equals Fixed Capital Investment and WCInv equals Working Capital Investment, which statement about FCF and its components is *least* accurate?

- A) WCInv is the change in the working capital accounts, excluding cash and short-term borrowings.
- B) $FCFE = (EBIT \times (1 - \text{tax rate})) + \text{Depreciation} - FCInv - WCInv$.
- C) $FCFF = (EBITDA \times (1 - \text{tax rate})) + (\text{Depreciation} \times \text{tax rate}) - FCInv - WCInv$.

Question #111 of 145

What is the cost of capital that Nguyen used for her valuation of Country Point?

- A) 15%.
- B) 17%.
- C) 18%.

Question #112 of 145

Given Nguyen's estimate of Country Point's terminal value in 2008, what is the growth assumption she must have used for free cash flow after 2008?

- A) 3%.
 - B) 9%.
 - C) 7%.
-

Question #113 of 145

The value of beta for Country Point is:

- A) 1.27.
 - B) 1.09.
 - C) 1.00.
-

Question #114 of 145

What is the estimated value of Country Point in a proposed spin-off?

- A) \$178.3 million.
 - B) \$144.5 million.
 - C) \$162.6 million.
-

Question #115 of 145

A three-stage free cash flow to the firm (FCFF) is typically appropriate when:

- A) growth is currently low and will move through a transitional stage to a final stage wherein growth exceeds the required rate of return.
- B) the required rate of return is less than the growth rate in the last stage.
- C) growth is currently high and will move through a transitional stage to a steady-state growth rate.

Question #116 of 145

A firm currently has the following per share values:

- Cash flow from operations (CFO) is \$49.50.
- Investment in fixed capital is \$40.00.
- Net borrowing is \$7.50.

What is the current per share free cash flow to equity (FCFE)?

- A)** \$16.50.
- B)** \$97.00.
- C)** \$17.00.
-

Question #117 of 145

An analyst has prepared the following scenarios for Schneider, Inc.:

Scenario 1 Assumptions

- Tax Rate is 40%.
- Weighted average cost of capital (WACC) = 12%.
- Constant growth rate in free cash flow = 3%.
- Last year, free cash flow to the firm (FCFF) = \$30.
- Target debt ratio = 10%.

Scenario 2 Assumptions

- Tax Rate is 40%.
- Expenses before interest and taxes (EBIT), capital expenditures, and depreciation will grow at 15% for the next three years.
- After three years, the growth in EBIT will be 2%, and capital expenditure and depreciation will offset each other.
- Weighted average cost of capital (WACC) during high growth stage = 20%.
- Weighted average cost of capital (WACC) during stable growth stage = 12%.
- Target debt ratio = 10%.

Scenario 2 FCFF	Year 0 (last year)	Year 1	Year 2	Year 3	Year 4
EBIT	\$15.00	\$17.25	\$19.84	\$22.81	\$23.27
Capital Expenditures	6.00	6.90	7.94	9.13	
Depreciation	4.00	4.60	5.29	6.08	
Change in Working Capital	2.00	2.10	2.20	2.40	2.40
FCFF		5.95	7.06	8.25	11.56

Given the assumptions contained in Scenario 2, what is the value of the firm?

- A) \$70.39.
- B) \$81.54.
- C) \$96.92.

Burcar-Eckhardt, a firm specializing in value investments, has been approached by the management of Overhaul Trucking, Inc., to explore the possibility of taking the firm private via a management buyout. Overhaul's stock has stumbled recently, in large part due to a sudden increase in oil prices. Management considers this an opportune time to take the company private. Burcar would be a minority investor in a group of friendly buyers.

Jaimie Carson, CFA, is a private equity portfolio manager with Burcar. He has been asked by Thelma Eckhardt, CFA, one of the firm's founding partners, to take a look at Overhaul and come up with a strategy for valuing the firm. After analyzing Overhaul's financial statements as of the most recent fiscal year-end (presented below), he determines that a valuation using Free Cash Flow to Equity (FCFE) is most appropriate. He also notes that there were no sales of PPE.

Overhaul Trucking, Inc. Income Statement April 30, 2005 (Millions of dollars)		
	2005	2006E
Sales	300.0	320.0
Gross Profit	200.0	190.0
SG&A	50.0	50.0
Depreciation	<u>70.0</u>	<u>80.0</u>
EBIT	80.0	60.0
Interest Expense	30.0	34.0
Taxes (at 35 percent)	<u>17.5</u>	<u>9.1</u>
Net Income	32.5	16.9

Overhaul Trucking, Inc. Balance Sheet April 30, 2005 (Millions of dollars)		
	2005	2006E
Cash	10.0	15.0
Accounts Receivable	50.0	55.0
Gross Property, Plant & Equip.	400.0	480.0
Accumulated Depreciation	<u>(160.0)</u>	<u>(240.0)</u>
Total Assets	300.0	310.0
Accounts Payable	50.0	70.0
Long-Term Debt	140.0	113.1

Common Stock	80.0	80.0
Retained Earnings	<u>30.0</u>	<u>46.9</u>
Total Liabilities & Equity	300.0	310.0

Eckhardt agrees with Carson's choice of valuation method, but her concern is Overhaul's debt ratio. Considerably higher than the industry average, Eckhardt worries that the firm's heavy leverage poses a risk to equity investors. Overhaul Trucking uses a weighted average cost of capital of 12% for capital budgeting, and Eckhardt wonders if that's realistic.

Eckhardt asks Carson to do a valuation of Overhaul in a high-growth scenario to see if optimistic estimates of the firm's near-term growth rate can justify the required return to equity. For the high-growth scenario, she asks him to start with his 2006 estimate of FCFE, grow it at 30% per year for three years and then decrease the growth rate in FCFE in equal increments for another three years until it hits the long-run growth rate of 3% in 2012. Eckhardt tells Carson that the returns to equity Burcar-Eckhardt would require are 20% until the completion of the high-growth phase, 15% during the three years of declining growth, and 10 percent thereafter. Eckhardt wants to know what Burcar could afford to pay for a 15% stake in Overhaul in this high-growth scenario.

Carson assembles a few spreadsheets and tells Eckhardt, "We could make a bid of just under \$16 million for the stake in Overhaul if the high-growth scenario plays out." Eckhardt worries, though, that the value of their bid is extremely sensitive to the assumption for terminal growth, since in that scenario, the terminal value of the firm accounts for slightly more than two-thirds of the total value.

Carson agrees, and proposes doing a valuation under a "sustained growth" scenario. His estimates show Overhaul growing FCFE by the following amounts:

	2007	2008	2009	2010	2011
Growth in FCFE	40.0%	15.7%	8.6%	9.1%	8.3%

In this scenario, he would project sustained growth of 6% per year in 2012 and beyond. With the more stable growth pattern in cash flow, Eckhardt and Carson agree that the required return to equity could be cut to a more moderate 12%.

Carson also decides to try valuing the firm on Free Cash Flow to the Firm (FCFF) using this same 12% required return. Using a single-stage model on the estimated 2006 figures presented in the financial statements above, he comes up with a valuation of \$1.08 billion.

Question #118 of 145

Which of the following is one of the differences between FCFE and FCFF? FCFF does not deduct:

- A) interest payments to bondholders.
 - B) working capital investment.
 - C) operating expenses.
-

Question #119 of 145

Which of the following is the *least likely* reason for Carson's decision to use FCFE in valuing Overhaul rather than FCFF?

- A) Overhaul's capital structure is stable.
 - B) Overhaul's debt ratio is significantly higher than the industry average.
 - C) FCFE is an easier and more straightforward calculation than FCFF.
-

Question #120 of 145

Assuming that Carson is using May 1, 2005 as his date of valuation, what is the estimated value of the firm's equity under the scenario most suited to using the two-stage FCFE method?

- A) \$173.3 million.
 - B) \$129.5 million.
 - C) \$125.2 million.
-

Question #121 of 145

What is the expected growth rate in FCFF that Carson must have used to generate his valuation of \$1.08 billion?

- A) 12%.

B) 7%.

C) 5%.

Question #122 of 145

If Carson had estimated FCFE under the assumption that Overhaul Trucking maintains a target debt-to-asset ratio of 36 percent for new investments in fixed and working capital, what would be his forecast of 2006 FCFE?

A) \$26.5 million.

B) \$9.6 million.

C) \$16.9 million.

Question #123 of 145

Regarding the statements made by Carson and Eckhardt about the value of Overhaul in the high-growth scenario:

A) only one is correct.

B) both are incorrect.

C) both are correct.

Question #124 of 145

A firm has:

- Free cash flow to equity = \$4.0 million.
- Cost of equity = 12%.
- Long-term expected growth rate = 5%.
- Value of equity per share = \$57.14 per share.

What will happen to the value of equity if the cost of equity decreases to 10%?

- A) There is insufficient information to tell.
- B) The value will increase.
- C) The value will decrease.

Question #125 of 145

BOX Inc. earned \$4.55 per share last year. The firm had capital expenditures of \$1.75 per share and depreciation expense of \$1.05. BOX Inc. has a target debt ratio of 0.25.

	High-Growth Period	Transitional Period	Stable-Growth Period
Duration	2 Years	5 Years	
Earnings growth rate	45%	Will decline 8% per year to 5% in the stable-growth period	5%
Growth in Capital Expenditures	30%	Increases by 8% per year	Same as Depreciation
Growth in Depreciation	30%	Increases by 13% per year	Same as Capital Expenditures
Change in Working Capital	Given Below	Given Below	\$2.25 per share in Year 8
Shareholder Required Return	25%	15%	10%

	Yr 0	Yr 1	Yr 2	Yr 3	Yr 4	Yr 5	Yr 6	Yr 7
EPS	4.55	6.60	9.57	13.11	16.91	20.46	23.12	24.27
Capital Expenditures	1.75	2.28	2.96	3.19	3.45	3.73	4.02	4.35
Depreciation	1.05	1.37	1.77	2.01	2.27	2.56	2.89	3.27
Change in WC	0.90	1.10	1.40	1.60	1.80	2.00	2.20	2.10
FCFE			7.63	11.01	14.67	18.08	20.62	21.89

In year 1, what is the free cashflow to equity (FCFE) for BOX Inc.?

- A) \$6.10.
 - B) \$5.09.
 - C) \$3.35.
-

Question #126 of 145

In using FCFE models, the assumption of growth should be:

- A) only consistent with the assumptions of capital spending and depreciation.
 - B) independent from the assumptions of other variables.
 - C) consistent with assumptions of other variables.
-

Question #127 of 145

Which of the following statements is *least* accurate? A firm's free cash flows to equity (FCFE) is the cash available to stockholders after funding:

- A) debt principal repayments.
 - B) capital expenditure requirements.
 - C) dividend payments.
-

Question #128 of 145

In what ways are dividends different from free cashflow to equity (FCFE)?

- A) Companies often use FCFE as a signal of positive future growth prospects while dividends are not used for signaling.
 - B) Dividends are often viewed as "sticky." Managers are reluctant to radically change the dividend payout policy while FCFE often has immense variability.
 - C) There is no difference. Dividends must equal FCFE.
-

Question #129 of 145

An analyst is performing an equity valuation for a minority equity position in a dividend paying multinational. The appropriate model for this analysis is *most likely*:

- A) FCFE approach.
 - B) The Dividend Discount approach.
 - C) FCFF approach.
-

Question #130 of 145

The ownership perspective implicit in the dividend valuation approach is of:

- A) control.
 - B) a common stockholder.
 - C) a preferred stockholder.
-

Question #131 of 145

Sudbury Industries expects FCFF in the coming year of 400 million Canadian dollars (\$), and expects FCFF to grow forever at a rate of 3 percent. The company maintains an all-equity capital structure, and Sudbury's required rate of return on equity is 8 percent.

Sudbury Industries has 100 million outstanding common shares. Sudbury's common shares are currently trading in the market for \$80 per share.

Using the Constant-Growth FCFF Valuation Model, Sudbury's stock is:

- A) overvalued.
 - B) undervalued.
 - C) fairly valued.
-

Question #132 of 145

When using the two-stage FCFE model, if increases in working capital appear too high the analyst should:

- A) use changes that are based upon a working capital ratio that is closer to the industry average.
 - B) normalize them to be equal to zero.
 - C) switch to a three-stage model.
-

Question #133 of 145

Currently, a firm has no outstanding debt. If the firm would add a small amount of leverage to its balance sheet, what should be the impact on the firm's value? There would be:

- A) no change in firm value.
 - B) an increase in value due to interest tax shields.
 - C) a decrease in value due to higher interest expense.
-

Question #134 of 145

The stable-growth free cash flow to equity (FCFE) model is best suited for which of the following types of companies? Companies:

- A) with patents that will not expire for 20 or more years.
 - B) growing at a rate similar or less than the nominal growth rate of the economy.
 - C) with significant barriers to entry.
-

Question #135 of 145

Which of the following statements regarding dividends and free cash flow to equity (FCFE) is *least* accurate?

- A)** FCFE discount models usually result in higher equity values than do dividend discount models (DDMs).
 - B)** Required returns are higher in FCFE discount models than they are in dividend discount models, since FCFE is more difficult to estimate.
 - C)** FCFE can be negative but dividends cannot.
-

Question #136 of 145

Ignoring any costs related to financial distress, if a firm increases its financial leverage, the value of the firm should:

- A)** decrease because the required rate of return on debt is lower than that of equity.
 - B)** increase because the FCFF will increase.
 - C)** increase because the weighted average cost of capital will be lower due to interest tax shields.
-

Question #137 of 145

BOX, Inc., earned \$4.55 per share last year. The firm had capital expenditures of \$1.75 per share and depreciation expense of \$1.05. BOX, Inc., has a target debt ratio of 0.25.

	High-Growth Period	Transitional Period	Stable-Growth Period
Duration	2 Years	5 Years	
Earnings growth rate	45%	Will decline 8% per year to 5% in the stable-growth period	5%
Growth in Capital Expenditures	30%	Increases by 8% per year	Same \$ amount as Depreciation
Growth in Depreciation	30%	Increases by 13% per year	Same \$ amount as Capital Expenditures
Change in Working Capital	Given Below	Given Below	\$2.25 per share in Year 8
Shareholder Required Return	25%	15%	10%

	Yr 0	Yr 1	Yr 2	Yr 3	Yr 4	Yr 5	Yr 6	Yr 7
Earnings per share (EPS)	4.55	6.60	9.57	13.11	16.91	20.46	23.12	24.27
Capital Expenditures	1.75	2.28	2.96	3.19	3.45	3.73	4.02	4.35
Depreciation	1.05	1.37	1.77	2.01	2.27	2.56	2.89	3.27
Change in working capital (WC)	0.90	1.10	1.40	1.60	1.80	2.00	2.20	2.10
Free cash flow to equity (FCFE)			7.63	11.01	14.67	18.08	20.62	21.89

What is the present value of BOX, Inc.?

- A) \$223.65.
- B) \$212.91.
- C) \$195.71.

Question #138 of 145

Which of the following items is NOT subtracted from the net income to calculate free cash flow to equity (FCFE)?

- A) Interest payments to bondholders.
 - B) Increase in fixed assets.
 - C) increase in accounts receivable.
-

Question #139 of 145

A biotech firm is currently experiencing high growth and pays no dividends. One of their product patents is scheduled to expire in 5 years. This firm would be a good candidate for which of the following valuation models?

- A) Two-stage dividend discount model (DDM).
 - B) Two-stage free cash flow to equity (FCFE).
 - C) Single-stage free cash flow to equity (FCFE).
-

Question #140 of 145

The two-stage (stable growth) free cash flow to equity (FCFE) and free cash flow to the firm (FCFF) models typically assume:

- A) growth of free cash flow that declines to the required rate of return in the last stage.
 - B) high growth in free cash flow for n years and then constant growth in free cash flow forever after.
 - C) a high level of free cash flow for n years and then a lower level of free cash flow thereafter
-

Question #141 of 145

The repurchase of 20% of a firm's outstanding common shares will cause free cash flow to the firm (FCFF) to:

- A) remain the same.
 - B) increase.
 - C) decrease.
-

Question #142 of 145

Using the information below, value the stock of Symphony Publishing, Inc. using the free cash flow from equity (FCFE) valuation method.

- Required return of 13.0%.
- Value at the end of year 3 of 13 times $FCFE_3$.
- Shares outstanding: 10.0 million.
- Net income in year 1 of \$10.0 million, projected to grow at 10% for the next two years.
- Depreciation per year of \$3.0 million.
- Capital Expenditures per year of \$2.5 million.
- Increase in working capital per year of \$1.0 million.
- Principal repayments on debt per year of \$1.5 million.

The value per share of Symphony Publishing is approximately:

- A) \$112.10.
 - B) \$11.21.
 - C) \$14.10.
-

Question #143 of 145

The following information pertains to the Harrisburg Tire Company (HTC) in 2000.

- Earnings (net income) = \$600M.
- Dividends = \$120M.
- Interest expense = \$400M.
- Tax rate = 40%.
- Depreciation = \$500M.
- Capital spending = \$800M.
- Total assets = \$10B (book value and market value).
- Debt = \$4B (book value and market value).
- Equity = \$6B (book value and market value).

The firm's working capital needs are negligible, and they plan to continue to operate at their current capital structure.

The free cash flow to the firm is:

- A) \$420M.
- B) \$300M.
- C) \$540M.

Question #144 of 145

A firm has:

- Free cash flow to equity = \$4.0 million.
- Cost of equity = 12%.
- Long-term expected growth rate = 5%.
- Value of equity per share = \$57.14 per share.

What will happen to the value of the firm if free cash flow to equity decreases to \$3.2 million?

- A) The value will increase.
 - B) The value will decrease.
 - C) There is insufficient information to tell.
-

Question #145 of 145

Free cash flow approaches are the *best* source of value when:

- A)** dividends are not paid.
- B)** a firm has significant minority interest.
- C)** return on assets is falling.

www.ombookcentre.in