Semiar 7

FCF models

5. Proust Company has FCFF of $1.7 billion and FCFE of $1.3 billion. Proust's WACC is 11 percent and its required rate of return for equity is 13 percent. FCFF is expected to grow forever at 7 percent and FCFE is expected to grow forever at 7.5 percent. Proust has debt outstanding of $15 billion.
   A. What is the total value of Proust's equity using the FCFF valuation approach?
   B. What is the total value of Proust's equity using the FCFE valuation approach?

7. Do Pham is evaluating Phaneuf Accelerateur using the FCFF and FCFE valuation approaches. Pham has collected the following information (currency in euro):
   - Phaneuf has net income of 250 million, depreciation of 90 million, capital expenditures of 170 million, and an increase in working capital of 40 million.
   - Phaneuf will finance 40 percent of the increase in net fixed assets (capital expenditures less depreciation) and 40 percent of the increase in working capital with debt financing.
   - Interest expenses are 150 million. The current market value of Phaneuf's outstanding debt is 1,800 million.

- FCFF is expected to grow at 6.0 percent indefinitely, and FCFE is expected to grow at 7.0 percent.
- The tax rate is 30 percent.
- Phaneuf is financed with 40 percent debt and 60 percent equity. The before-tax cost of debt is 9 percent and the before-tax cost of equity is 13 percent.
- Phaneuf has 10 million outstanding shares.
  A. Using the FCFF valuation approach, estimate the total value of the firm, the total market value of equity, and the value per share.
  B. Using the FCFE valuation approach, estimate the total market value of equity and the value per share.

8. PHB Company currently sells for $32.50 per share. In an attempt to determine if PHB is fairly priced, an analyst has assembled the following information:
   - The before-tax required rates of return on PHB debt, preferred stock, and common stock are 7.0 percent, 6.8 percent, and 11.0 percent, respectively.
   - The company's target capital structure is 30 percent debt, 15 percent preferred stock, and 55 percent common stock.
   - The market value of the company's debt is $145 million, and its preferred stock is valued at $65 million.
   - PHB's FCFF for the year just ended is $28 million. FCFF is expected to grow at a constant rate of 4 percent for the foreseeable future.
   - The tax rate is 35 percent.
   - PHB has 8 million outstanding common shares.

   What is PHB's estimated value per share? Is PHB's stock underpriced?

16. Lawrence McKibben is preparing a valuation of Tele Norte Leste Participacoes SA (NYSE: TNE), a telecom services company headquartered in Rio de Janeiro, Brazil. McKibben has decided to use a three-stage FCFE valuation model and the following estimates. The FCFE per share for the current year is $0.75. FCFE is expected to grow at 10 percent for next year, then at 26 percent annually for the following three years, and then grow at 6 percent in Year 5 and thereafter. TNE's estimated beta is 2.00,

and McKibben feels that current market conditions dictate a 4.5 percent risk-free rate of return and a 5.0 percent equity risk premium. Given McKibben's assumptions and approach, what is the value of Tele Norte Leste Participacoes?

13. (Adapted from CFA Level II exam, 2000) The management of Telluride, an international diversified conglomerate based in the United States, believes that the recent strong performance of its wholly owned medical supply subsidiary, Sundanci, has gone unnoticed. To realize Sundanci's full value, Telluride announced that it will divest Sundanci in a tax-free spinoff.

Sue Carroll, CFA, is Director of Research at Kesson and Associates. In developing an investment recommendation for Sundanci, Carroll has gathered the information shown in Tables 3-1 and 3-2.

Abbey Naylor, CFA, has been directed by Carroll to determine the value of Sundanci's stock using the FCFE model. Naylor believes that Sundanci's FCFE will grow at 27 percent for two years, and 13 percent thereafter. Capital expenditures, depreciation, and working capital are all expected to increase proportionately with FCFE.

A. Calculate the amount of FCFE per share for 2000 using the data from Table 3-1. Show your work.
B. Calculate the current value of a share of Sundanci stock based on the two-stage FCFE model. Show your work.

TABLE 3-1 Sundanci Actual 1999 and 2000 Financial Statements for Fiscal Years Ending 31 May (in millions, except per-share data)

Income Statement	1999	2000
Revenue	$474	$598
Depreciation	20	23
Other operating costs	368	460
Income before taxes	86	115
Taxes	26	35
Net income	60	80
Dividends	18	24
Earnings per share	$0.714	$0.952
Dividends per share	$0.214	$0.286
Common shares outstanding	84.0	84.0
Balance Sheet	**1999**	**2000**
Current assets (includes $5 cash in 1999 and 2000)	$201	$326
Net property, plant, and equipment	474	489
Total assets	675	815
Current liabilities (all non-interest bearing)	57	141
Long-term debt	0	0
Total liabilities		
Shareholders' equity	618	674
Total liabilities and equity	675	815
Capital expenditures	34	38

TABLE 3-2 Selected Financial Information

Required rate of return on equity	14%
Industry growth rate	13%
Industry P/E	26