STUDY SESSION

11

Equity Valuation (3)

This study session presents additional valuation methods for estimating a company's intrinsic value. The free cash flow model, which takes available cash flows for distribution as the basis for valuation, is presented as an alternative to the dividend discount model, which uses actual dividends distributed. Relative valuation, using price and enterprise value multiples and which includes the comparables and forecasted fundamentals methods, comes next. Residual income valuation, useful when dividends or cash flows are minimal or volatile, or when difficulties exist in forecasting long-term terminal values, follows. The main approaches for valuing private company equity (income, market, asset based) conclude the session.

READING ASSIGNMENTS

Reading 30	Free Cash Flow Valuation by Jerald E. Pinto, PhD, CFA, Elaine Henry, PhD, CFA, Thomas R. Robinson, PhD, CFA, and John D. Stowe, PhD, CFA
Reading 31	Market-Based Valuation: Price and Enterprise Value Multiples by Jerald E. Pinto, PhD, CFA, Elaine Henry, PhD, CFA, Thomas R. Robinson, PhD, CFA, and John D. Stowe, PhD, CFA
Reading 32	Residual Income Valuation by Jerald E. Pinto, PhD, CFA, Elaine Henry, PhD, CFA, Thomas R. Robinson, PhD, CFA, and John D. Stowe, PhD, CFA
Reading 33	Private Company Valuation by Raymond D. Rath, ASA, CFA

LEARNING OUTCOMES

READING 30. FREE CASH FLOW VALUATION

The candidate should be able to:

a compare the free cash flow to the firm (FCFF) and free cash flow to equity (FCFE) approaches to valuation;

b explain the ownership perspective implicit in the FCFE approach;

c explain the appropriate adjustments to net income, earnings before interest and taxes (EBIT), earnings before interest, taxes, depreciation, and amortization (EBITDA), and cash flow from operations (CFO) to calculate FCFF and FCFE;

d calculate FCFF and FCFE;

e describe approaches for forecasting FCFF and FCFE;

f compare the FCFE model and dividend discount models;

g explain how dividends, share repurchases, share issues, and changes in leverage may affect future FCFF and FCFE;

h evaluate the use of net income and EBITDA as proxies for cash flow in valuation;

i explain the single-stage (stable-growth), two-stage, and three-stage FCFF and FCFE models and select and justify the appropriate model given a company's characteristics;

j estimate a company's value using the appropriate free cash flow model(s);

k explain the use of sensitivity analysis in FCFF and FCFE valuations;

l describe approaches for calculating the terminal value in a multistage valuation model;

m evaluate whether a stock is overvalued, fairly valued, or undervalued based on a free cash flow valuation model.

READING 31. MARKET-BASED VALUATION: PRICE AND ENTERPRISE VALUE MULTIPLES

The candidate should be able to:

a distinguish between the method of comparables and the method based on forecasted fundamentals as approaches to using price multiples in valuation, and explain economic rationales for each approach;

b calculate and interpret a justified price multiple;

c describe rationales for and possible drawbacks to using alternative price multiples and dividend yield in valuation;

d calculate and interpret alternative price multiples and dividend yield;

e calculate and interpret underlying earnings, explain methods of normalizing earnings per share (EPS), and calculate normalized EPS;

f explain and justify the use of earnings yield (E/P);

g describe fundamental factors that influence alternative price multiples and dividend yield;

h calculate and interpret the justified price-to-earnings ratio (P/E), price-to-book ratio (P/B), and price-to-sales ratio (P/S) for a stock, based on forecasted fundamentals;

- **i** calculate and interpret a predicted P/E, given a cross-sectional regression on fundamentals, and explain limitations to the cross-sectional regression methodology;
- **j** evaluate a stock by the method of comparables and explain the importance of fundamentals in using the method of comparables;
- **k** calculate and interpret the P/E-to-growth ratio (PEG) and explain its use in relative valuation;
- **l** calculate and explain the use of price multiples in determining terminal value in a multistage discounted cash flow (DCF) model;
- **m** explain alternative definitions of cash flow used in price and enterprise value (EV) multiples and describe limitations of each definition;
- **n** calculate and interpret EV multiples and evaluate the use of EV/EBITDA;
- **o** explain sources of differences in cross-border valuation comparisons;
- **p** describe momentum indicators and their use in valuation;
- **q** explain the use of the arithmetic mean, the harmonic mean, the weighted harmonic mean, and the median to describe the central tendency of a group of multiples;
- **r** evaluate whether a stock is overvalued, fairly valued, or undervalued based on comparisons of multiples.

READING 32. RESIDUAL INCOME VALUATION

The candidate should be able to:

- **a** calculate and interpret residual income, economic value added, and market value added;
- **b** describe the uses of residual income models;
- **c** calculate the intrinsic value of a common stock using the residual income model and compare value recognition in residual income and other present value models;
- **d** explain fundamental determinants of residual income;
- **e** explain the relation between residual income valuation and the justified price-to-book ratio based on forecasted fundamentals;
- **f** calculate and interpret the intrinsic value of a common stock using single-stage (constant-growth) and multistage residual income models;
- **g** calculate the implied growth rate in residual income, given the market price-to-book ratio and an estimate of the required rate of return on equity;
- **h** explain continuing residual income and justify an estimate of continuing residual income at the forecast horizon, given company and industry prospects;
- **i** compare residual income models to dividend discount and free cash flow models;
- **j** explain strengths and weaknesses of residual income models and justify the selection of a residual income model to value a company's common stock;
- **k** describe accounting issues in applying residual income models;
- **l** evaluate whether a stock is overvalued, fairly valued, or undervalued based on a residual income model.

READING 33. PRIVATE COMPANY VALUATION

The candidate should be able to:

a compare public and private company valuation;

b describe uses of private business valuation and explain applications of greatest concern to financial analysts;

c explain various definitions of value and demonstrate how different definitions can lead to different estimates of value;

d explain the income, market, and asset-based approaches to private company valuation and factors relevant to the selection of each approach;

e explain cash flow estimation issues related to private companies and adjustments required to estimate normalized earnings;

f calculate the value of a private company using free cash flow, capitalized cash flow, and/or excess earnings methods;

g explain factors that require adjustment when estimating the discount rate for private companies;

h compare models used to estimate the required rate of return to private company equity (for example, the CAPM, the expanded CAPM, and the build-up approach);

i calculate the value of a private company based on market approach methods and describe advantages and disadvantages of each method;

j describe the asset-based approach to private company valuation;

k explain and evaluate the effects on private company valuations of discounts and premiums based on control and marketability;

l describe the role of valuation standards in valuing private companies.