

2025 CFA[®]
Exam Prep

SchweserNotes[™]
Equity Valuation

Level II Book 3

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Book 3: Equity Valuation

SchweserNotes™ 2025

Level II CFA®

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SCHWESERNOTES™ 2025 LEVEL II CFA® BOOK 3: EQUITY VALUATION

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Learning Outcome Statements (LOS)

17. Equity Valuation: Applications and Processes

The candidate should be able to:

- a. define valuation and intrinsic value and explain sources of perceived mispricing.
- b. explain the going concern assumption and contrast a going concern value to a liquidation value.
- c. describe definitions of value and justify which definition of value is most relevant to public company valuation.
- d. describe applications of equity valuation.
- e. describe questions that should be addressed in conducting an industry and competitive analysis.
- f. contrast absolute and relative valuation models and describe examples of each type of model.
- g. describe sum-of-the-parts valuation and conglomerate discounts.
- h. explain broad criteria for choosing an appropriate approach for valuing a given company.

18. Discounted Dividend Valuation

The candidate should be able to:

- a. compare dividends, free cash flow, and residual income as inputs to discounted cash flow models and identify investment situations for which each measure is suitable.
- b. calculate and interpret the value of a common stock using the dividend discount model (DDM) for single and multiple holding periods.
- c. calculate the value of a common stock using the Gordon growth model and explain the model's underlying assumptions.
- d. calculate the value of non-callable fixed-rate perpetual preferred stock.
- e. describe strengths and limitations of the Gordon growth model and justify its selection to value a company's common shares.

- f. calculate and interpret the implied growth rate of dividends using the Gordon growth model and current stock price.
- g. calculate and interpret the present value of growth opportunities (PVGO) and the component of the leading price-to-earnings ratio (P/E) related to PVGO.
- h. calculate and interpret the justified leading and trailing P/Es using the Gordon growth model.
- i. estimate a required return based on any DDM, including the Gordon growth model and the H-model.
- j. evaluate whether a stock is overvalued, fairly valued, or undervalued by the market based on a DDM estimate of value.
- k. explain the growth phase, transition phase, and maturity phase of a business.
- l. explain the assumptions and justify the selection of the two-stage DDM, the H-model, the three-stage DDM, or spreadsheet modeling to value a company's common shares.
- m. describe terminal value and explain alternative approaches to determining the terminal value in a DDM.
- n. calculate and interpret the value of common shares using the two-stage DDM, the H-model, and the three-stage DDM.
- o. explain the use of spreadsheet modeling to forecast dividends and to value common shares.
- p. calculate and interpret the sustainable growth rate of a company and demonstrate the use of DuPont analysis to estimate a company's sustainable growth rate.

19. 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. explain how dividends, share repurchases, share issues, and changes

in leverage may affect future FCFF and FCFE.

- g. compare the FCFE model and dividend discount models.
- h. evaluate the use of net income and EBITDA as proxies for cash flow in valuation.
- i. explain the use of sensitivity analysis in FCFF and FCFE valuations.
- j. explain the single-stage (stable-growth), two-stage, and three-stage FCFF and FCFE models and justify the selection of the appropriate model given a company's characteristics.
- k. estimate a company's value using the appropriate free cash flow model(s).
- 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.

20. Market-Based Valuation: Price and Enterprise Value Multiples

The candidate should be able to:

- a. contrast 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 a predicted P/E, given a cross-sectional regression on fundamentals, and explain limitations to the cross-sectional regression methodology.
- i. 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.
- j. calculate and interpret the P/E-to-growth (PEG) ratio and explain its use in relative valuation.
- k. calculate and explain the use of price multiples in determining

- terminal value in a multistage discounted cash flow (DCF) model.
- l. evaluate whether a stock is overvalued, fairly valued, or undervalued based on comparisons of multiples.
 - m. evaluate a stock by the method of comparables and explain the importance of fundamentals in using the method of comparables.
 - n. explain alternative definitions of cash flow used in price and enterprise value (EV) multiples and describe limitations of each definition.
 - o. calculate and interpret EV multiples and evaluate the use of EV/EBITDA.
 - p. explain sources of differences in cross-border valuation comparisons.
 - q. describe momentum indicators and their use in valuation.
 - r. 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.

21. 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.

22. Private Company Valuation

The candidate should be able to:

- a. contrast important public and private company features for valuation purposes.
- b. describe uses of private business valuation and explain key areas of focus for financial analysts.
- c. explain cash flow estimation issues related to private companies and adjustments required to estimate normalized earnings.
- d. explain factors that require adjustment when estimating the discount rate for private companies.
- e. 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).
- f. explain and evaluate the effects on private company valuations of discounts and premiums based on control and marketability.
- g. explain the income, market, and asset-based approaches to private company valuation and factors relevant to the selection of each approach.
- h. calculate the value of a private company using income-based methods.
- i. calculate the value of a private company using market-based methods and describe the advantages and disadvantages of each method.

READING 17

EQUITY VALUATION: APPLICATIONS AND PROCESSES

EXAM FOCUS

This review is simply an introduction to the process of equity valuation and its application. Many of the concepts and techniques introduced are developed more fully in subsequent topic reviews. Candidates should be familiar with the concepts introduced here, including intrinsic value, analyst perception of mispricing, going concern versus liquidation value, and the difference between absolute and relative valuation techniques.

MODULE 17.1: EQUITY VALUATION: APPLICATIONS AND PROCESSES



Video covering
this content is
available
online.

LOS 17.a: Define valuation and intrinsic value and explain sources of perceived mispricing.

Valuation is the process of determining the value of an asset. There are many approaches and estimating the inputs for a valuation model can be quite challenging. Investment success, however, can depend crucially on the analyst's ability to determine the values of securities.

When we use the term **intrinsic value (IV)**, we are referring to the valuation of an asset or security by someone who has complete understanding of the characteristics of the asset or issuing firm. To the

extent that stock prices are not perfectly (informationally) efficient, they may diverge from the intrinsic values.

Analysts seeking to produce positive risk-adjusted returns do so by trying to identify securities for which their estimate of intrinsic value differs from current market price. One framework divides mispricing perceived by the analyst into two sources: the difference between market price and the intrinsic value (actual mispricing) and the difference between the analyst's estimate of intrinsic value and actual intrinsic value (valuation error). We can represent this relation as follows:

$$IV_{\text{analyst}} - \text{price} = (IV_{\text{actual}} - \text{price}) + (IV_{\text{analyst}} - IV_{\text{actual}})$$

LOS 17.b: Explain the going concern assumption and contrast a going concern value to a liquidation value.

The **going concern assumption** is simply the assumption that a company will continue to operate as a business, as opposed to going out of business. The valuation models we will cover are all based on the going concern assumption. An alternative, when it cannot be assumed that the company will continue to operate (survive) as a business, is a firm's **liquidation value**. The liquidation value is the estimate of what the assets of the firm would bring if sold separately, net of the company's liabilities.

A related concept, **orderly liquidation value**, is the value of the assets if they can be sold over time so as to fetch better prices.

LOS 17.c: Describe definitions of value and justify which definition of value is most relevant to public company valuation.

As stated earlier, intrinsic value is the most relevant metric for an analyst valuing public equities. However, other definitions of value may be relevant in other contexts. **Fair market value** is the price at which a hypothetical willing, informed, and able seller would trade an asset to a willing, informed, and able buyer. This definition is similar to the concept of fair value used for financial reporting purposes. A company's market price

should reflect its fair market value over time if the market has confidence that the company's management is acting in the interest of equity investors.

Investment value is the value of a stock to a particular buyer. Investment value may depend on the buyer's specific needs and expectations, as well as perceived synergies with existing buyer assets.

When valuing a company, an analyst should be aware of the purpose of valuation. For most investment decisions, intrinsic value is the relevant concept of value. For acquisitions, investment value may be more appropriate.

LOS 17.d: Describe applications of equity valuation.



PROFESSOR'S NOTE

This is simply a list of the possible scenarios that may form the basis of an equity valuation question. No matter what the scenario is, the tools you will use are the same.

Valuation is the process of estimating the value of an asset by (1) using a model based on the variables the analyst believes influence the fundamental value of the asset or (2) comparing it to the observable market value of "similar" assets. Equity valuation models are used by analysts in a number of ways. Rather than an end unto itself, valuation is a tool that is used in the pursuit of other objectives like those listed in the following paragraphs.

The general steps in the equity valuation process are:

1. Understand the business.
2. Forecast company performance.
3. Select the appropriate valuation model.
4. Convert the forecasts into a valuation.
5. Apply the valuation conclusions.

Stock selection. The most direct use of equity valuation is to guide the purchase, holding, or sale of stocks. Valuation is based on both a comparison of the intrinsic value of the stock with its market price and a comparison of its price with that of comparable stocks.

Reading the market. Current market prices implicitly contain investors' expectations about the future value of the variables that influence the stock's price (e.g., earnings growth and expected return). Analysts can estimate these expectations by comparing market prices with a stock's intrinsic value.

Projecting the value of corporate actions. Many market professionals use valuation techniques to determine the value of proposed corporate mergers, acquisitions, divestitures, management buyouts (MBOs), and recapitalization efforts.

Fairness opinions. Analysts use equity valuation to support professional opinions about the fairness of a price to be received by minority shareholders in a merger or acquisition.

Planning and consulting. Many firms engage analysts to evaluate the effects of proposed corporate strategies on the firm's stock price, pursuing only those that have the greatest value to shareholders.

Communication with analysts and investors. The valuation approach provides management, investors, and analysts with a common basis upon which to discuss and evaluate the company's performance, current state, and future plans.

Valuation of private business. Analysts use valuation techniques to determine the value of firms or holdings in firms that are not publicly traded. Investors in nonpublic firms rely on these valuations to determine the value of their positions or proposed positions.

Portfolio management. While equity valuation can be considered a stand-alone function in which the value of a single equity position is estimated, it can be more valuable when used in a portfolio management context to determine the value and risk of a portfolio of investments. The investment process is usually considered to have three parts: planning, execution, and evaluation of results. Equity valuation is a primary concern in the first two of these steps.

- *Planning.* The first step of the investment process includes defining investment objectives and constraints and articulating an investment strategy for selecting securities based on valuation parameters or

techniques. Sometimes investors may not select individual equity positions, but the valuation techniques are implied in the selection of an index or other preset basket of securities. Active investment managers may use benchmarks as indicators of market expectations and then purposely deviate in composition or weighting to take advantage of their differing expectations.

- *Executing the investment plan.* The valuation of potential investments guides the implementation of an investment plan. The results of the specified valuation methods determine which investments will be made and which will be avoided.

LOS 17.e: Describe questions that should be addressed in conducting an industry and competitive analysis.

The five **elements of industry structure** as developed by Professor Michael Porter are:

1. Threat of new entrants in the industry.
2. Threat of substitutes.
3. Bargaining power of buyers.
4. Bargaining power of suppliers.
5. Rivalry among existing competitors.

The attractiveness (long-term profitability) of any industry is determined by the interaction of these five competitive forces (Porter's five forces).

There are three generic strategies a company may employ in order to compete and generate profits:

1. *Cost leadership:* Being the lowest-cost producer of the good.
2. *Product differentiation:* Addition of product features or services that increase the attractiveness of the firm's product so that it will command a premium price in the market.
3. *Focus:* Employing one of the previous strategies within a particular segment of the industry in order to gain a competitive advantage.

Once the analyst has identified a company's strategy, she can evaluate the performance of the business over time in terms of how well it executes its strategy and how successful it is.

The basic building blocks of equity valuation come from accounting information contained in the firm's reports and releases. In order for the analyst to successfully estimate the value of the firm, the financial factors must be disclosed in sufficient detail and accuracy. Investigating the issues associated with the accuracy and detail of a firm's disclosures is often referred to as a **quality of financial statement information**. This analysis requires examination of the firm's income statement, balance sheet, and the notes to the financial statements. Studies have shown that the quality of earnings issue is reflected in a firm's stock price, with firms with more transparent earnings having higher market values.

An analyst can often only discern important results of management discretion through a detailed examination of the footnotes accompanying the financial reports. Quality of earnings issues can be broken down into several categories and may be addressed only in the footnotes and disclosures to the financial statements.

Accelerating or premature recognition of income. Firms have used a variety of techniques to justify the recognition of income before it traditionally would have been recognized. These include recording sales and billing customers before products are shipped or accepted and bill and hold schemes in which items are billed in advance and held for future delivery. These schemes have been used to obscure declines in operating performance and boost reported revenue and income.

Reclassifying gains and nonoperating income. Firms occasionally have gains or income from sources that are peripheral to their operations. The reclassification of these items as operating income will distort the results of the firm's continuing operations, often hiding underperformance or a decline in sales.

Expense recognition and losses. Delaying the recognition of expenses, capitalizing expenses, and classifying operating expenses as nonoperating expenses is an opposite approach that has the same effect as reclassifying

gains from peripheral sources, increasing operating income. Management also has discretion in creating and estimating reserves that reflect expected future liabilities, such as a bad debt reserve or a provision for expected litigation losses.

Amortization, depreciation, and discount rates. Management has a great deal of discretion in the selection of amortization and depreciation methods, as well as the choice of discount rates in determination of pension plan obligations. These decisions can reduce the current recognition of expenses, in effect deferring recognition to later periods.

Off-balance-sheet issues. The firm's balance sheet may not fully reflect the assets and liabilities of the firm. Special purpose entities (SPEs) can be used by the firm to increase sales (by recording sales to the SPE) or to obscure the nature and value of assets or liabilities. Leases can be structured as operating, rather than finance, leases in order to reduce the total liabilities reported on the balance sheet.

Warning signs of poor earnings quality (and risk of negative earnings surprises) include:

1. Past history of SEC violations, or late filings.
2. Related-party transactions.
3. Excessive loans to officers, employees, or directors.
4. Poor accounting disclosures related to (for example) segmental information or accounting assumptions and policies, and inadequate discussion of negative factors.
5. High management or director turnover.
6. Consulting services provided by an audit firm.
7. Disputes with and/or changes in auditors.
8. Executive compensation tied to profitability or stock price.
9. Declining margins or market share.
0. Pressure to meet debt covenants or earnings expectations.

LOS 17.f: Contrast absolute and relative valuation models and describe examples of each type of model.

Absolute valuation models. An absolute valuation model is one that estimates an asset's intrinsic value, which is its value arising from its investment characteristics without regard to the value of other firms. One absolute valuation approach is to determine the value of a firm today as the *discounted* or *present value* of all the cash flows expected in the future. *Dividend discount models* estimate the value of a share based on the present value of all expected dividends discounted at the opportunity cost of capital. Many analysts realize that equity holders are entitled to more than just the dividends and so expand the measure of cash flow to include all expected cash flow to the firm that is not payable to senior claims (bondholders, taxing authorities, and senior stockholders). These models include the free cash flow approach and the residual income approach.

Another absolute approach to valuation is represented by *asset-based* models. This approach estimates a firm's value as the sum of the market value of the assets it owns or controls. This approach is commonly used to value firms that own or control natural resources, such as oil fields, coal deposits, and other mineral claims.

Relative valuation models. Another very common approach to valuation is to determine the value of an asset in relation to the values of other assets. This is the approach underlying relative valuation models. The most common models use market price as a multiple of an individual financial factor of the firm, such as earnings per share. The resulting ratio, price-to-earnings (P/E), is easily compared to that of other firms. If the P/E is higher than that of comparable firms, it is said to be *relatively* overvalued, that is, overvalued relative to the other firms (not necessarily overvalued on an intrinsic value basis). The converse is also true: if the P/E is lower than that of comparable firms, the firm is said to be relatively undervalued.

LOS 17.g: Describe sum-of-the-parts valuation and conglomerate discounts.

Rather than valuing a company as a single entity, an analyst can value individual parts of the firm and add them up to determine the value for the company as a whole. The value obtained is called the *sum-of-the-parts*

value, or sometimes *breakup value* or *private market value*. This process is especially useful when the company operates multiple divisions (or product lines) with different business models and risk characteristics (i.e., a conglomerate).

Conglomerate discount is based on the idea that investors apply a markdown to the value of a company that operates in multiple unrelated industries, compared to the value a company that has a single industry focus. Conglomerate discount is thus the amount by which market value under-represents sum-of-the-parts value.

Three explanations for conglomerate discounts are:

1. **Internal capital inefficiency.** The company's allocation of capital to different divisions may not have been based on sound decisions.
2. **Endogenous (internal) factors.** For example, the company may have pursued unrelated business acquisitions to hide poor operating performance.
3. **Research measurement errors.** Some hypothesize that conglomerate discounts do not exist, but rather are a result of incorrect measurement.

LOS 17.h: Explain broad criteria for choosing an appropriate approach for valuing a given company.

When selecting an approach for valuing a given company, an analyst should consider whether the model:

- Fits the characteristics of the company (e.g., Does it pay dividends? Is earnings growth estimable? Does it have significant intangible assets?).
- Is appropriate based on the quality and availability of input data.
- Is suitable given the purpose of the analysis.

The purpose of the analysis may be, for example, valuation for making a purchase offer for a controlling interest in the company. In this case, a model based on cash flow may be more appropriate than one based on dividends because a controlling interest would allow the purchaser to set dividend policy.

One thing to remember with respect to choice of a valuation model is that the analyst does not have to consider only one. Using multiple models and examining differences in estimated values can reveal how a model's assumptions and the perspective of the analysis are affecting the estimated values.



MODULE QUIZ 17.1

1. Susan Weiber, CFA, has noted that even her best estimates of a stock's intrinsic value can differ significantly from the current market price. The *least likely* explanation is differences between:
 - A. her estimate and the actual intrinsic value.
 - B. the actual intrinsic value and the market price.
 - C. the intrinsic value and the going concern value.
2. For a company for which the going-concern assumption is not valid, the *most appropriate* valuation approach would be to calculate its:
 - A. residual income model value.
 - B. dividend discount model value.
 - C. liquidation value.
3. Davy Jarvis, CFA, is performing an equity valuation as part of the planning and execution phase of the portfolio management process. His results will also be useful for:
 - A. communication with analysts and investors.
 - B. technical analysis.
 - C. benchmarking.
4. The five elements of industry structure, as outlined by Michael Porter, include:
 - A. threat of substitutes.
 - B. rivalry among buyers.
 - C. bargaining power of competitors.
5. Tom Walder has been instructed to use absolute valuation models, and not relative valuation models, in his analysis. Which of the following is *least likely* to be an example of an absolute valuation model?
 - A. The dividend discount model.
 - B. The price-to-earnings market multiple model.
 - C. The residual income model.
6. Davy Jarvis, CFA, is performing an equity valuation and reviews his notes for key points he wanted to cover when planning the valuation. He finds the following questions:
 - Does the company pay dividends?
 - Is earnings growth estimable?
 - Does the company have significant intangible assets?