

# CFA Space

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**Academy of Professional Finance 专业金融学院**

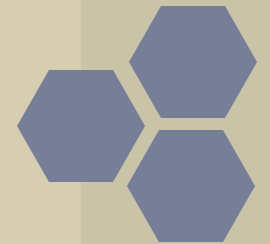


## CFA Level II

**Equity Valuation**

**Introduction**

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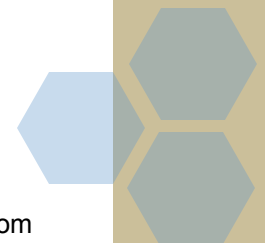




## Weight of Quantitative Methods

Topic Area	Level I	Level II	Level III
Ethical and Professional Standards	15	10-15	10-15
Quantitative Methods	12	5-10	0
Economics for Valuation	10	5-10	5-15
Financial Reporting and Analysis	20	15-20	0
Corporate Finance	7	5-15	0
<b>Equity Valuation</b>	<b>10</b>	<b>15-25</b>	<b>5-15</b>
Fixed Income	10	10-20	10-20
Derivatives	5	5-15	5-15
Alternative Investments	4	5-10	5-15
Portfolio Management	7	5-10	40-55
<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>

Data Source: CFAInstitute.org





# Overview

Readings	LOS
<b>Equity Valuation: Applications and Processes</b>	<b>8</b>
<b>Return Concepts</b>	<b>8</b>
<b>Industry and Company Analysis</b>	<b>13</b>
<b>Discounted Dividend Valuation</b>	<b>16</b>
<b>Free Cash Flow and Other Valuation Models</b>	<b>13</b>
<b>Market-based Valuation: Price and EV Multiples</b>	<b>18</b>
<b>Residual Income Valuation</b>	<b>12</b>
<b>Private Company Valuation</b>	<b>12</b>



# Overview of LOS

## **Equity Valuation: Applications and Processes**

1. Define valuation and intrinsic value and explain sources of perceived mispricing;
2. Explain the going concern assumption and contrast a going concern value to a liquidation value
3. Describe definitions of value and justify which definition of value is most relevant to public company valuation
4. Describe applications of equity valuation
5. Describe questions that should be addressed in conducting an industry and competitive analysis



# Overview of LOS

## **Equity Valuation: Applications and Processd**

6. Contrast absolute and relative valuation models and describe examples of each type of model

7. Describe sum-of-the-parts valuation and conglomerate discounts

8. Explain broad criteria for choosing an appropriate approach for valuing a given company



# Overview of LOS

## Return Concepts

1. Distinguish among realized holding period return, expected holding period return, required return, return from convergence of price to intrinsic value, discount rate, and internal rate of return
2. Calculate and interpret an equity risk premium using historical and forward-looking estimation approaches
3. Estimate the required return on an equity investment using the capital asset pricing model, the Fama-French model, the Pastor-Stambaugh model, macro-economic multifactor models, and the build-up method (e.g., bond yield plus risk premium)
4. Explain beta estimation for public companies, thinly traded public companies, and nonpublic companies
5. Describe strengths and weaknesses of methods used to estimate the required return on an equity investment



# Overview of LOS

## Return Concepts

6. Explain international considerations in required return estimation

7. Explain and calculate the WACC for a company

8. Evaluate the appropriateness of using a particular rate of return as a discount rate, given a description of the cash flow to be discounted and other relevant facts



# Overview of LOS

## Industry and Company Analysis

1. Compare top-down, bottom-up, and hybrid approaches for developing inputs to equity valuation models

2. Compare “growth relative to GDP growth” and “market growth and market share” approaches to forecasting revenue

3. Evaluate whether economies of scale are present in an industry by analyzing operating margins and sales levels

4. Forecast the following costs: cost of goods sold, selling general and administrative costs, financing costs, and income taxes

5. Describe approaches to balance sheet modeling





# Overview of LOS

## Industry and Company Analysis

6. Describe the relationship between return on invested capital and competitive advantage
7. Explain how competitive factors affect prices and costs
8. Judge the competitive position of a company based on a Porter's five forces analysis
9. Explain how to forecast industry and company sales and costs when they are subject to price inflation or deflation
10. Evaluate the effects of technological developments on demand, selling prices, costs, and margins



# Overview of LOS

## **Industry and Company Analysis**

11. Explain considerations in the choice of an explicit forecast horizon

12. Explain an analyst's choices in developing projections beyond the short-term forecast horizon

13. Demonstrate the development of a sales-based pro forma company model



# Overview of LOS

## Discounted Dividend Valuation

1. 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
2. Calculate and interpret the value of a common stock using the dividend discount model for single and multiple holding periods
3. Calculate the value of a common stock using the Gordon growth model and explain the model's underlying assumptions
4. Calculate and interpret the implied growth rate of dividends using the Gordon growth model and current stock price
5. 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



# Overview of LOS

## Discounted Dividend Valuation

6. Calculate and interpret the justified leading and trailing P/Es using the Gordon growth model

7. Calculate the value of noncallable fixed-rate perpetual preferred stock

8. Describe strengths and limitations of the Gordon growth model and justify its selection to value a company's common shares

9. 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

10. Explain the growth phase, transitional phase, and maturity phase of a business



# Overview of LOS

## Discounted Dividend Valuation

11. Describe terminal value and explain alternative approaches to determining the terminal value in a DDM
12. Calculate and interpret the value of common shares using the two-stage DDM, the H-model, and the three-stage DDM
13. Estimate a required return based on any DDM, including the Gordon growth model and the H-model
14. Explain the use of spreadsheet modeling to forecast dividends and to value common shares
15. 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
16. Evaluate whether a stock is overvalued, fairly valued, or undervalued by the market based on a DDM estimate of value



# Overview of LOS

## Free Cash Flow Valuation

1. Compare the free cash flow to the firm (FCFF) and free cash flow to equity (FCFE) approaches to valuation
2. Explain the ownership perspective implicit in the FCFE approach
3. Explain the appropriate adjustments to NI, EBIT, EBITDA, and CFO to calculate FCFF and FCFE
4. Calculate FCFF and FCFE
5. Describe approaches for forecasting FCFF and FCFE



# Overview of LOS

## Free Cash Flow Valuation

6. Compare the FCFE model and dividend discount models

7. Explain how dividends, share repurchases, share issues, and changes in leverage may affect future FCFF and FCFE

8. Evaluate the use of net income and EBITDA as proxies for cash flow in valuation

9. Explain the single-stage, two-stage, and three-stage FCFF and FCFE models and select and justify the appropriate model given a company's characteristics

10. Estimate a company's value using the appropriate FCF models



# Overview of LOS

## Free Cash Flow Valuation

11. Explain the use of sensitivity analysis in FCFF and FCFE valuations

12. Describe approaches for calculating the terminal value in a multistage valuation model

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





# Overview of LOS

## **Market-based Valuation: Price and Enterprise Value Multiples**

1. 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
2. Calculate and interpret a justified price multiple
3. Describe rationales for and possible drawbacks to using alternative price multiples and dividend yield in valuation
4. Calculate and interpret alternative price multiples and dividend yield
5. Calculate and interpret underlying earnings, explain methods of normalizing earnings per share (EPS), and calculate normalized EPS



# Overview of LOS

## **Market-based Valuation: Price and Enterprise Value Multiples**

6. Explain and justify the use of earnings yield (E/P)

7. Describe fundamental factors that influence alternative price multiples and dividend yield

8. Calculate and interpret the justified P/E, P/B, and P/S for a stock, based on forecasted fundamentals

9. Calculate and interpret a predicted P/E, given a cross-sectional regression on fundamentals, and explain limitations to the cross-sectional regression methodology

10. Evaluate a stock by the method of comparables and explain the importance of fundamentals in using the method of comparables



# Overview of LOS

## **Market-based Valuation: Price and Enterprise Value Multiples**

11. Calculate and interpret the P/E-to-growth ratio (PEG) and explain its use in relative valuation

12. Calculate and explain the use of price multiples in determining terminal value in a multistage discounted cash flow (DCF) model

13. Explain alternative definitions of cash flow used in price and enterprise value (EV) multiples and describe limitations of each definition

14. Calculate and interpret EV multiples and evaluate the use of EV/EBITDA

15. Explain sources of differences in cross-border valuation comparisons



# Overview of LOS

## **Market-based Valuation: Price and Enterprise Value Multiples**

16. Describe momentum indicators and their use in valuation

17. 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

18. Evaluate whether a stock is overvalued, fairly valued, or undervalued based on comparison of multiples



# Overview of LOS

## **Residual Income Valuation**

1. Calculate and interpret residual income, economic value added, and market value added
2. Describe the uses of residual income models
3. 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
4. Explain fundamental determinants of residual income
5. Explain the relation between residual income valuation and the justified price-to-book ratio used on forecasted fundamentals



# Overview of LOS

## Residual Income Valuation

6. Calculate and interpret the intrinsic value of a common stock using single-stage (constant-growth) and multistage residual income models

7. 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

8. Explain continuing residual income and justify an estimate of continuing residual income at the forecast horizon, given company and industry prospects

9. Compare residual income models to dividend discount and free cash flow models

10. Explain strengths and weaknesses of residual income models and justify the selection of a residual income model to value a company's common stock



# Overview of LOS

## Residual Income Valuation

11. Describe accounting issues in applying residual income models

12. Evaluate whether a stock is overvalued, fairly valued, or undervalued based on a residual income model



# Overview of LOS

## Private Company Valuation

1. Compare public and private company valuation
2. Describe uses of private business valuation and explain applications of greatest concern to financial analysts
3. Explain various definitions of value and demonstrate how different definitions can lead to different estimates of value
4. Explain the income, market, and asset-based approaches to private company valuation and factors relevant to the selection of each approach
5. Explain cash flow estimation issues related to private companies and adjustments required to estimate normalized earnings





# Overview of LOS

## Private Company Valuation

6. Calculate the value of a private company using free cash flow, capitalized cash flow, and/or excess earnings methods

7. Explain factors that require adjustment when estimating the discount rate for private companies

8. Compare models used to estimate the required rate of return to private company equity (e.g., the CAPM, the expanded CAPM, and the build-up approach)

9. Calculate the value of a private company based on market approach methods and describe advantages and disadvantages of each method

10. Describe the asset-based approach to private company valuation



# Overview of LOS

## Private Company Valuation

11. Explain and evaluate the effects on private company valuations of discounts and premiums based on control and marketability

12. Describe the role of valuation standards in valuing private companies

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**Thank You!**

