B7110 Valuation and Financial Statement Analysis

Course Descriptions and Syllabus

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Consultation hours: By appointments

Your Teaching Assistant
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Consultation hours: By appointments

Important Dates
Take-home Midterm Exam available on Mar 21, Due at the start of class on Mar 28
Group Assignment Due at the start of class on April 26
Take-home Final Exam available on April 25, Due on May 2

Course Descriptions
This course is about the use of financial information (e.g., firms’ financial statements, analyst earnings forecasts) to make investment decisions. Our primary focus is on equity (share) valuation, with a core emphasis on developing and applying technologies for valuing firms using financial statement analysis.

The course has a very practical emphasis. We will apply methods of fundamental analysis in a series of class exercises, cases and an assignment involving listed companies. Topics covered include models of shareholder value, a comparison of accrual accounting and discounted cash flow approaches to valuation, the analysis of, growth and valuation generation in a firm, diagnosing accounting quality, forecasting earnings and cash flows, pro-forma analysis for strategy and planning, and the determination of price/earnings and market-to-book ratios.

The course will be taught with a view to designing techniques to be used in an (independent) equity research department or firm. Accordingly, the material is pertinent to equity analysts, both buy and sell side, who issue buy, hold or sell recommendations on stocks. However, much of the material covered in the course is also relevant to the corporate financial analyst and for private equity analysis, for
evaluating acquisitions, restructurings and other investments, and for calculating the value generated by strategic scenarios.

By the end of the course, the student should feel competent in writing a thorough, credible equity research report or investment analysis that meets the highest standards of professionalism. The course is of interest to those contemplating careers in investment banking (particularly in equity research), security analysis, consulting, public accounting, and corporate finance. And it will also help with personal investing.

**Course Objectives**

By the end of the course, you should be able to answer the following questions:

- How are fundamental values (or “intrinsic values”) estimated?
- How are business strategies analyzed in order to understand the value they create?
- What business activities determine value?
- How is “value created for shareholders” identified?
- How does one pull apart the financial statements to get at the relevant information for valuing equities?
- How does ratio analysis help in valuation?
- How does profitability tie into valuation?
- What is growth? How does one analyze growth? How does one value a growth firm?
- How does one analyze the quality of financial reports?
- How does one deal with the accounting methods used in financial statements?
- How is financial analysis developed for strategy and planning?
- What determines a firm's P/E ratio? How does one calculate what the P/E should be?
- What determines a firm's market-to-book (P/B) ratio? How does one calculate what the P/B should be?
- How does one evaluate risk?
- How does one evaluate an equity research report?
- How does one trade on fundamental information?

**Prescribed Text**


**Other Materials**

All lecture notes, slides, class exercises, cases, solutions to class exercises and cases will be distributed class.

You can also access all course-related materials on ANGEL.
**Assessments**

Your final grade is calculated based on:

- 2 Pop Quizzes: 10%
- Take home Mid-term Exam: 20%
- 1 Group Assignment & Presentation: 40%
- Take home Final Exam: 30%

You will be given the dates of the 2 pop quizzes as we proceed through the course. The mid-term and final exams are designed to test your understanding of the principles of fundamental analysis.

**Group Assignment & Presentation**

**Objective**
Build your own analysis product and apply the product to make an investment decision.

**Group Size**
The group should consist of no more than five (5) members.

**Instructions:**
You need to select a company listed on the US market and complete an equity report using your own valuation template. Once you have formed a group, please email your professor identifying (i) the section that you belong (ii) members of the group and (iii) the company your group has selected for your equity analysis.

**Due Date:**
Same day as your group presentation. For EMBA students, this will take place on the last day of your class. For MBA students, you will be advised on the date of your group presentation.

**Requirements:**
(i) Present your group’s equity analysis in 10 minutes and allow 5 minutes for Questions and Answers
(ii) Your group need to submit an abbreviated equity report (not exceeding 2 pages). The abbreviated equity report should be made available to every class member. Attached please find an example of the abbreviated report. The attachment should only be used as a guide. You should amend the format of the equity report to tailor to your own analysis.

**Grading:**
(i) Presentation: 30% of your final grade
(ii) Abbreviated Equity Report: 10% of your final grade

Your group presentation will be graded by your peers. Your group abbreviated equity report will be graded by your professor.
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<tr>
<th>Session</th>
<th>Section/Date</th>
<th>Topics</th>
<th>Readings &amp; Powerpoint Slides</th>
<th>Class Exercises (CE)</th>
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<tr>
<td>Module I  Choosing a Valuation Model</td>
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<td>Jan 11</td>
<td>Introduction to Fundamental Analysis; Revisiting the Financial Statements; Stock Screening; Valuation of a Savings Account</td>
<td>Chapter 1, 2, 3 Powerpoint 01, 02, 03</td>
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<td>2</td>
<td>Jan 25</td>
<td>Dividend Discount Model; Discounted Cash Flow Model</td>
<td>Chapter 4 Powerpoint 04, 05</td>
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<td>3</td>
<td>Jan 26</td>
<td>Pricing Book Values</td>
<td>Chapter 5 Powerpoint 06, 07</td>
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<td></td>
<td>Date</td>
<td>Topic</td>
<td>Chapter/Powerpoint</td>
<td>Notes</td>
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<tr>
<td>4</td>
<td>Feb 9</td>
<td>Pricing Earnings Summary of Valuation Models</td>
<td>Chapter 6</td>
<td>Powerpoint 08, 09, 10 CE 08 Valuation from Forecasting Abnormal Earnings Growth; CE 09: Analysts’ Forecasts and Valuation - PepsiCo and Coca Cola; CE 10: Applying the Valuation Models – 3 mini cases (Kmart, Goldman Sachs, Borders)</td>
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<td><strong>Module II  Analysis of Information</strong></td>
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<td>5</td>
<td>Feb 22</td>
<td>Reformulation of Financial Statements; Analysis of the Statement of Shareholders’ Equity</td>
<td>Chapter 7, 8</td>
<td>Powerpoint 11, 12 CE11: Accounting Relations, Forecasting, and Valuation: Nike, Inc.; CE12: Analysis of the Equity Statement, Hidden Losses, and Off-Balance-Sheet Liabilities: Microsoft Corporation</td>
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<td>7</td>
<td>Feb 29</td>
<td>Analysis of Profitability; Analysis of Sustainable Growth</td>
<td>Chapter 11, 12</td>
<td>Powerpoint 15, 16 CE 13: Kimberly-Clark Corporation (KMB): Profitability Analysis; CE 14: Analysis of Growth in Core Operating Income During the 1990s – IBM (International Business Machines)</td>
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Take-Home Mid-Term Exam available March 21, due at the start of class on March 28.

**Module III  Forecasting and Valuation**

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<td>8</td>
<td>Mar 28</td>
<td>P/B &amp; P/E; Enterprise Valuation; Simple Valuation; Forecasting and Valuation</td>
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<td>Chapter 13, 15</td>
<td>Powerpoint 17, 18 &amp; 19</td>
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<td></td>
<td>CE 15 Valuing the Operations and the Investments of a Property and Casualty Insurer - Chubb Corporation;</td>
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| 9 | April 12 | Creating Accounting Value Added; Analysis of the Quality of Financial Statements |
|   | Chapter 16, 17 | Powerpoint 20 |

10 | April 26 | Group Presentation & hand in Group Assignment |

Take-Home Final Exam available April 25, due May 2.
List of Acronyms

AEG  Abnormal earnings growth
AMEX  American Stock Exchange
AOIG  Abnormal operating income growth
ATO  Asset Turnover = Sales/NOA
Bps  Book Value per Share
CAPM  Capital Asset Pricing Model
CSE  Common Shareholders’ Equity
CV  Continuing Value
DCF  Discounted Cash Flow
Dps  Dividends per Share
EBIT  Earnings before Interest and Taxes
EBITDA  Earnings before Interest, Taxes, Depreciation and Amortization
Eps  Earnings per Share
ESOP  Employee Stock Ownership Plan
FA  Financial Assets
FASB  Financial Accounting Standards Board
FCF  Free cash flow
FIFO  First in, first out
FLEV  Financial Leverage = NFO/CSE
FO  Financial Obligations
GAAP  Generally Accepted Accounting Principles
GDP  Gross Domestic Project
GM  Gross Margin
IASC  International Accounting Standards Committee
IPO  Initial Public Offering
LBO  Leverage Buyout
LIFO  Last in, first out
MI  Minority Interest
NBC  Net Borrowing Cost = NFE/NFO
NFA  Net Financial Assets
NFE  Net Financial Expense
NFI  Net Financial Income
NFO  Net Financial Obligations
NOA  Net Operating Assets
NPV  Net Present Value
NYSE  New York Stock Exchange
OA  Operating Assets
OE  Operating Expense
OI  Operating Income
OL  Operating Liabilities
OLEV  Operating Leverage
OLLEV  Operating Liability Leverage = OL/NOA
OLSPREAD  Operating Liability Leverage Spread = ROOA – Short-term Borrowing rate
OR  Operating Revenue
<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
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<tr>
<td>P/B</td>
<td>Price-to-Book Ratio</td>
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<tr>
<td>P/CFO</td>
<td>Price-to-Cash-Flow Ratio</td>
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<tr>
<td>P/d</td>
<td>Price-to-Dividend Ratio</td>
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<tr>
<td>P/E</td>
<td>Price-to-Earnings Ratio</td>
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<tr>
<td>PEG</td>
<td>Price-to-Earnings Growth</td>
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<tr>
<td>PM</td>
<td>Profit Margin = OI/Sales</td>
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<td>Pr</td>
<td>Probability</td>
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<td>P/S</td>
<td>Price-to-Sales Ratio</td>
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<td>PV</td>
<td>Present Value</td>
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<tr>
<td>P/V</td>
<td>Price-to-Value Ratio</td>
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<tr>
<td>R&amp;D</td>
<td>Research and Development</td>
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<tr>
<td>RE</td>
<td>Residual Earnings</td>
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<tr>
<td>ReOI</td>
<td>Residual Operating Income</td>
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<tr>
<td>RNFA</td>
<td>Return on Net Financial Assets = NFI/NFA</td>
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<tr>
<td>RNOA</td>
<td>Return on Net Operating Assets = OI/RNOA</td>
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<tr>
<td>ROA</td>
<td>Return on assets = Total Assets</td>
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<td>ROCE</td>
<td>Rate of Return on Common Equity</td>
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<tr>
<td>ROOA</td>
<td>Return on Operating Assets = OA</td>
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<tr>
<td>SEC</td>
<td>Securities and Exchange Commission</td>
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<tr>
<td>SF1</td>
<td>Simple Forecast, type 1</td>
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<tr>
<td>SF2</td>
<td>Simple Forecast, type 2</td>
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<td>SF3</td>
<td>Simpler Forecast, type 3</td>
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<tr>
<td>SG&amp;A</td>
<td>Selling, General &amp; Administrative (expenses)</td>
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<tr>
<td>SPREAD</td>
<td>The Operating Spread = RNOA - NBC</td>
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<td>TV</td>
<td>Terminal Value</td>
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<tr>
<td>UI</td>
<td>Unusual Items</td>
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<tr>
<td>WACC</td>
<td>Weighted-average Cost of Capital</td>
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