

**Security Analysis**  
B8313-02

Spring 2007  
Wednesday: 5:45 - 9:00 PM  
Office Hours: By appointment

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“Nullius in verba” - *Royal Society motto*  
“Non notationes, sed notiones” - *Carl Friedrich Gauss*

## Course Description and Outline

### Course Content:

This course's goal is to understand a thought process for equity security analysis. The course is based on four building blocks:

#### (1) Capital markets

- What factors drive market value and how do we understand and analyze them?
- Are markets efficient? If so, why? If not, why not?
- Does modern portfolio theory best explain markets?
- Does intrinsic value or market psychology determine stock prices?
- Can studies of complex systems provide useful insight into markets?

#### (2) Valuation

- How do you value a business?
- Which of the commonly used analytical tools tells you the most about value?
- What does the stock market say about corporate performance?
- How do you incorporate risk into the value calculation?
- How do you capture competitive advantage in your valuation?
- Is there a legitimate distinction between value and growth investing?

#### (3) Competitive Strategy

- What is the definition of a good business?
- How do you evaluate industry factors?
- How do you isolate company-specific sources of value creation?
- What is role of firm interaction?
- Does the shift from physical to knowledge assets require new strategy models?

#### (4) Decision Making

- What do successful players in probabilistic fields have in common?
- How do we misspecify probabilities and outcomes?
- Can self-awareness negate personal biases?
- How can we link cognition and economics?

We will consider answers to these questions in the context of a highly competitive market, and will combine practical tools and theoretical approaches.

## **Course Structure:**

55% lecture

35% student presentations

10% company/student interaction

The course has two sections. The first part (14 to 16 lectures) develops the essential tools the securities analyst needs, including basic capital market concepts, competitive analysis and valuation methods. The second part (8 sessions) allows students to apply what they have learned by presenting a thorough analysis of a company and an investment conclusion regarding its company's shares.

A representative of a major corporation will join the class near the end of the first section. This session will give students the opportunity to question a management team directly on all facets of corporate strategy. Further, accomplished portfolio managers will be invited to attend student presentations to provide constructive feedback, share their insights into the security analysis process, and answer questions.

A key skill for an analyst is to be able to clearly and persuasively make a case for the purchase or the sale of a particular security based on well-reasoned analysis. To make all class presentations more realistic, the class will participate by acting as portfolio managers. Further, following each presentation, each student will elect whether or not to follow the investment recommendation of the presenting group.

Course prerequisites are B8100 (Corporate Financial Reporting) and B6302 (Foundations of Finance). Early in the semester, some of the material covered will overlap with finance courses. You should view this material as the opposite side of the same coin, and it is intended to firmly establish a foundation upon which the key tenets of the course will be based. It is important to underscore that while an understanding of basic finance is important for this course, the course is designed to develop concepts that are highly intuitive.

Columbia Business School has a terrific tradition of teaching security analysis. This course, at its best, is both practically oriented and intellectually stimulating. The quotes at the top of the syllabus sum up the proper attitude going into this course. The first—*nullius in verba*—means “take nobody’s word for it; see for yourself.” Security analysis is not a science (although a few of the tenets are reasonably well established) and there is much to learn. You must always actively seek to better understand the process, and you can be assured no one is going to offer you the answers. The second quote—*non notationes, sed notiones*—translates to “not notations, but notions.” Corporate finance is too often taught by laying out formulas, without enough consideration of what those formulas mean (or were meant to explain). We should all do our best to perpetuate the fine tradition of security analysis at CBS.

## **Grades:**

Grades for the course will be based on 6 factors as follows:

1. Company basic report. The maximum length of the report is 10 pages, excluding exhibits. We will discuss the format and content of the report in more detail in class. These reports are done on a group basis, although a mechanism will be in place to assure that contributions are equal among members. This report is due one week after our last class meeting. **(30%)**
2. Presentation of basic reports. Everyone will be required to participate in the presentation. **(20%)**
3. Valuation exercise. Students will be required to complete a valuation exercise (details in class). This project is to be completed individually. Due one week after assigned. **(15%)**
4. Strategic assessment of the company based on our corporate presentation. The corporate write-up paper should not exceed five (5) pages, and does not require valuation work. This project is to be completed individually. Due one week after assigned. **(15%)**
5. Three one-page reports on companies presented in class. These papers are due one week after the presentation in class. Two copies of the report should be handed in, so that a copy can go to the presenting group for feedback. **(10%)**
6. Class participation. All aspects of the course—including the initial lectures—are intended to be interactive. Students are encouraged to challenge, disagree, and pose alternate views. Further, attendance will be taken every class, with the cumulative attendance record contributing to a class participation grade. **(10%)**

*All papers must be handed in on the assigned due date (unless arrangements have been made ahead of time). Any student that hands work in late will not receive top grades.*

- (1) Basic reports. Students will work in groups of three to four on the basic reports. A list of companies that can be covered will be provided, and only one group can do a company. Students will make a presentation to the class and hand in the full report on or before **April 25, 2007**. The order of the presentations will be determined within the first few weeks of the course, and will depend in part on the schedules of the professional guests critiquing the presentations. Portfolio manager comments will not be considered in the grading process, and are intended for student edification only.
- (2) Valuation project. This exercise is intended to give all students an opportunity to explore the key thought process and mechanics behind valuation.
- (3) Write-up of company presentation. Students are expected to assess the competitive position, key value drivers, central strategies (both operating and financial) and management of the presenting company. Well thought out conclusions, appropriate prioritization of key issues and rigorous and consistent analysis are the central objectives of this paper.
- (4) One-page reports. The one-page reports will be done individually and will be due at the start of the class following the week of the presentation. The write-ups should focus on an evaluation of the information and should present an independent recommendation for the company's shares (with an explanation). Do not recap what was said in class. Each student must select three cases to write up.
- (5) Presentation of reports. Consistent with the theme of practical skill development, you will be graded on the verbal presentation as well as the written report. Emphasis should be placed on the clear conveyance of well thought-out conclusions. Other students are expected to actively participate in the Q&A period following each presentation, and will be graded on their questions and comments.

## **Reading List:**

Each student should obtain the course readings and a copy of the book *Expectations Investing: Reading Stock Prices for Better Returns* by Alfred Rappaport and Michael J. Mauboussin (Boston: Harvard Business School Press, 2001). Students will *not* be required to read all of the articles. There are, however, a number of core articles that you are expected to be familiar with (i.e., be prepared to discuss). For more depth than the course will provide, the following books are highly recommended:

Bernstein, Peter L., *Capital Ideas* (New York: Free Press, 1992).

———. *Against the Gods: The Remarkable Story of Risk* (New York: John Wiley & Sons, 1996).

Besanko, David, David Dranove, and Mark Shanley, *Economics of Strategy*, 3<sup>rd</sup> ed. (New York: John Wiley & Sons, 2004).

Ghemawat, Pankaj, *Strategy and The Business Landscape*, 2<sup>nd</sup> ed. (Upper Saddle River, NJ: Pearson Prentice Hall, 2006).

Greenwald, Bruce, Judd Kahn, Paul Sonkin and Michael Van Biema, *Value Investing: From Graham to Buffett and Beyond* (New York: John Wiley & Sons, 2001).

Greenwald, Bruce and Judd Kahn, *Competition Demystified: A Radically Simplified Approach to Business Strategy* (New York: Portfolio Books, 2005).

Kaufman, Peter D., ed. *Poor Charlie's Almanack*, 2<sup>nd</sup> ed. (Virginia Beach, VA: The Donning Company Publishers, 2006).

Koller, Tim, Marc Goedhart, and David Wessels *Measuring and Managing the Value of Companies*, 4th Edition (New York: John Wiley & Sons, 2005).

Malkiel, Burton G., *A Random Walk Down Wall Street: The Time-Tested Strategy for Successful Investing*, 9<sup>th</sup> Edition (New York: W.W. Norton & Company, 2007).

McTaggart, Kontes, Mankins, *The Value Imperative* (New York: Free Press, 1994).

Rappaport, Alfred, *Creating Shareholder Value: A Guide for Shareholders and Investors* (New York: Free Press, 1998).

Stewart, III, G. Bennett, *The Quest for Value* (New York: HarperCollins, 1991).

Surowiecki, James, *The Wisdom of Crowds* (New York: Doubleday, 2004).

| <b>Class</b> | <b>Date</b> | <b>Material to be Covered/Assignment</b>   |
|--------------|-------------|--|
| 1 and 2      | January 17  | <ul style="list-style-type: none"> <li>• Introduction and Overview</li> <li>• Illuminating Exercises</li> <li>• Groundwork</li> </ul>  |
| 3 and 4      | January 24  | <ul style="list-style-type: none"> <li>• Market Myths and Realities</li> <li>• Market Efficiency</li> <li>• Market as a Complex Adaptive System</li> <li>• Selection of Groups for Final Reports</li> </ul> <p><i>Core readings:</i></p> <p>Siegel, <u>Stock and Bond Returns</u><br/> Rappaport and Mauboussin, <u>Chapter 1</u><br/> Treydor, <u>Market Efficiency and the Bean Jar Experiment</u><br/> Ellis, <u>The Loser's Game</u><br/> Bernstein, <u>Are the Markets the Solution or the Problem?</u><br/> Mauboussin, <u>Revisiting Market Efficiency</u><br/> Arthur, <u>Complexity in Economic and Financial Markets</u></p> <p><i>Additional readings:</i></p> <p>Crist, <u>Crist on Value</u><br/> Mauboussin, <u>Capital Ideas Revisited</u><br/> Mauboussin, <u>Capital Ideas Revisited-Part 2</u></p> |
| 5 and 6      | January 31  | <ul style="list-style-type: none"> <li>• Valuation Concepts</li> <li>• Review of Techniques</li> <li>• Selection of Stocks for Final Reports</li> </ul> <p><i>Core readings:</i></p> <p>Williams, <u>Theory of Investment Value</u><br/> Rappaport and Mauboussin, <u>Chapters 2, 3, 5, 6, 7, 8</u><br/> Mauboussin et al., <u>Competitive Advantage Period (CAP)</u></p>  |
| 7 and 8      | February 7  | <ul style="list-style-type: none"> <li>• Valuation Concepts</li> <li>• Competitive Advantage and Valuation</li> <li>• Expectations Investing</li> <li>• Case Study</li> </ul> <p><i>Additional readings:</i></p> <p>Mauboussin, <u>Common Errors in DCF Models</u></p>   |
| 9 and 10     | February 14 | <ul style="list-style-type: none"> <li>• Competitive Strategy Framework</li> <li>• Capital Allocation Decisions</li> <li>• Valuation papers due</li> </ul> <p><i>Core readings:</i></p> <p>Mauboussin, <u>Measuring the Moat</u><br/> Porter, <u>What is Strategy?</u><br/> Rappaport and Mauboussin, <u>Chapters 4 and 9</u><br/> McTaggart, Kontes, Mankins, <u>Resource Allocation</u><br/> Arthur, <u>Increasing Returns and The New World of Business</u></p>   |

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|-----------|-----------------|---|
| 11 and 12 | February 21     | <ul style="list-style-type: none"> <li>• Decision Making Theory</li> <li>• Preparation for Management</li> <li>• Miscellaneous Ideas</li> </ul> <p><i>Core readings:</i></p> <p>Bazerman, <u>Judgment Under Uncertainty</u><br/> Mauboussin, <u>Decision Making for Investors</u><br/> Russo, Shoemaker, <u>Decision Traps and How to Avoid Them</u><br/> Munger, <u>A Lesson on Elementary, Worldly Wisdom</u></p> |
|           | February 28     | NO CLASS  |
|           | March 7         | NO CLASS  |
| 13 and 14 | March 14        | Company Presentation<br>Rick Simonson<br>Chief Financial Officer<br><i>Nokia Corporation</i>  |
| 15 and 16 | March 21        | <ul style="list-style-type: none"> <li>• Other Analytical Tools (M&amp;A, real options, TAM, customer economics)</li> <li>• Nokia papers due</li> </ul>   |
| 17 and 18 | March 28        | <ul style="list-style-type: none"> <li>• Presentations</li> </ul> Guest: Lisa Rapuano<br><i>Lane Five Capital</i>   |
| 19 and 20 | April 4         | <ul style="list-style-type: none"> <li>• Presentations</li> </ul> Guest: Bill Miller<br><i>Legg Mason Capital Management</i>  |
| 21 and 22 | April 11        | <ul style="list-style-type: none"> <li>• Presentations</li> </ul> Guest: Roberto Mignone<br><i>Bridger Capital</i>  |
| 23 and 24 | April 18        | <ul style="list-style-type: none"> <li>• Presentations</li> </ul> Guest: Whitney Tilson<br><i>T2 Partners</i>   |
|           | <b>April 25</b> | <b>• FINAL PAPERS DUE</b>   |