

**Security Analysis**  
**(B8368-01) Spring 2020-**  
**Bidding Syllabus**

**PROFESSOR: Michael J. Mauboussin**

Phone: 917-617-0950

E-mail: [mjm55@columbia.edu](mailto:mjm55@columbia.edu)

Classroom Location: TBD

Wednesdays: 5:45 – 9:00 pm

Office Hours: By appointment

**TEACHING ASSISTANT: TBD**

Phone: TBD

E-mail: TBD

Communications from professor and teaching assistants about the course will take place through Canvas. Students should make sure they regularly check for announcements and messaging notifications.

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**COURSE DESCRIPTION**

The course has two parts. The first part (14 to 16 lectures) develops the essential tools that a security analyst needs to come to a thoughtful investment recommendation. These tools include basic capital market concepts, analysis of competitive advantage, valuation methods, and techniques for proper decision making. The second part (8 sessions) allows the students to apply these lessons by presenting an analysis of a company and an investment conclusion regarding the shares of the company.

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

The learning objective of the course is to combine various analytical frameworks and mental models into an investment recommendation. Further, students will learn to make a clear and persuasive presentation based on well-reasoned analysis.

This course will be of most value to students who intend to pursue a career in investment management. That said, the concepts apply broadly and are of use to students assuming careers in consulting, management, and finance. Some of the material will overlap with finance courses, which is useful establish a foundation for the course's key tenets. While an understanding of basic finance is useful, the course is designed to develop concepts in a way that is intuitive, practical, and operational.

## REQUIRED COURSE MATERIALS

Each class will have required reading that will prepare the students for discussion, as well as recommended reading that will go beyond the conversation in class. The professor or teaching assistant will be made available on Canvas or through the library.

## REQUIRED READING

Arthur, W. Brian, "Complexity in Economic and Financial Markets" *Complexity*, 1995.

\_\_\_\_\_. , "Increasing Returns and the New World of Business," *Harvard Business Review*, July/August 1996.

Bernstein, Peter L., "Are Financial Markets the Solution or the Problem?" *Financial Analysts Journal*, November/December 1991.

Crist, Steven, "Crist on Value," *Bet with the Best*, 2001.

Ellis, Charles D., "The Loser's Game," *Financial Analysts Journal*, July/August 1975.

Heuer, Richards, Chapters 4-12, *Psychology of Intelligence Analysis*, 1999.

Keynes, John Maynard, "The State of Long-Term Expectation," *The General Theory of Employment, Interest, and Money*, 1936.

Klarman, Seth A., "The Timeless Wisdom of Graham and Dodd," *Security Analysis*, 6<sup>th</sup> edition, 2009.

Malkiel, Burton G., "Firm Foundations and Castles in the Air," *A Random Walk Down Wall Street*, 1996.

Mauboussin, Michael J., Alexander Schay, Patrick McCarthy, "Competitive Advantage Period 'CAP' – At the Intersection of Finance and Competitive Strategy," *Credit Suisse First Boston*, October 4, 2001.

Mauboussin, Michael J., and Dan Callahan, "Measuring the Moat: Assessing the Magnitude and Sustainability of Value Creation," *Credit Suisse*, November 1, 2016.

\_\_\_\_\_. , "Capital Allocation--Updated," *Credit Suisse*, October 19, 2016.

Mauboussin, Michael J., "Revisiting Market Efficiency: The Stock Market as a Complex Adaptive System," *Journal of Applied Corporate Finance*, Winter 2002.

\_\_\_\_\_. , "Decision Making for Investors," *Legg Mason Capital Management*, May 2004.

\_\_\_\_\_. , "Common Errors in DCF Models," *Legg Mason Capital Management*, March 2006.

Munger, Charles, "A Lesson on Elementary, Worldly Wisdom as it Relates to Investment Management and Business," *USC Business School*, 1994.

Porter, Michael E., "What is Strategy?" *Harvard Business Review*, November/December 1996.

Rappaport, Alfred, and Michael J. Mauboussin, "The Case for Expectations Investing," Chapters 2-3 and 5-8 *Expectations Investing*, 2001.

Siegel, Jeremy J., "Chapter 1," *Stocks for the Long Run*, 4<sup>th</sup> Edition, 2007.

Treynor, Jack L., "Market Efficiency and the Bean Jar Experiment," *Financial Analysts Journal*, May/June 1987.

Tversky, Amos, and Daniel Kahneman, "Judgment under Uncertainty: Heuristics and Biases," *Science*, September 1974.

Williams, John Burr, Preface, Chapter 1-2, 15, *The Theory of Investment Value*, 1938.

## RECOMMENDED READING

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, Mark Shanley, and Scott Schaefer, *Economics of Strategy, 7th Edition* (New York: John Wiley & Sons, 2015).

Ghemawat, Pankaj, , 3<sup>rd</sup> Edition (Upper Saddle River, NJ: Pearson Prentice Hall, 2009).

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).

Kahneman, Daniel, *Thinking, Fast and Slow* (New York: Farrar, Straus and Giroux, 2011).

Kaufman, Peter D., ed. *Poor Charlie's Almanack, Expanded Third Edition*. (Marceline, MO: Walsworth Publishing Company, 2008).

Koller, Tim, Marc Goedhart, and David Wessels, *Measuring and Managing the Value of Companies, 6th Edition* (New York: John Wiley & Sons, 2015).

Malkiel, Burton G., *A Random Walk Down Wall Street: The Time-Tested Strategy for Successful Investing, Completely Revised and Updated* (New York: W.W. Norton & Company, 2015).

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

Siegel, Jeremy J., *Stocks for the Long Run, 5<sup>th</sup> Edition* (New York: McGraw Hill, 2014).

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

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

**OPTIONAL READING** (if you want to make the professor really happy)

Mauboussin, Michael J., *More Than You Know: Finding Financial Wisdom in Unconventional Places, Updated and Expanded* (New York: Columbia Business School Publishing, 2008).

\_\_\_\_\_, *Think Twice: Harnessing the Power of Counterintuition* (Boston, MA: Harvard Business Press, 2009).

\_\_\_\_\_, *The Success Equation: Untangling Skill and Luck in Business, Sports, and Investing* (Boston, MA: Harvard Business Review Press, 2012).

Here are some websites you might find useful:

<http://pages.stern.nyu.edu/~adamodar/>

[www.expectationsinvesting.com](http://www.expectationsinvesting.com)

**CONNECTION TO THE CORE**

The learning in this course will utilize, build on, and extend concepts covered in the following core courses:

<b>Core Course</b>	<b>Connection with Core</b>
Corporate Finance	<ol style="list-style-type: none"> <li>1. Cost of capital</li> <li>2. Valuation</li> <li>3. Financing options</li> <li>4. Time value of money</li> <li>5. The capital asset pricing model (CAPM)</li> <li>6. Real options</li> </ol>
Financial Accounting	<ol style="list-style-type: none"> <li>1. The “accounting equation”</li> <li>2. Revenue and expense recognition</li> <li>3. Resources and obligations – measurement and disclosure</li> </ol>
Global Economic Environment	<ol style="list-style-type: none"> <li>1. Risk management</li> <li>2. What is the role of financial markets in the economy?</li> </ol>
Managerial Economics	<ol style="list-style-type: none"> <li>1. Barriers to entry and moats</li> <li>2. Maximization and thinking on the margin</li> <li>3. Analyzing complex decision making under uncertainty</li> <li>4. Decision-based cost analysis</li> <li>5. Pricing with market power</li> <li>6. Understanding market competition and equilibrium thinking</li> <li>7. Market equilibrium thinking (in the long run) and barriers to entry</li> <li>8. Strategic interaction among firms and Nash equilibrium</li> </ol>
Strategy Formulation	<ol style="list-style-type: none"> <li>1. Trade-offs, value-added, efficiencies</li> <li>2. Creation of value vs. value capture</li> <li>3. Competing firms</li> <li>4. Co-opetition and complementors</li> <li>5. Diversification and scope</li> <li>6. Ethics &amp; IBS</li> <li>7. Behavioral and evidence-based strategy</li> <li>8. Management</li> </ol>

Students will be expected to have mastered these concepts and be able to apply them in the course.

## **CLASSROOM NORMS AND EXPECTATIONS**

Students are expected to adhere to CBS Core Culture in this class by being Present, Prepared, and Participating.

### **Present:**

- On time and present for every session
- Attendance will be tracked

### **Prepared:**

- Complete pre-work needed, expect cold calling
- Bring nameplates and clickers

### **Participating:**

- Constructive participation expected and part of grade
- No electronic devices unless explicitly called for by the instructor

## **COURSE ROADMAP**

The goal of this course is to develop a thought process for equity security analysis 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 study of complex systems provide useful insight into markets?

### **(2) Valuation**

- How do you value a business?
- Which of the common 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?
- How do we assess capital allocation?

### **(4) Decision Making**

- What do successful players in probabilistic fields have in common?
- How do we misspecify probabilities and outcomes?
- What methods can we employ to improve our decisions?

**COURSE SCHEDULE- Based on 2019 Schedule for Example**

<b>Class</b>	<b>Date</b>	<b>Materials We Will Cover and Your Assignment</b>
1 and 2	29-January	<ul style="list-style-type: none"> <li>· Introduction and Overview</li> <li>· Illuminating Exercises</li> <li>· Groundwork</li> </ul> <p><i>Core readings:</i>            Klarman, The Timeless Wisdom of Graham and Dodd            Crist, Crist on Value            Keynes, The State of Long-Term Expectation</p>
3 and 4	5-February	<ul style="list-style-type: none"> <li>· Market Perceptions and Empirical Observations</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>            Siegel, Stock and Bond Returns            Rappaport and Mauboussin, Chapter 1            Treynor, Market Efficiency and the Bean Jar Experiment            Ellis, The Loser's Game            Bernstein, Are the Markets the Solution or the Problem?            Graham, The Investor and Market Fluctuations            Mauboussin, Revisiting Market Efficiency            Arthur, Complexity in Economic and Financial Markets</p> <p><i>Additional readings:</i>            Mauboussin, Capital Ideas Revisited Parts I and II</p>
5 and 6	12-February	<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>            Williams, Theory of Investment Value            Rappaport and Mauboussin, Chapters 2, 3, 5, 6, 7, 8            Mauboussin, What Does an EV/EBITDA Multiple Mean?            Mauboussin et al., Competitive Advantage Period (CAP)</p>

7 and 8	19-February	<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>            Mauboussin, Common Errors in DCF Models            Mauboussin and Callahan, How to Model Reversion to the Mean            Mauboussin and Callahan, Estimating the Cost of Capital</p>
9 and 10	26-February	<ul style="list-style-type: none"> <li>· Competitive Strategy Framework</li> <li>· Capital Allocation Decisions</li> <li>· Valuation Papers Due</li> <li>· Preparation for Management</li> </ul> <p><i>Core readings:</i>            Mauboussin, Measuring the Moat            Porter, What is Strategy?            Rappaport and Mauboussin, Chapters 4 and 9            Mauboussin and Callahan, Capital Allocation</p>
11 and 12	5-March	<ul style="list-style-type: none"> <li>· Company Presentation                Phil Snow                Chief Executive Officer                FactSet Research Systems Inc.</li> </ul>
	12-March	NO CLASS
	19-March	NO CLASS
13 and 14	26-March	<ul style="list-style-type: none"> <li>· Decision Making</li> <li>· Strategy Papers Due</li> </ul> <p><i>Core readings:</i>            Tversky and Kahneman, Judgment Under Uncertainty            Heuer, Psychology of Intelligence Analysis            Mauboussin, Decision Making for Investors            Mauboussin and Callahan, Methods to Improve Decisions            Munger, A Lesson on Elementary, Worldly Wisdom</p>
15 and 16	2-April	<ul style="list-style-type: none"> <li>· Other Analytical Tools (M&amp;A, real options, TAM, customer economics)</li> <li>· Open ended Q&amp;A</li> <li>· Presentation tips</li> </ul>

17 and 18	9-April	· Student Presentations Guest: Roberto Mignone <i>Bridger Capital</i>
19 and 20	16-April	· Student Presentations Guest: Ian McKinnon <i>Sandia Holdings, LLC</i>
21 and 22	23-April	· Student Presentations Guest: Bill Miller <i>Miller Value Partners</i>
23 and 24	30-April	· Student Presentations Guest: Kelly Granat <i>Lone Pine Capital</i>
	<b>7-May</b>	<b>· FINAL PAPERS DUE</b>

## METHOD OF EVALUATION

Company basic report	30%
Presentation of basic reports	20%
Valuation exercise	15%
Strategic assessment	15%
Three one-page reports	10%
Class participation	10%

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 (Type A), 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 (Type C). Due one week after assigned. **(15%)**



4. Strategic assessment of the company based on our corporate presentation. The paper should be approximately five (5) pages with 1.5 spacing, and does *not* require valuation work. This project is to be completed individually (Type C). 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. This is to be completed individually (Type C). **(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%)**

(1) Basic reports. Students will work in groups of four on the basic reports. The professor will provide a list of companies that the groups will analyze—one group per company. Students will make a presentation to the class and hand in the full report on or before **May 7, 2019**. 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 for student edification only.

(2) Valuation project. This exercise is intended to give all students an opportunity to explore the key processes and mechanics of 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. The central objectives of this paper include a thoughtful conclusion, appropriate prioritization of key issues, and the application of rigorous and consistent analysis.

(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 presentations 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.

**ASSIGNMENTS**

All of your assignment submissions are subject to the [CBS Honor Code](#). Violations of the CBS Honor Code may lead to failing the assignment, failing the course, suspension, and/or dismissal. In order to avoid ambiguity that may lead to unintentional violations of the Honor Code, assignment description types have been standardized and specified below.

<b>Type</b>	<b>Designation</b>	<b>Grade</b>	<b>Preparation of submission</b>	<b>Discussion of Submission*</b>	<b>Discussion of Concepts**</b>
A	Group Work	Same grade for all group members	By the group	Permitted to discuss (within group)	Permitted
B <sup>1</sup>	Individual w/ Discussions of Concepts and Submission	Individual grade	Individual preparation	Permitted to discuss; sharing solutions or submission files is not allowed	Permitted
B <sup>2</sup>	Individual w/ Discussions of Concepts Only	Individual grade	Individual preparation	Not permitted to share/discuss solutions or submission	Permitted
C	Individual	Individual grade	Individual preparation	Not permitted to share/discuss solutions or submission	Not permitted***

\* The designated group can be either an assigned study group or a self-selected one.

**GRADE RUBRIC**
**Valuation**

This project is to be completed on an individual basis.

H	HP	≤P
* Correct answers	*Partially correct answers	*Incorrect answers
* Work is shown	*Work is shown	*Work is not shown
* Answers are organized	*Answers are organized	*Answers are disorganized

**Competitive strategy**

This project is to be completed on an individual basis.

H	HP	≤P
* Does not regurgitate known facts	* Some discussion of known facts	* Substantial recap of known facts
* Effective use of strategy frameworks	* Competent use of frameworks	* Little/poor use of frameworks
* Clear summary with conclusion stated	* Summary does not state conclusion	* Conclusion poorly articulated
* Well organized	* Decently organized	* Poorly organized
* Stays within specified length	* Stays close to specified length	* Deviates from specified length
* Free of typos	* Some typos	* Lots of typos

**Presentation to portfolio manager**

This presentation is to be completed as a group, although you will be assessed both individually and as a group.

H	HP	≤P
<b>Group Level</b>		
* Strong intro/company description	* Average intro	* Weak intro/company description
* Prioritized operating assessment	* Solid operating assessment	* Poorly prioritized or no operating assessment
* Relevant financial assessment	* Average financial assessment	* Weak or lacking financial assessment
* Thorough valuation	* Solid valuation	* Sloppy or incomplete valuation
* Analysis strongly supports conclusion	* Analysis backs conclusion	* Analysis doesn't support conclusion
* Within time limit (12 minutes)	* Near time limit	* Over time limit
<b>Individual Level</b>		
* Looks and acts highly professional	* Looks and acts professional	* Does not appear professional
* Highly organized	* Well organized	* Disorganized
* Conveys ideas very clearly	* Conveys ideas well	* Poorly conveys ideas
* Comments are well substantiated	* Comments are supported	* Comments are unsubstantiated
* Contribution is equal	* Contribution is close to equal	* Unequal contribution

**One page summaries of other group presentations**

These are to be completed on an individual basis.

√+	√
<ul style="list-style-type: none"> <li>* Does not simply recap presentation</li> <li>* Clearly explains basis for agreement or disagreement</li> <li>* Highlights key facts behind reviewer decision</li> <li>* Articulates presentation’s strengths/weaknesses</li> </ul>	<ul style="list-style-type: none"> <li>* Presentation recap</li> <li>* No clear view explained</li> <li>* Does not prioritize salient issues</li> <li>* Fails to explore presentation effectiveness</li> </ul>

**Final paper**

The final paper is a group effort.

H	HP	≤P
<ul style="list-style-type: none"> <li>* Clear summary and recommendation</li> <li>* Effective company description</li> <li>* Discussion of relevant recent activity</li> <li>* Well-structured operating discussion</li> <li>* Effective financial assessment</li> <li>* Proper discussion of management</li> <li>* Valuation, incl. multiple approaches</li> <li>* Includes all recommended tables</li> <li>* Well-presented and edited</li> <li>* Effective use of graphics</li> </ul>	<ul style="list-style-type: none"> <li>* Solid summary</li> <li>* Acceptable company description</li> <li>* Recent activity discussed</li> <li>* Solid operating discussion</li> <li>* Partial discussion of financials</li> <li>* Some management discussion</li> <li>* Some valuation work</li> <li>* Includes some recommended tables</li> <li>* Average presentation and editing</li> <li>* Good use of graphics</li> </ul>	<ul style="list-style-type: none"> <li>* Poor summary</li> <li>* Poor company description</li> <li>* Recent developments ignored</li> <li>* Poor operating assessment</li> <li>* Weak financial assessment</li> <li>* Managerial assessment overlooked</li> <li>* Weak valuation</li> <li>* Includes few recommended tables</li> <li>* Poor presentation and editing</li> <li>* Weak use of graphics</li> </ul>

**ATTENDANCE POLICY**

Students are required to attend each class. Students should reach out to the [Office of Student Affairs \(OSA\)](#) by using Core Absence Form on this course’s Canvas page regarding excused absences (for religious observances; personal, medical, and family emergencies; military service; court appearances such as jury duty). Unexcused absences will affect your course grade.

**INCLUSION, ACCOMMODATIONS, AND SUPPORT FOR STUDENTS**

At Columbia Business School, we believe that diversity strengthens any community or business model and brings it greater success. Columbia Business School is committed to providing all students with the equal opportunity to thrive in the classroom by providing a learning, living, and working environment free from discrimination, harassment, and bias on the basis of gender, sexual orientation, race, ethnicity, socioeconomic status, or ability.

Columbia Business School will make reasonable accommodations for persons with documented disabilities. Students are encouraged to contact the Columbia University's Office of Disability Services for information about registration. Students seeking accommodation in the classroom may obtain information on the services offered by [Columbia University's Office of Disability Services online](#) or by contacting (212) 854-2388.

Columbia Business School is committed to maintaining a safe environment for students, staff and faculty. Because of this commitment and because of federal and state regulations, we must advise you that if you tell any of your instructors about sexual harassment or gender-based misconduct involving a member of the campus community, your instructor is required to report this information to a Title IX Coordinator. They will treat this information as private, but will need to follow up with you and possibly look into the matter. Counseling and Psychological Services, the Office of the University Chaplain, and the Ombuds Office for Gender-Based Misconduct are confidential resources available for students, staff and faculty. "Gender-based misconduct" includes sexual assault, stalking, sexual harassment, dating violence, domestic violence, sexual exploitation, and gender-based harassment. For more information, see <http://sexualrespect.columbia.edu/gender-based-misconduct-policy-students>.