B8306 Capital Markets and Investments  
Professor Paul Tetlock  
Preliminary Fall 2018 Syllabus  
To Be Finalized in Sept 2018  

Contact Details:  
Professor Paul Tetlock  
Uris 811  
Office hours by appointment  
E-mail: paul.tetlock@columbia.edu  

I. Course Description  
This course has three goals:  

1. To understand and apply the principles of investing. The course covers the valuation of bonds, stocks, and options. Key applications include personal and professional portfolio management, risk management, security valuation, and capital structure.  

2. To develop the following concepts: risk-return trade-offs, diversification, systematic and idiosyncratic risk, expected returns, market efficiency, performance evaluation, arbitrage, the term structure of interest rates, bond duration, and options.  

3. To provide sufficient background knowledge for students seeking an overview of capital markets and an introduction to advanced finance courses.  

The main topics can be summarized in the following groups:  

- 3 classes: Intro to Capital Markets  
- 5 classes: Fixed Income Securities  
- 4 classes: Portfolio Choice  
- 3 classes: Investment Performance  
- 3 classes: Behavioral Finance  
- 6 classes: Valuation of Options  

Throughout the course, we will address two basic questions:  

1. How should we manage and evaluate portfolios of investments?  
2. Which methods do we use to value securities?
Connection with the Core

Capital Markets builds on knowledge from Corporate Finance, Managerial Statistics, and Business Analytics courses by advancing students’ understanding of asset valuation and investment decisions. Capital Markets uses and builds upon the basic valuation tools developed in Corporate Finance, such as arbitrage, time value of money, understanding risk-return trade-offs, the CAPM, and asset valuation. Capital Markets uses many concepts from Statistics, including statistical modeling, random variables and distributions, parameter estimators, hypothesis testing, and regression. Particularly in the portfolio and risk management section, the course uses optimization methods and modeling tools from Business Analytics. Finally, our discussions of the economy’s impact on financial markets, especially bond markets, build on ideas from the Global Economic Environment course.

II. Course Materials

Class Notes – We will distribute handouts of the lecture notes during class and will also place electronic copies of the lecture notes and other reading materials on Canvas.

Readings – Beyond the assigned textbook chapters, there will be supplementary readings available on Canvas (relevant articles from industry, academia, and the popular press will be provided throughout the course).

The following textbook is useful as background material throughout this course:
- Investments by Bodie, Kane, and Marcus (hereafter BKM), 10th edition
- Investments, Student Solutions Manual by Bruce Swenson, 10th edition.

We will refer to relevant chapters in BKM.

III. Course Administration

Finance and Economics Division: Michelle Zern: mz2492@gsb.columbia.edu

Teaching Assistants:
The names and e-mail addresses of the teaching assistants are:
- Name1: FLast21@gsb.columbia.edu
- Name2: FLast21@gsb.columbia.edu

Teaching assistants will hold office hours at times posted on Canvas.

Please contact your teaching assistants if you have questions about the course.

Review Sessions – Optional review sessions will be held on Fridays at TBA in TBA. See the review session calendar on Canvas for details and exceptions. The first review session, which will be held on Sept. 7th, will cover mathematical and statistical background for the class. Additional Friday review sessions throughout the semester will help students with questions about cases, problem sets, or lectures. Review sessions will
emphasize examples. Special review sessions will be held before the midterm and final exams as follows:

Midterm Review:

- TBA (last year Monday, October 16th from 5:45pm to 7:15pm in Uris 301)
- Additional review(s) TBA

Final Review:

- TBA (last year Tuesday, December 12th from 5:45pm to 7:15pm in Uris 301)
- Additional review(s) TBA

Groups – Cases and problem sets should be done in groups of 3 members (MBA Assignment Type A). Students are responsible for organizing these groups and should add all group members to one of the Assignment Groups on Canvas. Groups can be formed across both sections.

Cases – There will be four case assignments. Each case will be distributed one week in advance and must be submitted by 9am on the due date. All assignments can be submitted online via Canvas. Cases and solutions will be available only on Canvas. Submitted cases will be graded on a 0 to 3 scale. Your lowest case grade will be excluded from your case average when computing your course grade. Because we discuss case solutions in class, late cases cannot be accepted.

Problem Sets – There will be four problem sets. Each problem set will be distributed at least one week in advance and must be submitted by 9am on the due date. All assignments can be submitted online via Canvas. Problem sets and solutions will be available only on Canvas. Submitted problem sets will be graded on a 0 to 3 scale. Your lowest grade will be excluded from your problem set average when computing your course grade. Late problem sets cannot be accepted.

Class Participation – This evaluation is based on a student’s contribution to learning inside and outside the classroom. Attendance is part of your class participation grade and will be tracked via PollEverywhere. Bring your nameplate and expect cold calling in class. Activities that enhance learning in the classroom include listening thoughtfully, answering questions, keeping up with readings, sharing well-formulated ideas, helping a classmate understand a concept, and coming to review sessions. We understand that different people participate in different ways and consider all valid. Please do not use mobile devices, including phones, laptops, or tablets. Activities that enhance learning outside the classroom include taking weekly Canvas quizzes, helping group members solve problem sets and cases, and attending the guest lecture.
Weekly Canvas Quizzes – Each week students must take a **short quiz on Canvas** between Thursday at 5pm and the following Tuesday at 9am. Each quiz consists of **three questions** mainly based on the week’s lectures and readings. Any books, references, computing or calculating equipment can be used. Quizzes must be taken **individually**. Quiz scores count towards your class participation grade. Because solutions will be posted soon after quizzes are due, late quizzes cannot be accepted.

Midterm Examination – The midterm will be a timed 3-hour exam administered by OSA. Students will take the exam on October ? at ?. Students can use any books, references, and computing devices. During the exam period, students who have taken the exam must not discuss the exam with other students who have not yet taken the exam. The Columbia Business School Honor Code applies.

Final Examination – The final will be a timed 3-hour exam administered by OSA. Students will take the exam on December ? at ?. Students can use any books, references, and computing devices. During the exam period, students who have taken the exam must not discuss the exam with other students who have not yet taken the exam. The Columbia Business School Honor Code applies.

Components of the grade:

- 20% Cases
- 20% Problem sets
- 20% Midterm exam
- 25% Final exam
- 15% Class participation, including quizzes
## Preliminary Content Outline for Tu/Th Sections – To Be Finalized in Sept 2018

<table>
<thead>
<tr>
<th>Class</th>
<th>Date</th>
<th>Topic</th>
<th>Chapters in BKM</th>
<th>Assignment (Type)*</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>4-Sep</td>
<td>MARKETS - Overview</td>
<td>1, 2</td>
<td>Case 1 (A) due 11-Sep</td>
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<tr>
<td>2</td>
<td>6-Sep</td>
<td>MARKETS - Investing</td>
<td>2, 3</td>
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<tr>
<td>3</td>
<td>11-Sep</td>
<td>MARKETS - Valuation and Returns</td>
<td>14</td>
<td></td>
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<tr>
<td>4</td>
<td>13-Sep</td>
<td>FIXED INCOME - Interest Rates</td>
<td>15</td>
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<tr>
<td>5</td>
<td>18-Sep</td>
<td>FIXED INCOME - Interest Rate Risk (Duration)</td>
<td>16</td>
<td>Case 2 (A) due 25-Sep</td>
</tr>
<tr>
<td>6</td>
<td>20-Sep</td>
<td>FIXED INCOME - Managing Rate Risk</td>
<td>16</td>
<td></td>
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<tr>
<td>7</td>
<td>25-Sep</td>
<td>FIXED INCOME - Forwards</td>
<td>16</td>
<td>PS 1 (A) due 2-Oct</td>
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<tr>
<td>8</td>
<td>27-Sep</td>
<td>FIXED INCOME - Default Risk</td>
<td>16</td>
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<tr>
<td>9</td>
<td>2-Oct</td>
<td>PORTFOLIO CHOICE - Equity Valuation</td>
<td>5, 18</td>
<td>PS 2 (A) due 11-Oct</td>
</tr>
<tr>
<td>10</td>
<td>4-Oct</td>
<td>PORTFOLIO CHOICE - Portfolio Optimization</td>
<td>6, 7</td>
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<tr>
<td>11</td>
<td>9-Oct</td>
<td>PORTFOLIO CHOICE - Applying the CAPM</td>
<td>8, 9</td>
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<tr>
<td>12</td>
<td>11-Oct</td>
<td>PORTFOLIO CHOICE - CAPM Anomalies</td>
<td>8, 9</td>
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<tr>
<td>13</td>
<td>2-Oct</td>
<td>Midterm Exam - administered by OSA at ?</td>
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<tr>
<td>14</td>
<td>25-Oct</td>
<td>PERFORMANCE EVALUATION - Beyond the CAPM</td>
<td>9, 11</td>
<td>Case 3 (A) due 1-Nov</td>
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<tr>
<td>15</td>
<td>30-Oct</td>
<td>PERFORMANCE EVALUATION - Skill versus Luck</td>
<td>10, 13</td>
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<tr>
<td>16</td>
<td>1-Nov</td>
<td>PERFORMANCE EVALUATION - Applications</td>
<td>4, 24</td>
<td>PS 3 (A) due 15-Nov</td>
</tr>
<tr>
<td>17</td>
<td>8-Nov</td>
<td>BEHAVIORAL FINANCE - Limits to Arbitrage</td>
<td>12</td>
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<tr>
<td>18</td>
<td>13-Nov</td>
<td>Guest - date/time/room TBA</td>
<td>26, 27</td>
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<tr>
<td>19</td>
<td>15-Nov</td>
<td>BEHAVIORAL FINANCE - Behavioral Biases</td>
<td>26, 27</td>
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<tr>
<td>20</td>
<td>20-Nov</td>
<td>OPTIONS - Payoffs and Arbitrage Relationships</td>
<td>20</td>
<td>PS 4 (A) due 4-Dec</td>
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<tr>
<td>21</td>
<td>27-Nov</td>
<td>OPTIONS - Replicating an Option</td>
<td>21</td>
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<tr>
<td>22</td>
<td>29-Nov</td>
<td>OPTIONS - Binomial Model</td>
<td>21</td>
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<tr>
<td>23</td>
<td>4-Dec</td>
<td>OPTIONS - Black-Scholes Valuation</td>
<td>21</td>
<td>Case 4 (A) due 11-Dec</td>
</tr>
<tr>
<td>24</td>
<td>6-Dec</td>
<td>OPTIONS – Applications</td>
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<tr>
<td>25</td>
<td>11-Dec</td>
<td>OPTIONS – Applications</td>
<td></td>
<td></td>
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<tr>
<td>26</td>
<td>26-Dec</td>
<td>Final Exam - administered by OSA at ?</td>
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* Cases and problem sets must be submitted to Canvas by 9am on their due dates

Official MBA assignment types appear in parentheses

A = group/group, B = group/individual, C = individual/individual