FIN 279A-1: Applied Risk Management  
Brandeis University IBS  
Spring 2018 – preliminary syllabus, December 2017  
Professor Podorefsky  
Tuesday 6:30 – 9:20 pm  
Location: Lemberg Academic Center 180

Professor Robert Podorefsky  
Email: rpod@brandeis.edu  
Office hours: by appointment  
Fall session: Class begins January 16, 2018. Last class April 24, 2018  
Telephone: (508) 245-5888  
Teaching Assistant: TBA

Readings  
Case studies, articles and supplementary materials will be available for purchase on-line. The web-link is provided below and on the course website on Latte. Students will be expected to print, analyze and mark-up these materials before the class in which each is discussed. Computers will not be allowed in class.

Prerequisites  
FIN 201a and FIN 212a.

Course Description  
This course is targeted to IBS students with a strong interest in finance and risk management applications in the real world, especially for students who anticipate being in professional positions where they will be called upon to identify and manage risks. In contrast to the more quantitative risk management course, Financial Risk Management (FIN 280a), this course will be centered on case studies of real world situations, in which the risk management theory and applications will be developed through a collection of insightful and varied examples.

These studies will be supplemented with optional case materials on the derivatives markets and instruments, as well as on the essentials of risk assessment and modeling. We will not dwell on the technical details of derivatives pricing and risk modeling, which are addressed in depth in Options and Derivatives I/II (FIN 270a/271a), FIN 280a and other courses. Instead, our focus will be on the essential tools and ideas that will allow students to identify risks, to determine various approaches to quantifying risk and evaluating the effect on corporate strategy, to negotiate ‘a hedge’ or ‘no hedge’ decision, and in the hedging case, identify the alternative strategies to accomplishing the hedging objectives while understanding the pros and cons of such strategies.

The cases studied will provide an array of examples of risk management problems that corporations face as part of their core business strategies (ex. multi-national companies have currency risk; mining companies face commodity risk; debt issuers must address interest rate risk), but also the risk management problems facing financial intermediaries such as banks and hedge funds.
While we will not focus significantly on the mathematical theories, students will be expected to develop “hands-on” experience by working through examples and developing hedging strategies. Many case analyses will be improved with student-developed spreadsheets.

**Workload**

Success in this four-credit course is based on the expectation that students will spend a minimum of 9 hours of study time per week in preparation for class (readings, papers, discussion sections, exam preparation, etc.)

**Learning Goals**

- To understand the many types of risks that firms face in the ordinary conduct of their business, the application of various risk metrics such as “value at risk” to quantify such risks, and the considerations involved in assessing whether risks should be “managed.”
  - We will study cases which involve risks related to commodity and equity prices, weather, foreign exchange rates, interest rates, credit risk and operational risk, as well as various combinations.
- To develop an understanding of the contract designs and payoffs for a variety of financial derivatives defined relative to the above risks. Specifically, we will study the applications of forwards, futures, options, various swaps, caps and floors.
- To learn how financial derivative trades and corporate strategic actions can be used to hedge or otherwise modify the risk profiles of firms in a variety of real world settings.

**Instructions for Course Materials**

The course materials are available on the Harvard Business Education web site. You will need to register on the site to create a user name if you do not already have one. Once you have registered, you can log in to see the course materials by doing the following:

1. Visit [hbsp.harvard.edu](http://hbsp.harvard.edu) and log in.
2. Click [My Courses](http://hbsp.harvard.edu), and then click this course name: Applied Risk Management-Spring 2018

The Course pack direct link is: [http://cb.hbsp.harvard.edu/cbmp/access/72618901](http://cb.hbsp.harvard.edu/cbmp/access/72618901)

All course materials are in PDF documents, and you can open them with Adobe Reader. You will have access to these materials for the semester.

For technical assistance, please contact the Harvard Business Publishing Tech Help line at (800) 810-8858 (outside the U.S. and Canada, call 617-783-7700); or email techhelp@hbsp.harvard.edu.

**Examinations**

There will be 1 mid-term examination (2 hours) and a final examination (3 hours), both “closed-book”. The final examination will be cumulative, reflecting the content covered in the mid-term as well as content from the final half of the semester. Each examination will test the students’ understanding of the concepts and methods discussed in the readings and cases, and their ability to apply these tools to hypothetical risk management vignettes which will be reminiscent of the case situations.

**There are no Mid-term make-up examinations.** See Grading Method below, but in general a student that misses a midterm, or fairs poorly, can succeed in the course with a solid Final exam and class participation. Consequently, there is no advantage to missing the mid-term exam even if not well prepared at that time.
**Risk Management Project Assignment**
Students will be required to submit a project addressing their own hedging strategies relating to a current risk management challenge for at least 1 currency, 1 commodity, and 1 interest rate risk exposure that are independent of the case studies discussed in class. During the second and third class, the project requirements will be discussed in detail.

**Homework**
Advance readings will be assigned every class, and students are expected to be very familiar with these readings before the corresponding lectures in order to be able participate in lively class discussions. It is essential that students keep up with assignments both to improve class participation, but also to aid in exam preparation. Readings and case analyses should be discussed in student groups before class to deepen understanding.

**Grading Method**  The final numerical average for each student will be the larger of two calculations:

<table>
<thead>
<tr>
<th>Component</th>
<th>Weight</th>
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<tbody>
<tr>
<td>Mid-term</td>
<td>25%</td>
</tr>
<tr>
<td>Risk management project</td>
<td>15%</td>
</tr>
<tr>
<td>Final</td>
<td>40%</td>
</tr>
<tr>
<td>Participation</td>
<td>20%</td>
</tr>
<tr>
<td>Mid-term</td>
<td>0%</td>
</tr>
<tr>
<td>RM project</td>
<td>15%</td>
</tr>
<tr>
<td>Final</td>
<td>65%</td>
</tr>
<tr>
<td>Participation</td>
<td>20%</td>
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</tbody>
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**Class Attendance and Participation Grading**
Class attendance will be taken, and participation will be evaluated each class based on the quality and insight of students’ comments.

Class scoring will be as follows:
- -1.0: Absent from class
- -0.5: Late for class (defined by initiation of class discussion)
- 0: Present with no participation
- 0.5: Added a modest contribution to the class discussion
- 1.0: Added constructive comments to the class discussion
- 2.0: Added materially to the class discussion

Both the number of questions that you answer and the quality of your answers will affect the grade for each class. For example, if you are active in the class, making several contributions, and get a grade of 1 for each, then the grade for that session will be 2.

At the end of the semester, we will translate the students’ scores to the basis of x/100 for the purpose of weighting this score into the final grade.

**Course Examinations**
Content of each examination will be announced well in advance.

<table>
<thead>
<tr>
<th>Component</th>
<th>Date</th>
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<tbody>
<tr>
<td>Mid-Term</td>
<td>March 6 (class 7)</td>
</tr>
<tr>
<td>Final</td>
<td>April 30 – May 8 is the exam period (actual time TBD)</td>
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**Disabilities**
If you are a student with a documented disability on record at Brandeis University and wish to have a reasonable accommodation made for you in this class, please see me immediately.
Academic Honesty
You are expected to be honest in all of your academic work. Please consult Brandeis University Rights and Responsibilities for all policies and procedures related to academic integrity. Students may be required to submit work to TurnItIn.com software to verify originality. Allegations of alleged academic dishonesty will be forwarded to the Director of Academic Integrity. Sanctions for academic dishonesty can include failing grades and/or suspension from the university. Citation and research assistance can be found at LTS - Library guides.

Risk Topics and Cases
Readings on derivatives markets and instruments (noted in parentheses below) are identified as background for case studies. Generally, two case studies will be discussed per class, and students will be expected to be well prepared for the discussions.

Schedule of classes, topics and material
Risk Management Theory (Background Reading: Introduction to Derivative Instruments*)
- January 16: - Managing Risks: A New Framework
  - Understanding Corporate-Value-at-Risk Through a Comprehensive and Simple Example
  - Discuss risk management project and context

Commodity Risk
- January 23: - J&L Railroad
  - Risk Management at Apache
- January 30: - Discuss risk management project requirements
  - American Barrick Resources Corp.: Managing Gold Price Risk

Weather Risk
- January 30: - United Grain Growers Ltd. (A)
- February 6: - BASIX
  - Enron Corporation's Weather Derivatives (A)
- RISK MANAGEMENT project proposal is due

Foreign Exchange Risk (Background Reading: Foreign Exchange Markets and Transactions***)
- February 13: - Tiffany & Co.--1993
  - Hedging Currency Risks at AIFS
- February 20: - No Class (Midterm recess)
- February 27: - OSG Corporation: Risk Hedging Against Transaction Exposures
  - Aspen Technology, Inc.: Currency Hedging Review
- March 6: - Midterm Exam

Interest Rate Risk (Background Readings: Note on Duration and Convexity and Interest Rate Derivatives***)
- March 13: - Carrefour S.A.
  - British Columbia Hydro
- March 20: - Student Educational Loan Fund, Inc. (Abridged)
  - Bank One Corp.: Asset and Liability Management

Credit Risk
- March 27: First American Bank: Credit Default Swaps
  A Tale of Two Hedge Funds: Magnetar and Peloton
- April 3: - No Class (Passover & spring recess)

Corporate Governance
- April 10: RISK MANAGEMENT project is due
Corporate Governance at Citic Pacific
Accounting Fraud at WorldCom

**Integrated Risk Management/Enterprise Risk Management**

- **April 17:** Jet Propulsion Laboratory
  - Risk Management at Wellfleet Bank: All That Glitters Is Not Gold
- **April 24:** Honeywell, Inc. and Integrated Risk Management
  - Enterprise Risk Management at Hydro One (A)

**Final exam:** Date & Location TBD, Exam period is April 30 – May 8

* Background Readings may be supplemented with alternative resources from other classes.