



## Financial Risk Management (MSF 297) Spring 2017

**Professor:** Andreas D. Christopoulos

**Office:** CBA 6.464, ext. 6506

**Office Hours:** Tuesdays and Thursdays from 3-5pm (or by appointment and announcement)

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**Course Times:** MBA: TTH1:00pm-3:00pm

**Course Location:** GSB 2.120

**Course Web Page:** Canvas

**Teaching Assistant:** Patrick Coleman, email: Patrick.Coleman@mba17.mcombs.utexas.edu

**TA Office Hours:** None

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**1. Overview:** This class is an advanced elective in Finance. As such there is an assumed competency/prior exposure to fundamentals of equity and fixed income instruments as well as an understanding of capital markets and corporate structure. Though you may have seen aspects of this course in other courses the application of such prior exposure to the discipline of Financial Risk Management (“FRM”) is not assumed. That is the purpose of this class: the focusing and expansion of your thinking on the discipline of FRM. I approach the topic of risk from both academic and senior practitioner perspectives. This is reflected in my research and teaching pedagogy. This class can be demanding of your time but is effective in ensuring you secure the objectives of this class in a limited amount of time to prepare you for your interaction with Risk.

**2. Course Learning Objectives:** My objective for you is for you to be able to demonstrate your capabilities related to FRM in a professional capacity and have the ability, if you choose, to pursue more advanced topics and training in Risk. Specifically, in this class we will:

- Distill prior knowledge in Finance and focus such knowledge on FRM.
- Introduce new concepts, definitions, and techniques essential to FRM.
- Discern and develop your capabilities, competence and mastery of FRM with a variety of methods including, but not limited to:
  - Homework (computation and writing);
  - One Timed In-Class Examination (2.25 hours, 1 note page, closed book);
  - 1 Project on Case(s);
  - Presentations Cases/Analyses
  - Constructive Class Participation

**3. Course Structure:** The course is partitioned into two modules. The idea is to ensure that what is learned in the 1st module is advanced in the 2nd module. Readings will be mostly from the book though from time to time I will also require academic papers and news articles.

- Module 1.) Basics will be the foundations of risk management including: Interest Rate/Market Risk, Credit risk premia, basic hedging, Derivatives Forwards/Futures, Options Caps/Floor, Black Scholes, Merton, Binomial Lattice, Swaps, VAR, Capital Adequacy, Credit VAR, CreditMetrics, Regulation, Securitization, Liquidity, Advanced hedging.

- Module 2.) The Cases/Project. Here we will use a number of cases and outside readings pertaining to FRM. The set of cases is provided in an electronic course package at the midpoint in the course. The cases will focus the origins of the financial crisis and the similarities and differences between organizations and risk failures. We will study LTCM, Lehman, AIG, JP Morgan Chase/London Whale and some advanced cases in VAR, securitization and loan relative risk and reward assessment. Significant prep and discussion readiness is critical in this aspect of the course. You will be assigned opener and closer status as well as discussant roles and you will be cold called by me and each other. In lieu of a sitting final exam, you will instead write a 10-15 page double-spaced analysis of the issues and questions I motivate. And you will be given a limited amount of time (~a weekend) to provide your response. Given the seminar size of the class all projects are individual. This project will be assigned March 2<sup>nd</sup> and due on March 7<sup>th</sup>.

#### **4. Required Materials:**

- Custom Book: The custom text and the online license are required for this course. Used books will not get you the license and there is no cost savings to purchasing used copies as the license comes with the custom text. The text and the license will be available in the bookstore by the first class meeting. The authors Saunders/Cornett - Financial Markets and Institutions (6E) and selections from Saunders/Cornett - Financial Institutions Management – A Risk Management Approach (8E) are included in print and online content. The mandatory online e-book platform McGraw Hill Connect will be walked through by McGraw Hill on Day 1 in class so bring your laptop. The cost is about \$150. I will provide lecture notes on the day of class, typically in the morning for you to preview.
- Cases and Readings Course Pack: HBS cases will be made available online. Each case costs about \$5 and there will be about 10 cases.
- Laptop or Tablet: Excel including Solver and Analytical Toolpak for some homeworks.
- Financial Calculator (HP 12C, TIBAll...). This may not be an internet or cell enabled device.

#### **5. Grading Policy:**

1. 4 Homeworks, 7.5% each (some portions may be timed)	30.0%
2. In Class Exam: 2 25hrs, 1 page cheat sheet, closed book, fin calculator, pencils, multiple choice, no internet or cell devices	30.0%
3. Case Essay	25.0%
4. Class Participation (includes prep for cases) split 5% for Module 1 and 10% for Module 2	15.0%
<b>Grand Total</b>	<b>100.0%</b>

1	Tuesday, January 17, 2017 Intro to Risk/Fed/Bonds Duration/Convexity Stocks	
2	Thursday, January 19, 2017 Finish up Sensitivity, Market and Credit Basics; Hedging 1	HW1 Assigned
3	Tuesday, January 24, 2017 VaR, Futures/Forwards/TermStruct/Bootstrap Term Structure	HW1 Due
4	Thursday, January 26, 2017 Options/Black Scholes/Merton	HW2 Assigned
5	Tuesday, January 31, 2017 Advanced PD/RAROC/TTDef PD Merton	HW2 Due
6	Thursday, February 2, 2017 CDS and Hedging 2, CVAR,E[Loss]	HW3 Assigned
7	Tuesday, February 7, 2017 Loans and Mortgages 1; Structuring 1	HW3 Due
8	Thursday, February 9, 2017 Loans and Mortgages 2; Path Dep 2 ZV & OAS 1	HW4 Assigned; Due Sun 2/12
9	Tuesday, February 14, 2017 In Class Exam (2.5 hours)	
10	Thursday, February 16, 2017 Cases LTCM	Prep - ungraded
11	Tuesday, February 21, 2017 Cases Lehman; Leverage Regulation	Prep - ungraded
12	Thursday, February 23, 2017 Cases AIG; Density/Diversification	Prep - ungraded
13	Tuesday, February 28, 2017 Cases JPMC; Risk Control; Mgmt	Prep - ungraded
14	Thursday, March 2, 2017 Cases Mortgages and SubPrime	Take home essay Assigned
15	Tuesday, March 7, 2017 Due: Essay on Case(s)	Take home essay Due

**6. Class Structure Rules and Etiquette:** It is my right to eject any student from my class who acts in a manner that is disruptive to the class and/or violates the rules and codes of conduct of the McCombs School, University of Texas at Austin. Escalation of continued violations subject to disciplinary penalties, including the possibility of failure in the course and/or dismissal from the University. The format of Modules 1 is primarily lecture. When I get to a concept 'check-point' I will ask if there are questions. If you have one, raise your hand and I will answer when I can. Module 2 will entail heavy discussion and I will use cold-calling frequently in this portion of the class and people generally like this. Some additional points:

- No Food Consumption At All (Drinks are fine; clean up your own trash don't leave it).
- No Phone Calls/No Texts/No Music/No Entertainment/No Headsets
- No Video Recording, No Photography (Audio recording is fine; cannot be redistributed)
- Professional corporate behavior at a bank Associate level; Shoes on, Feet down.
- No guests.
- Further discussion about code of conduct and academic integrity are discussed in Sections 8 & 9. Staying in the class is evidence of your acceptance of these rules.

**7. Questions/Electronic Communication:** If after coming to class and doing the work, you have remaining questions about material in class or on the homework, there are two ways to get them answered. The first is to come to either my office hours or those of the TA's. The second is to submit an email to my TA who will then meet me in person to discuss at a mutually convenient time. In all cases, requesting answers to Homework questions or synopses of concepts oriented or intended to tacitly reveal answers to homework or materials is inappropriate, bad form at best, and could be considered a form of Cheating as defined by the policies of UT-Austin. Emails to me are for emergencies and not general inquiry (see below).

**8. McCombs Classroom Professionalism Policy:** The highest professional standards are expected of all members of the McCombs community. The collective class reputation and the value of the Texas MBA/MPA/BBA experience hinges on this. Faculty are expected to be professional and prepared to deliver value for each and every class session. Students are expected to be professional in all respects. The Texas MBA/MPA/BBA classroom experience is enhanced when:

- **Students arrive on time.** On time arrival ensures that classes are able to start and finish at the scheduled time. On time arrival shows respect for both fellow students and faculty and it enhances learning by reducing avoidable distractions.
- **Students display their name cards.** This permits fellow students and faculty to learn names, enhancing opportunities for community building and evaluation of in-class contributions.
- **Students minimize unscheduled personal breaks.** The learning environment improves when disruptions are limited.
- **Students are fully prepared for each class.** Much of the learning in the Texas MBA/MSF/MPA/BBA program takes place during classroom discussions. When students are not prepared they cannot contribute to the overall learning process. This affects not only the individual, but their peers who count on them as well.
- **Students attend the class section to which they are registered.** Learning is enhanced when class sizes are optimized. Limits are set to ensure a quality experience. When section hopping takes place some classes become too large and it becomes difficult to contribute. When they are too small, the breadth of experience and opinion suffers.
- **Students respect the views and opinions of their colleagues.** Disagreement and debate are encouraged. Intolerance for the views of others is unacceptable.

- **Laptops are closed and put away.** The default is no laptops. When I need you to follow along with spreadsheets and or on presentations I will let you know. It inappropriate for students to surf the web, respond to e-mails, instant message each other, and otherwise not devote their full attention to the topic at hand. Such actions are doing themselves and their peers a major disservice. Those around them face additional distraction. Fellow students cannot benefit from the insights of the students who are not engaged. Faculty office hours are spent going over class material with students who chose not to pay attention, rather than truly adding value by helping students who want a better understanding of the material or want to explore the issues in more depth. Students with real needs may not be able to obtain adequate help if faculty time is spent repeating what was said in class. There are often cases where learning is enhanced by the use of laptops in class. Faculty will let you know when it is appropriate to use them. In such cases, professional behavior is exhibited when misuse does not take place.
- **Phones and wireless devices are turned off.** We've all heard the annoying ringing in the middle of a meeting. Not only is it not professional, it cuts off the flow of discussion when the search for the offender begins. When a true need to communicate with someone outside of class exists (eg. some medical need) please inform the professor prior to class.

**9. Academic Dishonesty:** The McCombs School of Business has no tolerance for acts of scholastic dishonesty.

The responsibilities of both students & faculty with regard to scholastic dishonesty are described in detail at <http://search.mcombs.utexas.edu/Pages/results.aspx?k=code%20of%20ethics>.

By teaching this course, I have agreed to observe all faculty responsibilities described in that document. By enrolling in this class, you have agreed to observe all student responsibilities described in that document. If the application of the Statement on Scholastic Dishonesty to this class or its assignments is unclear in any way, it is your responsibility to ask me for clarification. Students who violate University rules on scholastic dishonesty are subject to disciplinary penalties, including the possibility of failure in the course and/or dismissal from the University. Since dishonesty harms the individual, all students, the integrity of the University, and the value of our academic brand, policies on scholastic dishonesty will be strictly enforced. You should refer to the Student Judicial Services website at <http://deanofstudents.utexas.edu/sjs> to access the official University policies and procedures on scholastic dishonesty as well as further elaboration on what constitutes scholastic dishonesty. Academic dishonesty includes but is not limited to: lying, cheating, stealing (e.g., answers), multiple submissions, plagiarism (including, improper attribution of sources), unauthorized cooperation, and misrepresentation of facts. It is your responsibility to understand all attributes of proper conduct. Please carefully read: [http://deanofstudents.utexas.edu/sjs/scholdis\\_plagiarism.php](http://deanofstudents.utexas.edu/sjs/scholdis_plagiarism.php)

Any individual assignment should be completed individually without help from others. Group preparation for examinations is acceptable and encouraged.

**10. Students with Disabilities:** Students with disabilities may request appropriate academic accommodations from the Division of Diversity and Community Engagement, Services for Students with Disabilities, 512-471-6259, <http://www.utexas.edu/diversity/ddce/ssd/>.

**11. Religious Holy Days:** By UT Austin policy, you must notify me of your pending absence at least 14 days prior to the date of observance of a religious holy day. If you must miss a class, an examination, a work assignment, or a project in order to observe a religious holy day, you will be given an opportunity to complete the missed work within a reasonable time after the absence.

**12. Missed Assignments or Exams:** If you miss a homework assignment or an exam due to a family or personal emergency, you will be given an opportunity to complete the missed work within a reasonable time. The emergency must be documented and verified by UT's Student Emergency Services (<http://deanofstudents.utexas.edu/emergency/>); only then will I grant an assignment modification, extension, or a make-up exam.

**13. Campus Safety:** Please note the following recommendations regarding emergency evacuation, provided by the Office of Campus Safety and Security, 512-471-5767, <http://www.utexas.edu/safety>. Occupants of buildings on The University of Texas at Austin campus are required to evacuate buildings when a fire alarm is activated. Alarm activation or announcement requires exiting and assembling outside.

- Familiarize yourself with all exit doors of each classroom and building you may occupy. Remember that the nearest exit door may not be the one you used when entering the building.
- Students requiring assistance in evacuation should inform the instructor in writing during the first week of class.
- In the event of an evacuation, follow the instruction of faculty or class instructors.
- Do not re-enter a building unless given instructions by the following: Austin Fire Department, The University of Texas at Austin Police Department, or Fire Prevention Services office
- Behavior Concerns Advice Line (BCAL): 512-232-5050
- Further information regarding emergency evacuation routes and emergency procedures can be found at: <http://www.utexas.edu/emergency>.

**14. Privacy in Canvas:** Information in Canvas is protected by your UTEID login. Please be aware that I will use a merged Canvas site for all sections of the course that I am teaching this semester. This will allow students in other sections to see that you are enrolled in the course and send you email from within Canvas. However, they will not actually learn your email address and no other personal data will be revealed through Canvas. If you have any concerns, please contact the ITS Help Desk at 475-9400 for help removing your name from view of other students.