



Baylor University

Intro to *Business Risk Management*
(FIN 4335)

Dr. James R. Garven

Syllabus

Financial Risk: Risk vs. Uncertainty

Financial Risk: Market Volatility (VIX)

Introduction to *Business Risk Management* Finance 4335, Spring 2020

Dr. James R. Garven

Department of Finance, Insurance and Real Estate
Hankamer School of Business
Baylor University

January 14, 2020



BAYLOR UNIVERSITY
HANKAMER SCHOOL OF BUSINESS
DEPARTMENT OF FINANCE, INSURANCE & REAL ESTATE

Finance 4335: Business Risk Management, Spring 2020
Tuesday and Thursday, 2 - 3:15 p.m., Foster 428

Instructor: Dr. James R. Garven
[Frank S. Groner Chair of Finance](#)
Professor of Finance and Insurance
Email: James_Garven@baylor.edu
Home page: garven.com
Course website: fin4335.garven.com

Office Hours: 3:30-4:30 pm TR
or by appointment
Office: Foster 320.39
Phone: (254) 307-1317



1. Texts and Materials

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- **Integrated Risk Management: Techniques and Strategies for Managing Corporate Risk**, Neil A. Doherty, McGraw-Hill Professional Publishing, 2000. You may purchase this book from [Amazon](#) or various other online booksellers. Alternatively, you may also [download and print assigned chapters](#) from the course website.
- **Readings** (assigned from sources other than the textbook) distributed from [the course website](#).
- *Wall Street Journal*. A "Student Digital Pack" which offers online access only is available at <https://education.wsj.com/search-students>. A "Student Print & Digital Pack" (which provides daily home delivery *in addition to* online access) is available at <https://r.wsj.com/PROFxypa>.



2. Prerequisites

- The only course prerequisite for Finance 4335 is Finance 3310. However, since Finance 4335 is a fairly quantitative course, you should also be “up to speed” in mathematics and statistics. The mathematics and statistics topics used in Finance 4335 are listed in the blog posting entitled “[Calculus and Probability & Statistics recommendations](#)” where links to Khan Academy tutorials for each of these topics are provided.
- [Section 1](#) of Professor Martin Osborne’s [math tutorial](#) is also a highly recommended resource for topics in mathematics which are applicable for Finance 4335.



3. Course Description

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- This course offers an integrated approach to risk management by combining concepts, tools, and techniques from finance and related disciplines such as economics and the decision sciences.
- It focuses attention on the identification, evaluation, pricing, and management of risk from corporate as well as personal perspectives.
- Topics covered include how to characterize and measure risk attitudes, compare and price risk, evaluate the effects that risk has on incentives, welfare, corporate value, etc.



4. Learning Objectives

After completing this course, students should understand:

- The various measures of risk;
- How to calculate risk measures for individual risk exposures and portfolios of risk exposures;
- The steps of the risk management process; i.e.,
 - Identify risks;
 - Measure risks;
 - Evaluate different methods for managing risk; and
 - Implement an appropriate risk management strategy.



4. Learning Objectives (Continued)

- Methods which individuals and businesses can use to allocate and manage risk;
- Factors which limit the extent to which risk can be diversified or traded from one counterparty to another;
- Various types of insurance and derivative contracts and their use in risk management;
- Basic financial valuation models and how risk is incorporated into these models; and
- How risk management can be used to enhance corporate value as well as personal and social welfare.



5. Grade Determination

The final course numeric grade is based upon the following equation:

$$\text{Final Course Numeric Grade} = .10(\text{Attendance and Participation}) + .10(\text{Quizzes}) + .20(\text{Problem Sets}) + \text{Max} \{ .20(\text{Midterm Exam 1}) + .20(\text{Midterm Exam 2}) + .20(\text{Final Exam}), .20(\text{Midterm Exam 1}) + .40(\text{Final Exam}), .20(\text{Midterm Exam 2}) + .40(\text{Final Exam}) \}$$

There will be two midterm exams given in class. The date for the first midterm exam is February 18 (in class), and the date for the second midterm exam is March 26 (also in class). The dates for the two midterm exams are subject to change at the discretion of the instructor. However, the final exam is scheduled according to the official university schedule.



5. Grade Determination (Continued)

Final Course Letter Grade:

The final course letter grade will be tentatively based upon the following schedule of final course numeric grades:

A	93 – 100%	C	73 – 77%
A-	90 – 93%	C-	70 – 73%
B+	87 – 90%	D+	67 – 70%
B	83 – 87%	D	63 – 67%
B-	80 – 83%	D-	60 – 63%
C+	77 – 80%	F	<60%



6. Office/Contact Information & 7. Attendance and Participation

6. Office and Contact Information

My office is located at Foster 320.39 and my telephone number is (254) 307-1317. I can also be reached by email at James_Garven@baylor.edu and by text at 254-307-1317.

7. Attendance and Participation

This course will be conducted on an informal seminar basis. Students are expected to attend class regularly and punctually, as well as participate meaningfully. I abide by the [Hankamer School of Business Attendance Policy](#), which calls for assigning a grade of “F” to any student who fails to attend at least 75 percent of all class sessions. It is the student’s responsibility to ensure that he or she is in compliance with this policy.



8. Other Course Policies: a) Grade Appeals

- Graded assignments and exams will be returned to students no more than one week after the assignment deadline or the date of the exam. If you feel that a graded assignment or exam has not been fairly evaluated, then you may submit an appeal for the assignment or exam to be regraded. In order to be considered, your appeal must be submitted no later than two weeks after the date of the exam or due date for the assignment. Any appeals submitted beyond this deadline will not be considered.
- If you decide to submit an appeal, email it to fin4335@gmail.com with the following subject header: "Grade Appeal for Finance 4335". Include a clearly scanned or photographed copy of the question(s) that is (are) to be regraded, a copy of your answer(s), and an explanation as to *why* you think the question(s) merit(s) regrading. Keep in mind that regrading implies three possible outcomes: a higher grade, the same grade, or a lower grade.
- The appeal procedure described above constitutes the "Conference with Faculty Member" requirement set forth in [Baylor's Academic Appeals Policy and Procedure document](#).



8. Other Course Policies: b) Electronics and Late Work Policies

- The following electronics policies will be strictly enforced: 1) Neither laptops nor tablets may be used in class without the express permission of the instructor; 2) No audio or visual recording of lectures without the express permission of the instructor; and 3) No cell phone use during class, which includes texting, talking, photography, and videography.
- **Assigned problem sets** are due at the beginning of class. If you expect to absent on a day when a **problem set** is due, it must be turned in at or before this time; otherwise you will not receive any credit for the problem set. Furthermore, if you miss class on a day when a required reading is assigned, there will be no make-ups for the quiz that you miss (note: these rules does not apply in cases involving medical or family emergencies).



9. Course Blog

A course blog has been established for Finance 4335. This provides a convenient and timely means for distributing important announcements outside of class. The address for the course blog is risk.garven.com, and it is linked from the “[Course Blog](#)” button on the home page of the course website. I recommend that you regularly follow the course blog via any of the following methods: I recommend that you regularly follow the course blog via any of the following methods:

- Via Facebook, by “liking” the [Finance 4335 Facebook Page](#).
- Via Twitter, by visiting <http://twitter.com/fin4335>.
- Via email; see <https://wp.me/p7ESgv-2yJ> for subscription instructions.



10. Course Schedule

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Financial Risk: Risk vs. Uncertainty

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- This course provides a primer on basic economic, statistical and financial principles and applies these principles to the study of risk management decision-making by individuals and firms. The textbook material is supplemented throughout the course by various outside readings, all of which are available from the [readings section of the course website](#).
- Although the course schedule is subject to change, the [lecture notes page](#) on the course website effectively serves as a course calendar, since it lists by date the sequencing of course material for the entire semester.



11. Academic Honesty and Integrity

- Plagiarism or any form of cheating is not acceptable. [Baylor's honor code](#) and the [Finance 4335 honor code](#) are important resources for understanding various types of academic dishonesty, and I expect my students to be intimately familiar with both of these documents. The standards set forth in both of these honor codes will be applied to all of your work in Finance 4335.
- Cheating involves not only a breach of trust that disrupts the proper harmony of society and creation, but it is also an act of violence against one's soul, corrupting judgment by sanctioning a distorted notion of success and honing destructive tools to pursue it.



12. Baylor University Title IX

- Baylor University does not discriminate on the basis of sex or gender in any of its education or employment programs and activities, and it does not tolerate discrimination or harassment on the basis of sex or gender. If you or someone you know would like help related to an experience involving sexual or gender-based harassment, sexual assault, sexual exploitation, stalking, intimate partner violence, or retaliation for reporting one of these type of prohibited conduct, please contact the Title IX Office at (254)710-8454 or report online at www.baylor.edu/titleix.
- The Title IX office understands the sensitive nature of these situations and can provide information about available on- and off-campus resources, such as counseling and psychological services, medical treatment, academic support, university housing, and other forms of assistance that may be available. Staff members at the office can also explain your rights and procedural options if you contact the Title IX Office. You will not be required to share your experience. **If you or someone you know feels unsafe or may be in imminent danger, please call the Baylor Police Department (254-710-2222) or Waco Police Department (9-1-1) immediately.** For more information, please visit www.baylor.edu/titleix.



Risk versus Uncertainty

- Frank Knight (1921) defines risk as a quantity susceptible of measurement, and uncertainty as a form of risk that cannot be quantified.
- “Uncertainty must be taken in a sense radically distinct from the familiar notion of Risk, from which it has never been properly separated ... A measurable uncertainty, or ‘risk’ proper ... is so far different from an unmeasurable one that it is not in effect an uncertainty at all.”
- **Knighian uncertainty** is commonly referred to as “ambiguity”.
- In this course, we focus primarily on *risk* as defined by Professor Knight.



Financial Risk: Market Volatility (VIX)

- A particularly useful measure of future short-term market volatility is VIX; VIX is the ticker symbol for the Chicago Board Options Exchange (CBOE) Volatility Index.
 - VIX is intended to measure the “implied” volatility of a “synthetic” at-the-money option on the S&P 500 index, with 30 days to expiration.
 - Thus, VIX represents a short-term (30-day) forecast (market consensus) of future stock market (S&P 500) volatility.
 - VIX is commonly referred to as a “fear” gauge, in that it proxies for investor risk aversion.
 - Higher (lower) VIX → higher (lower) risk aversion → higher (lower) cost of risk!



VIX Time Series, 1/2/1990 - 12/27/2019 (n=7,557)

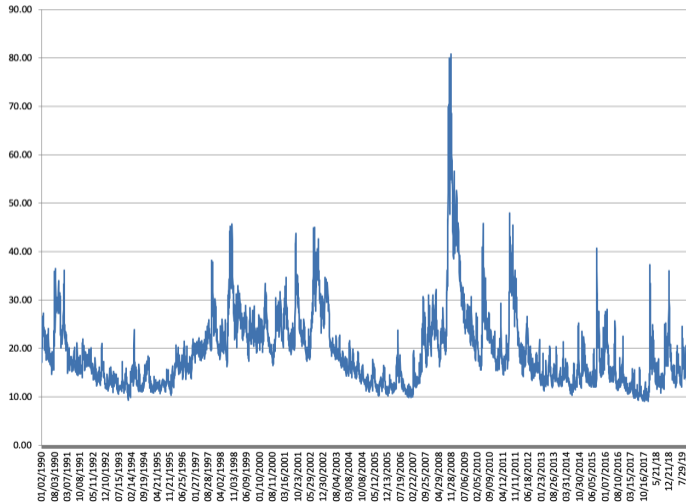
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VIX Descriptive Statistics, 1/2/1990 - 12/27/2019 (n=7,557)

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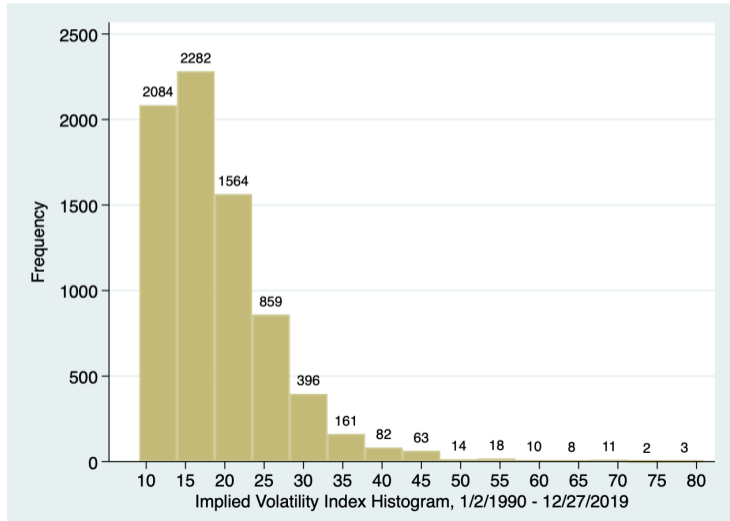
Financial Risk: Market Volatility (VIX)

No. of Observations	7,557	Date
Mean	19.15	
Standard Deviation	7.73	
Minimum	9.14	11/3/17
First Decile	11.93	
First Quartile	13.57	
Median	17.24	
Third Quartile	22.51	
Ninth Decile	28.38	
Maximum	80.86	11/20/08



VIX Histogram, 1/2/1990 - 12/27/2019 (n=7,557)

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SP500/VIX Daily Returns, 1/2/1990 - 12/27/2019 (n=7,557)

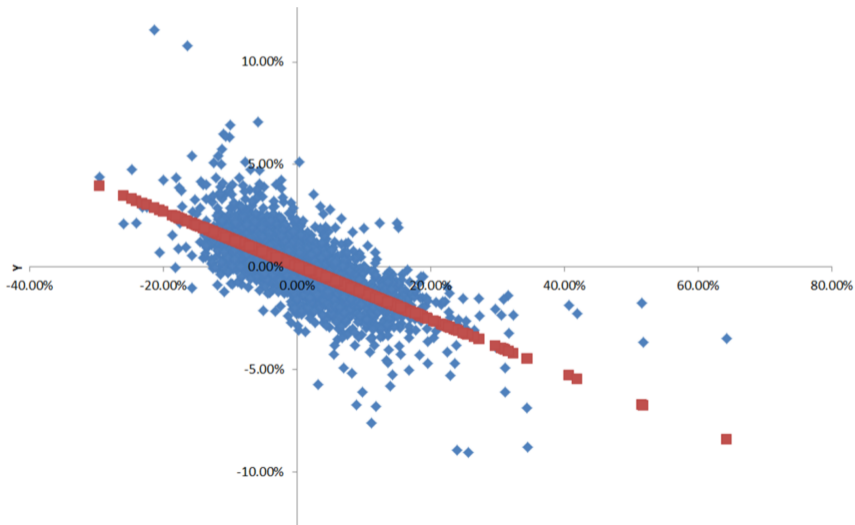
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See “On the relationship between the S&P 500 and the CBOE Volatility Index (VIX).”