

FIN 2227 – Fixed Income Markets and Valuation

Spring 2017

Instructor	Dr. Benjamin Scheick (pronounced “shike”)
Contact Information	Office: 2040 Bartley Hall Phone: (610) 519-7994 Email: benjamin.scheick@villanova.edu Office Hours: TR: 1:00 PM – 2:15 PM <i>and by appointment</i>
Class Hours	Section 004: TR (4:00 PM – 5:15 PM)
Class Location	Bartley Hall 2010
Required Text	Frank J. Fabozzi, <i>Bond Markets, Analysis and Strategies</i> , Ninth Edition, Pearson, 2015
Supplementary Materials	Lecture notes will be posted online (via Blackboard) prior to each class for students who wish to print their own copies. Supplemental articles, homework assignments, Excel files and other additional course material will also be posted throughout the semester. The lecture notes are designed to provide an outline of the topics covered in more detail in class, but they are not sufficient in and of themselves to substitute for a student’s own note-taking.
Calculator	A financial calculator will be required for the course, and should be brought to class for use in solving problems and exercises. Although any financial calculator is acceptable, particularly recommended are the Texas Instruments BAI Plus (<i>what I will be using in class</i>) and the Hewlett Packard 12C.
Course Prerequisites	(VSB 2010 and VSB 2020) or FIN 1113; Junior or Senior standing required <i>**Note: It is the student’s responsibility to be certain that the prerequisites have been successfully completed. If at any time during the semester it is determined that the student has not completed the prerequisites, the student can be administratively dropped from the course without credit or tuition refund</i>

Course Description

This course is designed to provide an introduction to fixed income markets, by covering the following broad topical areas: (a) the institutions, instruments and operations involved in these markets, (b) the valuation and analysis of fixed-income securities, (c) the increased importance of the secondary mortgage market, and (d) an introduction to the use and application of derivative securities in the areas of risk management.

A substantial portion of this course will be quantitative in nature. This will not only involve the use of a financial calculator, but will at times also incorporate the development of Excel spreadsheets for solving problems outside of the classroom. Students will also become familiar with gathering market data from a variety of sources including the Bloomberg terminals located in the Applied Finance Lab.

Classroom Expectations

Class Participation and Attendance

Students are expected to behave in a professional and courteous manner at all times, not only in dealing with the course instructor, but also with fellow students. Respect for others is to be demonstrated through class attendance, meaningful participation, and punctuality in arriving to the class. Any student who cannot attend a class, or who will be late for a class, should inform the instructor beforehand (in writing). Similarly, for any known special arrangements that need to be made, a student should give the instructor written notice with as much forewarning as possible.

For each class, students should come prepared, having read the assigned chapters and supplemental readings. Students are encouraged to actively participate in each class with meaningful questions and comments.

Laptop Policy and Note Taking

As technology is an important part of our everyday lives, students are permitted to use laptop computers / tablets during class periods *exclusively* for note taking. Improper use of technology (i.e., viewing anything other than class lectures or materials) during class periods can be a distraction to both the instructor and fellow students. Therefore, improper use of technology during class periods can result in this privilege being revoked for the entire class.

All lecture notes will be posted online (via Blackboard) prior to the class period in which they will be discussed. Students are encouraged to print out lecture materials prior to class to facilitate note taking. The lecture notes are designed to provide a guideline for the class discussion and are not a sufficient substitute for a student's own note taking.

University Issues

1. Accommodations for students with disabilities:

Villanova University seeks to provide students with disabilities the opportunity to fully participate in educational programs and services. In keeping with this philosophy, it is University policy that students with documented disabilities receive reasonable accommodations through access to classroom information. Students who require academic accommodations should schedule an appointment with me to discuss specifics either after class or during office hours. Students must also register with the Learning Support Office by contacting 610-519-5176 or nancy.mott@villanova.edu directly. Registration is needed in order to receive accommodations. Once accommodations have been established, it is the student's responsibility to follow up with the instructor in advance of each evaluative assessment (e.g., In-Class Assignment, Exam, etc.) to coordinate the means of administration.

2. The University's honesty policy regarding cheating and use of copyrighted materials:

The Code of Academic Integrity of Villanova University addresses cheating, fabrication of submitted work, plagiarism, and other forms of dishonesty. For the first offense, a student who violates the Code of Villanova University will receive a zero for the assignment. The violation will be reported to the Dean's office and recorded in the student's file. In addition, the student will be expected to complete an education program. The second offense will result in dismissal from Villanova with the reason for dismissal noted on the student's transcript. It is the student's responsibility to be familiar with the University's Code of Academic Integrity including policies regarding misrepresentation of oneself or one's circumstances to an instructor (e.g., explaining an absence, requesting a special due date for an assignment, etc.).

Course Requirements and Evaluation

Graded Components of the Course

The following components will be used to determine a student's course grade:

Component	Weight	Description
In-class Assignments	20%	There will be periodic in-class assignments that are designed to evaluate basic understanding of the material covered in class and further serve as a study tool for exams. These will be closed-book and completed individually during scheduled class times.
Homework	15%	There will be 3 homework assignments / projects throughout the semester involving the use of Excel, Bloomberg, and other data sources. Assignments will be done in groups, which will be determined early in the semester.
Group Presentation	5%	Each group will be required to make a professional business presentation to the class. Specific details will be provided at a later date.
Exams	60%	There will be three exams (the last exam is to be given during exam week), each worth 20% of your final grade.

Grading Scale

Grades will be assigned based on the following weighted percentages (using the weights detailed above):

Grade	Percentage
A	93.00-100.00
A-	90.00-92.99
B+	87.00-89.99
B	83.00-86.99
B-	80.00-82.99
C+	77.00-79.99
C	73.00-76.99
C-	70.00-72.99
D+	67.00-69.99
D	63.00-66.99
D-	60.00-62.99
F	0.00-59.99

In-Class Assignments

In-class assignments will be given throughout the course of the semester and will determine a student's In-Class Assignment Grade. These assignments are designed to provide students with a valuable study tool for each exam as well as an opportunity for students to break down their preparation for each exam into a more manageable timeline. *Students who are absent for a scheduled in-class assignment or leave class immediately after completing the assignment will be given a zero for that particular assignment.* Overall, questions will tend to be more qualitative in nature, though some may require the use of a financial calculator for appropriate computations. All in-class assignments will be closed book, will be taken during class time (15 to 20 minutes), and will be worked on individually. Students are expected to abide by the school honor code when taking them. *There will be no make-ups*, so students must make every effort to attend classes as scheduled. Students will be allowed to drop their lowest in-class assignment grade (which would include a zero for an absence during an in-class assignment). Assignments will cover required readings from the textbook, lecture materials covered in previous classes, as well as any supplemental readings that are assigned prior to class. Assignments will likely be announced in advance (See Course Schedule), though the instructor reserves the right to administer them unannounced.

Homework Assignments

These assignments are to be done in groups, which will be determined by the instructor early in the semester. *Late assignments will be penalized with each day late resulting in a 10% reduction in the assignment grade.* An assignment is deemed late if it is received by the instructor at any point after the specified deadline. All homework assignments must be **submitted electronically via email (not Blackboard) to the instructor by one of your group members**. Marks will be given for accuracy of answers, functionality of Excel models, aesthetic presentation (formatting of important cells, appropriate graph labels, etc.), and individual group member participation. Each student will receive an individual grade on the homework assignment that is a combination of their group score and individual contribution (see description below for further details).

These assignments are designed to help students become familiar with Excel spreadsheets, perform calculations that are more complex than can be done on a financial calculator, and gain experience creating models that could be presented to a supervisor in a work environment. These assignments also require students to work with their peers on small projects, as this is reflective to a large extent of what students will face in the years following graduation. Finally, these assignments will provide students with an opportunity to relate classroom concepts to current events in today's financial environment and expose them to multiple sources of market level data including Bloomberg.

As part of each assignment, students will be required to submit a group member evaluation form. Each group member will be evaluated on a contribution scale from 0 to 5, with 5 being the highest, in a number of evaluative areas. Based on the group member evaluations, a portion of the student's individual grade on the group assignment will be adjusted accordingly. *If a group member receives any evaluation of 0 from his/her group members, indicating a lack of participation in the assignment, he/she will receive a 0 for the entire assignment, regardless of the overall group grade.* It is each student's responsibility to submit their group member evaluation form via email to the instructor by the assignment deadline. *Late submissions will be penalized 1 point for each day late resulting in a reduction of the individual's grade. A maximum penalty of 5 points will be assessed for submissions later than 5 calendar days after the scheduled due date.*

Group Presentation

Each group will be required to make a professional business presentation to the class. Specific details of this assignment will be provided at a later date. Groups will be graded in terms of both content and presentation. Students are encouraged to make use of our library's resources in gathering information on the topic provided. Students will be required to submit a hard copy of their presentation as well as a list of references used.

Part of the group presentation grade will also be determined by an evaluation form submitted by each group member assessing the contribution of their fellow students. Each group member will be evaluated on a contribution scale from 0 to 5, with 5 being the highest, in a number of evaluative areas. Based on the group member evaluations, the group work portions of a student's grade will be adjusted accordingly. ***If a group member receives any evaluation of 0 from his/her group members, indicating a lack of participation in the assignment, he/she will receive a 0 for the entire assignment, regardless of the overall group grade.*** It is each student's responsibility to submit their group member evaluation form via email to the instructor by the assignment deadline. ***Late submissions will be penalized 1 point for each day late resulting in a reduction of the individual's grade. A maximum penalty of 5 points will be assessed for submissions later than 5 calendar days after the scheduled due date.***

Examinations

Three (3) exams will be given during the semester at the completion of designated topic areas, with the third exam being administered during final exam week. Exam questions will be both qualitative and quantitative in nature. Financial calculators will be required to answer some questions. ***Students are not permitted to use graphing calculators or any other calculators that have storage capability during any evaluative assessment.*** Questions will consist of multiple choice, short answer, and quantitative problems.

It is the student's responsibility to be on-time and present for all exams. ***Any student who misses an exam without prior instructor approval will receive a zero grade for that exam.*** Make-up exams will be offered only under *extremely* extenuating circumstances and only if a student provides notification to the instructor *well in advance* of the conflict. Written documentation reflecting the reason for absence must be submitted to the instructor well in advance of the exam date and the instructor must provide subsequent approval (in writing) upon evaluation of submitted materials. ***Any student who misses an exam without satisfying these criteria will receive a zero grade for that exam.***

Tentative Exam Dates (Subject to Change):

EXAM 1:	February 21 st (In Class)
EXAM 2:	March 28 th (In Class)
EXAM 3:	May 12 th (Section: 004) 8:30 AM-11:00 AM

Final Exam Schedule Conflicts

The university recognizes two situations that warrant sufficient consideration for rescheduling a final exam on an individual student basis. The two conflict situations as described by the university registrar are as follows:

- 1) If a student has two (2) or more final exams scheduled at the same time
- 2) If a student has three (3) or more final exams scheduled for the same day

If either of these two cases applies, the student will be required to provide the instructor with written documentation of the conflict with as much forewarning as possible. The instructor will then coordinate with the student an appropriate time for the exam to be administered.

Other Important Course Policies

Re-grade Policy

To ensure that all students are treated equally and fairly in the grading process, a student must follow the re-grade policy outlined below if they want their grade on a specific assignment to be reconsidered. The following material must be provided within **one week** of when the assignment grade was posted to Blackboard.

If it is believed that course points were **incorrectly summed**, then a student should:

1. Turn in **all** graded course material, with corresponding points.
2. Show clearly in writing where the summation error is believed to have occurred.
3. Provide contact information so that they can be reached once their case has been evaluated (phone and email).

If it is believed that **incorrect credit** was received for a particular portion of the graded material (i.e., an individual assignment), then a student should:

1. Turn in **all** graded course material, with corresponding points.
2. Provide a **clear**, type-written case (along with *very strong* supporting documentation) that **clearly** shows why it is believed that insufficient credit was received for the assignment. Note that only **I** **opportunity** will be given for a case to be made – so it needs to be as clear and strong as possible. Also, please note that cases can result in a student's course grade being downgraded once all of their graded course material has been re-evaluated.
3. Provide contact information so that they can be reached once their case has been evaluated (phone and email).

The course syllabus is a general plan for the course; deviations announced to the class by the instructor may be necessary.

Tentative Course Outline

The schedule given below is only *tentative*, and may be changed at any time based on the progress of the class.

Date	Topic	Required Readings	Assignments
I. Introduction to Debt Markets			
01/17	Course Overview	Syllabus	
01/19	Introduction to Debt Markets & Loan Basics: <i>Debt Market Overview</i> <i>Bond Features</i> <i>Risks of Bond Investing</i>	Ch.1 (Fabozzi) – all	
01/24	Determinants of the Level of Interest Rates <i>Interest Rate Theories</i> <i>The Federal Reserve</i> <i>The Impact of Inflation</i>	Supplemental Handout	
01/26	Determinants of the Level of Interest Rates (Cont'd):		
01/31	Treasury Securities Market : <i>Types of Treasury Securities</i> <i>Treasury Auctions</i> <i>STRIPS, TIPS, and Repos</i>	Ch.6 (Fabozzi) pp.125-129; 133-134; Ch.24 (Fabozzi) pp. 541-544	In-Class Assignment #1
02/02	Treasury Securities Market (Cont'd)		
02/07	Corporate Debt Instruments <i>Yield Spreads</i> <i>Credit Ratings and Default</i> <i>Commercial Paper</i>	Ch.7 (Fabozzi) pp.140-146, 149-150, 156-158; Ch. 22 (Fabozzi) pp. 462-464	
02/09	Corporate Debt Instruments (Cont'd)		
02/14	Municipal Securities Market: <i>Tax Exempt Feature and ETY</i> <i>Use in Stadium Financing</i>	Ch. 8 (Fabozzi) pp.172-175, 180-184; Supplemental Handout	In-Class Assignment #2
02/16	Municipal Securities Market (Cont'd):		HW #1 Due (Friday February 17 th)
02/21	Exam 1 (In-Class)		
II. Bond Valuation			
02/23	Bond Pricing: <i>Pricing of Bonds</i> <i>The Case of Accrued Interest</i> <i>Bonds with Embedded Options</i>	Ch.2 (Fabozzi) pp.14-24, 30- 31; Ch. 18 pp.380-382, 386- 387; TVM Review Lecture	

02/28	Bond Pricing (Cont'd)		
03/02	Measuring Yield: <i>Price-Yield Relation</i> <i>Calculating YTM, YTC, YTP, YTW</i> <i>Impact of Reinvestment Risk</i>	Ch. 2 (Fabozzi) pp. 24-26 Ch.3 (Fabozzi) pp. 34-53	
03/07	Semester Recess (No Class)		
03/09	Semester Recess (No Class)		
03/14	Measuring Yield (Cont'd)		
03/16	Bond Price Volatility: Duration <i>Understanding Price Volatility</i> <i>Modified Duration</i>	Ch. 4 (Fabozzi) pp.63-70	In-Class Assignment #3
03/21	Bond Price Volatility: Duration (Cont'd)		
03/23	Bond Price Volatility: Convexity <i>Limitations of Duration</i> <i>Using Duration and Convexity</i> <i>Implications of Convexity</i>	Ch. 4 (Fabozzi) pp.73-82	
03/28	Exam 2 (In Class)		
III. Mortgages			
03/30	Mortgage Pass-Through Securities: An Introduction to Securitization <i>The Fixed Rate Mortgage</i> <i>The Securitization Process</i> <i>Mortgage Pass-Through Securities</i>	Ch. 10 (Fabozzi) pp.209-221; Ch. 11 (Fabozzi) pp.223-228; Excel Spreadsheet	HW #2 Due (Friday, March 31 st)
04/04	Mortgage Pass-Through Securities: An Introduction to Securitization (Cont'd)		<i>WX Deadline</i> (Wednesday, April 5 th)
04/06	No Class – Research Conference Presentation		
04/11	Mortgage Pass-Through Securities: The Issue of Prepayment <i>Refinancing and Prepayment</i> <i>Estimating Prepayments</i> <i>Calculating PT Cash Flows with Prepayment</i> <i>Estimating Prepayment Speeds</i>	Ch. 11 (Fabozzi) pp.228-237, 242-243; Excel Spreadsheet	
04/13	No Class – Easter Recess		
04/18	Mortgage Pass-Through Securities: The Issue of Prepayment (Cont'd)		In-Class Assignment #4

04/20	Managing Risk in the Mortgage Sector (CMOs and CDS) <i>Mortgage Default (Foreclosure)</i> <i>Collateralized Mortgage Obligations</i> <i>Credit Default Swaps</i>	Ch. 12 (Fabozzi) pp. 248-254 Ch. 32 (Fabozzi) pp.754-759; Excel Spreadsheet	HW #3 Due (Friday, April 21 st)
04/25	Managing Risk in the Mortgage Sector (Cont'd)		
<i>Group Presentations</i>			
04/27	Group Presentation (Day 1)		
05/04	Group Presentation (Day 2)		
<i>End of Classes</i>			
<i>Final Exam Schedule (by Section)</i>			
5/12	Exam 3 (Section: 004) TR 4:00-5:15	Exam Time: 8:30-11:00 AM	