



Carleton
University

Sprett
School of Business

BUSI 4511A
Fixed Income Analysis
Fall 2021

Instructor: Ankit Sanghvi, CFA, FRM
Class time: Wednesday 11:35am-1:25pm at Azrieli Theatre
302
Email: ankit.sanghvi@carleton.ca
Office Hours: On Request

Prerequisites

[BUSI 3500](#), [BUSI 3502](#), [BUSI 3512](#) with a grade of C- or higher in each, and [STAT 2607](#) with a grade of C- or higher.

The School of Business enforces all prerequisites. Only the Undergraduate Program Supervisor of the School can waive prerequisite requirements.

Calendar Description:

Valuation of fixed income securities and interest rate derivatives including bonds, mortgage- and asset-based securities. Analytic tools used in bond portfolio and interest rate risk management including yield curve construction, duration and convexity, and term structure models.

Course Objectives

The goal of the course is to develop a conceptual framework for fixed income valuation and risk management. The course will introduce you to valuation of fixed income securities and interest rate derivatives including bonds, mortgage- and asset-based securities. You will learn analytic tools used in bond portfolio and interest rate risk management including yield curve construction, duration and convexity, and term structure models.

Class Modality

The class will be delivered on campus for 3 hours session each week.

Required Text and Materials

Frank J. Fabozzi, “Fixed Income Analysis” 2nd edition, Wiley, 2007, ISBN 978-0470052211.

Frank J. Fabozzi, “Fixed Income Analysis Workbook” 2nd edition, Wiley, 2007, ISBN 978-0470069196.

John Hull, “Options, Futures, and Other Derivatives”, 10th edition., Prentice Hall, 2018, ISBN 978-0134472089.

Course Evaluation

	Grade weight
Quizzes (2@10% each)	20%
Group Presentation (group of 4 people max)	20%
Individual Presentation	10%
Midterm Exam	15%
Final Exam	35%

Quizzes (online): Quizzes are designed to focus on material that was just covered. They will be approximately 20 minutes in length and will consist of a number of multiple-choice questions. You will write quizzes in cuLearn.

Group presentations: Each group of **up to 4 people** will have to present on a topic selected from a list of suggested topics distributed in class. The presentation should be no longer than 40 minutes.

Individual presentations: Each student will have to present on a topic selected from a list of suggested topics distributed in class. The presentation should be no longer than 20 minutes.

Midterm exam (online): There will be an online midterm test. You will write the midterm exam in cuLearn.

Final exam (online): The date and location of the final exam will be announced through the University’s normal procedures for such matters. You will write the final exam in cuLearn. Be sure that you are available for the mid-term and final exams.

NOTE: The final exam will be comprehensive, covering material from the entire course. If you are awarded less than 40% on the final exam, you will receive an “F”, regardless of your total mark in the course.

Every effort will be made to mark fairly and accurately. Nonetheless, in some cases, students may call into question the grades awarded to assignments or tests. In such cases, please write a brief note describing the difficulty with the awarded grade and provide the note, to the instructor not later than seven calendar days following the return of the graded work. Please be sure to include your name and student number on the note to enable the instructor to identify it properly. Note that the resulting remarking may lead to a lower grade.

Exam and Quiz Attendance

If a student is unable to sit for a quiz or mid-term test due to verifiable illness (or, in rare cases, some other circumstances beyond your control), the student will be given a choice

to write the test on an alternate date or mark allocation to that quiz will be allocated to remaining quizzes; the mark allocation for the mid-term test will be allocated to the final exam. If a student is unable to sit for the final exam, the student may apply to the Registrar's Office to write a deferred examination. Deferral final examination will only be granted to students showing satisfactory in-term performance (as described below). Please also see Sections 2.4, 2.5 and 2.6 of the Undergraduate Calendar. It should be noted that deferred examinations are not granted to students who make travel plans that conflict with the examination period.

Satisfactory In-term Performance

1. The criterion and the standard for Satisfactory In-term Performance are as follow: 50% of total pre-final exam work (cumulative) marks. This includes total marks for all quizzes and midterm exam.

2. Unsatisfactory In-term Performance in this course will lead to

Failure in this course (regardless of the performance at the Final exam or final project)	No
FND grade in this course (in case of missed Final exam)	Yes

Course Schedule (tentative and subject to changes)

Date	Topic	Chapters in Fabozzi (Hull)
	Introduction to Debt Securities <i>You are responsible for reading this material on your own. You will be tested on it on Quiz 1.</i>	1-3
Sept.8	Interest Rates and Bond Yields	4 (4)
Sept.15	Valuation of Debt Securities, Group 1 presentation	5
Sept.22	Quiz 1 , Term Structure of Interest Rates	6, 8
Sept 29	Duration and Convexity, Group 2 presentation	7
Oct.6	Valuation of Bonds with Embedded Options	9
Oct.13	Mortgage-Backed Securities, Group 3 presentation	10
Oct.20	Midterm Exam (online)	
Oct.27	Fall break (no class)	
Nov. 3	Interest Rate Derivatives, Group 4 presentation	13, 14 (6)
Nov.10	Quiz 2 , Credit Risk Analysis	15 (24)
Nov.17	Credit Derivatives, Group 5 presentation	24 (25)
Nov.24	Individual presentations	
Dec.1	Individual presentations	
Dec 8	Final Exam (Online)	

Contribution to Learning Goals of the Program

Program Learning Goal	Competencies Not Covered	Competencies Introduced (only)	Competencies Taught But Not Assessed	Competencies Taught and Assessed
BC1 Knowledge				X

<i>Graduates will be skilled in applying foundational business knowledge to appropriate business contexts.</i>				
BC2 Collaboration <i>Graduates will be collaborative and effective contributors in team environments that respect the experience, expertise and interest of all members.</i>				X
BC3 Critical Thinking <i>Graduates will be discerning critical thinkers, able to discuss different viewpoints, challenge biases and assumptions, and draw conclusions based on analysis and evaluation.</i>				X
BC4 Communication <i>Graduates will be effective and persuasive in their communications.</i>			X	
BI5 Global Awareness (BIB ONLY) <i>Graduates will be globally-minded.</i>			X	

ADDITIONAL INFORMATION

Course Sharing Websites

Materials created for this course (including presentations and posted notes, labs, case studies, assignments and exams) remain the intellectual property of the author(s). They are intended for personal use and may not be reproduced or redistributed without prior written consent of the author(s).

Required calculator in BUSI course examinations

If you are purchasing a calculator, we recommend any one of the following options: Texas Instruments BA II Plus (including Pro Model), Hewlett Packard HP 12C (including Platinum model), Staples Financial Calculator, Sharp EL-738C & Hewlett Packard HP 10bII

Group work

The Sprott School of Business encourages group assignments in the school for several reasons. They provide you with opportunities to develop and enhance interpersonal, communication, leadership, follower-ship and other group skills. Group assignments are also good for learning integrative skills for putting together a complex task. Your professor may assign one or more group tasks/assignments/projects in this course. Before embarking on a specific problem as a group, it is your responsibility to ensure that the problem is meant to be a group assignment and not an individual one.

In accordance with the Carleton University Undergraduate Calendar (p 34), the letter grades assigned in this course will have the following percentage equivalents:

A+ = 90-100	B+ = 77-79	C+ = 67-69	D+ = 57-59
A = 85-89	B = 73-76	C = 63-66	D = 53-56
A - = 80-84	B - = 70-72	C - = 60-62	D - = 50-52
F = Below 50			

Grades entered by Registrar:

WDN = Withdrawn from the course

DEF = Deferred

Academic Regulations

University rules regarding registration, withdrawal, appealing marks, and most anything else you might need to know can be found on the university's website, here:

<http://calendar.carleton.ca/undergrad/regulations/academicregulationsoftheuniversity/>

Requests for Academic Accommodation

You may need special arrangements to meet your academic obligations during the term. For an accommodation request, the processes are as follows:

Pregnancy obligation

Please contact your instructor with any requests for academic accommodation during the first two weeks of class, or as soon as possible after the need for accommodation is known to exist. For more details, visit the Equity Services website:

carleton.ca/equity/wp-content/uploads/Student-Guide-to-Academic-Accommodation.pdf

Religious obligation

Please contact your instructor with any requests for academic accommodation during the first two weeks of class, or as soon as possible after the need for accommodation is known to exist. For more details, visit the Equity Services website:

carleton.ca/equity/wp-content/uploads/Student-Guide-to-Academic-Accommodation.pdf

Academic Accommodations for Students with Disabilities

If you have a documented disability requiring academic accommodations in this course, please contact the Paul Menton Centre for Students with Disabilities (PMC) at 613-520-6608 or pmc@carleton.ca for a formal evaluation or contact your PMC coordinator to send your instructor your Letter of Accommodation at the beginning of the term. You must also contact the PMC no later than two weeks before the first in-class scheduled test or exam requiring accommodation (if applicable). After requesting accommodation from PMC, meet with your instructor as soon as possible to ensure accommodation arrangements are made. carleton.ca/pmc

Survivors of Sexual Violence

As a community, Carleton University is committed to maintaining a positive learning, working and living environment where sexual violence will not be tolerated, and its survivors are supported through academic accommodations as per Carleton's Sexual Violence Policy. For more information about the services available at the university and to obtain information about sexual violence and/or support, visit: carleton.ca/sexual-violence-support

Accommodation for Student Activities

Carleton University recognizes the substantial benefits, both to the individual student and for the university, that result from a student participating in activities beyond the classroom experience. Reasonable accommodation must be provided to students who compete or perform at the national or international level. Please contact your instructor with any requests for academic accommodation during the first two weeks of class, or as soon as possible after the need for accommodation is known to exist.

<https://carleton.ca/senate/wp-content/uploads/Accommodation-for-Student-Activities-1.pdf>

For more information on academic accommodation, please contact the departmental administrator or visit: students.carleton.ca/course-outline

Academic Integrity

Violations of academic integrity are a serious academic offence. Violations of academic integrity – presenting another's ideas, arguments, words or images as your own, using unauthorized material, misrepresentation, fabricating or misrepresenting research data, unauthorized co-operation or collaboration or completing work for another student – weaken the quality of the degree and will not be tolerated.

Process: If an alleged violation occurs, all relevant documentation will be forwarded to the Dean. If the allegation proves true, the penalties may include; a grade of Failure on the submitted work and/or course; academic probation; a refusal of permission to continue or to register in a specific degree program; suspension from full-time

studies; suspension from all studies at Carleton; expulsion from Carleton, amongst others. **For a first offence, at a minimum, the penalty assigned will normally be a zero on the submitted work and at least a minimum full grade reduction of the final course grade. For a second offence, at a minimum, the penalty assigned will normally lead to a suspension from studies.**

Students are expected to familiarize themselves with and follow the Carleton University Student Academic Integrity Policy which is available, along with resources for compliance at: <https://carleton.ca/registrar/academic-integrity/>.

Sprott Student Services

The Sprott Undergraduate Student Services Office offers program advising and overall student success support. Our team is available to discuss your academic goals and your program progression plans. We can also work with you to develop strategies for success, including study skills for Business. If you experience any difficulty this term or if you would like to access support, please contact our team at bcom@sprott.carleton.ca or at bib@sprott.carleton.ca.

Centre for Student Academic Support

The Centre for Student Academic Support (CSAS) is a centralized collection of learning support services designed to help students achieve their goals and improve their learning both inside and outside the classroom. CSAS offers academic assistance with course content, academic writing and skills development. Visit CSAS on the 4th floor of MacOdrum Library or online at: carleton.ca/csas.

Important Information:

- Students must always retain a hard copy of all work that is submitted.
 - All final grades are subject to the Dean's approval.
 - For us to respond to your emails, we need to see your full name, CU ID, and the email must be written from your valid CARLETON address. Therefore, in order to respond to your inquiries, please send all email from your Carleton CMail account. If you do not have or have yet to activate this account, you may wish to do so by visiting <https://carleton.ca/its/get-started/new-students-2/>
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