

FIN7190 (Go1/A01) (3.0 CH)
FIXED INCOME SECURITIES
SUMMER 2024

TERRITORY ACKNOWLEDGEMENT

The University of Manitoba campuses are located on original lands of Anishinaabeg, Ininewuk, Anisininewuk, Dakota Oyate and Denesuline, and on the National Homeland of the Red River Métis. We respect the Treaties that were made on these territories, we acknowledge the harms and mistakes of the past, and we dedicate ourselves to move forward in partnership with Indigenous communities in a spirit of Reconciliation and collaboration.

INSTRUCTOR

Name:	Ying Zhang	Office Location:	Drake 466
Phone:	204-474-9480	Office Hours:	by appointment
Fax:	204-474-7545	Class Room:	Drake 530
Email:	ying.zhang@umanitoba.ca	Class Time:	MW 6:15pm - 9:30 pm

COURSE DESCRIPTION

This course introduces you to fixed income securities and markets. Topics covered include: debt securities, risks of investing in bonds, the pricing of fixed income securities, the measurement of interest rate risk, the term structure and volatility of interest rates, introduction to asset-backed securities, credit analysis and portfolio management. A notable feature of this course is that it is based on the Chartered Financial Analyst (CFA) curriculum, thus preparing you for writing the fixed income parts across Level I and Level II (with a touch of Level III) of the CFA exams. This course is both rich in content and fast in pace. Therefore, significant out of class work is required for all students.

COURSE OBJECTIVES

This course provides students with comprehensive knowledge covering major topics in fixed income. Students are expected to understand theories and model applications of fixed income securities and its related topics, including interest rates and term structure, fixed income derivatives, and factors that corporate, as well as investors should consider when making decisions on fixed income securities. On course completion, you should be able to:

- Understand the defining elements of fixed-income securities and their markets.
- Estimate the risk and expected returns for fixed income instruments, with emphasis on interest rate risk and credit risk.
- Calculate the bond price using the arbitrage free valuation framework
- Analyze the term structure of interest rates and yield spreads.
- Evaluate fixed-income instruments with embedded options.
- Understand interest rate dynamics.

- Understand the types, characteristics, and risk of securitization investments.
- Understand the fundamentals of credit analysis and credit analysis models.

COURSE MATERIALS

1. **Textbook:** Fixed Income Analysis, fifth edition, James F. Adams and Donald J. Smith, John Wiley & Sons, Inc., 2022. ISBN 9781119850540

New textbooks are available through the University of Manitoba Bookstore. The option to purchase the e-book version is available through UM BookStore’s partnership with VitalSource Technologies:

<https://www.campusebookstore.com/link/?id=ed84297b-a287-431c-87a5-172cb9ff1d5c>

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2. **Lecture notes** - Lecture notes, Homework assignments, and quizzes will be available on the course’s UM learn site. Students are responsible for checking UM learn and downloading the relevant material before each class.
3. **Computer** - Students are required to use their computer for Quizzes and final exam.
4. **Financial Calculator:** A financial calculator is **required** for this course. If you will pursue the CFA designation in the future, note that only two calculator models are currently allowed for use during the CFA exams:
 - Texas Instruments BA II Plus (including BAII Plus Professional)
 - Hewlett Packard 12C
 The course will be instructed with TI BA-II Plus Professional.

TECHNOLOGICAL REQUIREMENTS

For exams and quizzes that will be administered via the Respondus Lockdown browser, you will need a device with one of the following operating systems:

Windows 10 or 8 (note: will not work with Windows 10S)

MacOS 11.1+ to 10.12

iPad iOS: 11.0+ (will not work with other tablets)

Memory: 2 GB RAM

Hard Disk Space: 200 MB of free hard disk space for program files

You will need the Chrome browser. Other browsers such as Safari will not work.

COURSE ASSESSMENT

Student progress will be assessed as follows:

Assignments	5 @ 6% each	30%
Quizzes	5 @ 6% each	30%

Final Exam	Cumulative	40%
Total		100%

1. Homework Assignments

There will be **five** assignments throughout this course. Assignments, along with their due dates are available on UM Learn. In case that a due date change, announcement will be made both in class and through UM Learn announcement. Each assignment may involve problem-solving and short answers questions covering topics discussed in class. All assignments must be submitted **individually** in the assignment folder. Please make sure that your writing is **legible**. Assignments are due **11:59pm** on the assignment due date. Late assignments will **NOT** be accepted. If your assignment is late, you will receive a mark of zero (0) on that assignment. You may submit your assignment early before the due date.

2. Quizzes

During this course, there will be one quiz on assigned dates, conducted via UM Learn, testing the content covered last week and in the most recent assignment. There is **no** cheat sheet allowed during the exam and students are expected to recall formulas from memory during the quiz unless specified otherwise. The quiz will be structured and timed in a similar manner of the CFA exam.

3. Exams

There will one cumulative final for this course. The exam will be closed book. Students are permitted to bring in one 8.5 by 11-inch sheet of paper on which they can write anything on both sides. You should begin preparing your "formula" sheet immediately. Formula sheets must be hand written (both sides permitted). NO word-processed or photocopied material is allowed on your formula sheet. However, please keep in mind that in a CFA exam, no formula sheet is allowed and you are expected to memorize all formulas and concepts.

If you miss a final examination for medical or compassionate reasons, you may be granted a deferred examination. Travel plans are not an acceptable reason to miss examinations. **University or the Undergraduate/Graduate Office of the student's home faculty/school, as appropriate, can arrange a deferred examination for you.**

The governing documents regarding Final Exams and Final Grades can be found here:
http://umanitoba.ca/admin/governance/governing_documents/academic/1299.html

Tentative grading scheme is provided as following:

Cumulative Marks	Grade	GPA	Performance
90-100	A+	4.5	Excellent
80-89.99	A	4.0	Very Good
75-79.99	B+	3.5	Good
70-74.99	B	3.0	Satisfactory
65-69.99	C+	2.5	Marginal
60-64.99	C	2.0	Unsatisfactory
50-59.99	D	1.0	Unsatisfactory
49.99 and below	F	0.0	Unsatisfactory

NOTE: Class attendance is required. Missing more than 20% of this course due to absence from lectures may result in a failing grade. It is your responsibility to inform your professor, in advance if possible, of your absence and the reason for it:

- 1) if **medical**, self-declaration form must be submitted for an illness lasting 5 consecutive days or less <https://umanitoba.ca/governance/governing-documents-students#self-declaration-for-brief-or-temporary-student-absences>, no later than 48 hours after the end of the brief absence; a medical note from your physician must be submitted for an illness lasting more than 5 days;
- 2) if a **work commitment**, a signed letter on letterhead from your supervisor is required in advance, noting clearly the date(s) you must be away for your work commitment(s);
- 3) if for **student competitions**, an email from your Asper team coach must be received in advance indicating the dates you are away at competition.

The professor will then decide how to deal with the impact of the missed classes on your final grade.

COURSE SCHEDULE

You will find that the course progresses quickly and the material covered builds on earlier material. It is important to stay current in your studies. Otherwise you will not understand the new material as it is presented. If you read the text in advance of the relevant classes, you will have a much better chance of keeping pace with the material. It is the **student's responsibility** to read the assigned material **prior** to the relevant class.

Lecture	Topic	Chapter	Dues
May 6	Fixed-Income Securities: Defining Elements Fixed Income Markets	Ch. 1 & Ch. 2	
May 8	Introduction to the Fixed Income Valuation	Ch. 3	
May 13	Understanding Fixed Income Risk and Return	Ch. 5	Assignment 1 Quiz 1
May 15	The Term Structure and Interest Rate Dynamics	Ch. 7	
May 20	Victoria Day, No Class		
May 22	The Term Structure and Interest Rate Dynamics Arbitrage-Free Valuation Framework	Ch. 7 & 8	Assignment 2 Quiz 2
May 27	Valuation and Analysis: Bonds with Embedded Options	Ch. 9	
May 29	Valuation and Analysis: Bonds with Embedded Options Introduction to Asset Backed Securities	Ch. 9 & 4	Assignment 3 Quiz 3
Jun 3	Fundamentals of Credit Analysis	Ch. 6	
Jun 4	Last day for VW		
Jun 5	Credit Analysis Models	Ch. 10	Assignment 4 Quiz 4

Jun 10	Fixed Income Portfolio Management	Ch. 12 & 13	
Jun 12	Fixed Income Portfolio Management	Ch. 12 & 13	Assignment 5 Quiz 5
Final Exam: TBA			

ACADEMIC REGULATIONS AND STUDENT SERVICES

HUMAN ETHICS APPROVAL FOR DATA COLLECTION

As part of coursework, if you will be collecting data from people who are not students in this class, you must obtain Human Ethics approval from the UofM's Research Ethics Board (REB) prior to data collection. This applies to data collection such as surveys, interviews, focus groups, experiments, video recording, etc., where a respondent is solicited for participation.

If the entire class will be working on the same project, your instructor will apply for human ethics approval from the REB. If individuals or small groups of students will be working on different projects, it is the responsibility of the students to obtain approval (only one group member needs to apply). Your instructor will tell you whether s/he will be or you need to. **When in doubt, please talk to your instructor.**

Instructions and forms to apply for human ethics approval can be found at:
<http://umanitoba.ca/research/orec/ethics/guidelines.html>

In most cases, you will be using the "Protocol Submission Form" which is under the "REB Forms - Fort Garry Campus" heading.

It can take up to six weeks to process human ethics applications and obtain approval. Therefore, plan early. Note that approval must be obtained prior to data collection and cannot be obtained during the data collection phase or retroactively. Violation can get you, your instructor, and the Asper School in serious trouble with the REB.

The following do not require REB approval:

- a) Projects where students are conducting the research on themselves during class time;
- b) Projects involving the use of records or information that is in the public domain, including the use of anonymous secondary data and surveys or questionnaires that have already been published;
- c) Projects involving the use of naturalistic observation where there is no reasonable expectation of privacy (i.e. public park).
- d) Practicum or job training projects where students are fully integrated into the organization's operational practices and are not conducting research;
- e) Projects where the intent is to use the information to provide advice, diagnosis, identification of appropriate interventions or general advice for a client;
- f) Projects where the intent is to develop skills which are standard practice within a profession (e.g. observation, assessment, intervention, evaluation, auditing); or
- g) Projects where the information gathering processes are part of the normal professional relationship between the student and the participants.

If you have any questions, please contact humanethics@umanitoba.ca or your instructor.

UNCLAIMED ASSIGNMENT POLICY

Pursuant to the FIPPA Review Committee's approved recommendations of August 15, 2007, all unclaimed student assignments will become the property of the faculty and will be subject to destruction six months after the completion of any given academic term.

STUDENT SERVICES AND SUPPORTS

The University of Manitoba provides many different services that can enhance learning and provide support for a variety of academic and personal concerns. You are encouraged to visit the below websites to learn more about these services and supports. If you have any questions or concerns, please do not hesitate to contact your instructor or the Graduate Program Office.

For Information on...	...follow this link
Course Outlines, Year-at-a-Glance, Concentrations, Textbooks, VW Dates and Final Exams	Asper Graduate Student Resources
Exam Rescheduling Policy - <i>Please refer to Missing a Test/Exam on page 18 of the MBA Student Handbook</i>	MBA Student Handbook
Help with research needs such as books, journals, sources of data, how to cite, and writing	Library Resources
Tutors, workshops, and resources to help you improve your learning, writing, time management, and test-taking skills	Writing and Learning Support
Support and advocacy for students with disabilities to help them in their academic work and progress	Student Accessibility Services
Copyright-related questions and resources to help you avoid plagiarism or intellectual property violations	Copyright Office
Student discipline bylaws, policies and procedures on academic integrity and misconduct, appeal procedures	Academic Integrity
Policies & procedures with respect to student discipline or misconduct, including academic integrity violations	Student Discipline
Students' rights & responsibilities, policies & procedures, and support services for academic or discipline concerns	Student Advocacy
Your rights and responsibilities as a student, in both academic and non-academic contexts	Your rights and responsibilities
Full range of medical services for any physical or mental health issues	University Health Service
Information on health topics, including physical/mental health, alcohol/substance use harms, and sexual assault	Health and Wellness
Any aspect of mental health, including anxiety, stress, depression, help with relationships or other life concerns, crisis services, and counselling.	Student Counselling Centre
Support services available for help regarding any aspect of student and campus life, especially safety issues	Student Support Case Management
Resources available on campus, for environmental, mental, physical, socio-cultural, and spiritual well-being	Live Well @ UofM
Help with any concerns of harassment, discrimination, or sexual assault	Respectful Work and Learning Environment
Concerns involving violence or threats, protocols for reporting, and how the university addresses them	Violent or Threatening Behavior

ACADEMIC INTEGRITY

I.H. Asper School of Business, The University of Manitoba

It is critical to the reputation of the I. H. Asper School of Business and of our degrees that everyone associated with our faculty behaves with the highest academic integrity. As the faculty that helps create business and government leaders, we have a special obligation to ensure that our ethical standards are beyond reproach. Any misconduct in our academic transactions violates this trust. The University of Manitoba Graduate Calendar addresses the issue of academic misconduct under the heading "Plagiarism and Cheating." Specifically, acts of academic misconduct include, but are not limited to:

- using the exact words of a published or unpublished author without quotation marks and without referencing the source of these words
- duplicating a table, graph or diagram, in whole or in part, without referencing the source
- paraphrasing the conceptual framework, research design, interpretation, or any other ideas of another person, whether written or verbal (e.g., personal communications, ideas from a verbal presentation) without referencing the source
- copying the answers of another student in any test, examination, or take-home assignment
- providing answers to another student in any test, examination, or take-home assignment
- taking any unauthorized materials into an examination or term test (crib notes)
- impersonating another student or allowing another person to impersonate oneself for the purpose of submitting academic work or writing any test or examination
- stealing or mutilating library materials
- accessing tests prior to the time and date of the sitting
- changing name or answer(s) on a test after that test has been graded and returned
- submitting the same paper or portions thereof for more than one assignment, without discussions with the instructors involved.

Many courses in the I. H. Asper School of Business require group projects. Students should be aware that group projects are subject to the same rules regarding academic misconduct. Because of the unique nature of group projects, all group members must exercise extraordinary care to insure that the group project does not violate the policy on Academic Integrity. Should a violation occur on a group project, all group members will be held jointly accountable, no matter what their individual level of involvement in the specific violation.

Some courses, while not requiring group projects, encourage students to work together in groups (or at least do not prohibit it) before submitting individual assignments. Students are encouraged to discuss this issue as it relates to academic integrity with their instructor to avoid violating this policy.

In the I. H. Asper School of Business, all suspected cases of academic misconduct involving a graduate student (i.e. MBA, MFin, MSCM, MSc or PhD student) will be reported directly by the instructor to the Dean of the Faculty of Graduate Studies.

AI TOOLS

AI tools can be used to enhance learning and problem-solving skills, but they should not replace independent thinking and learning. Students must exercise critical thinking when using AI tools and acknowledge their use in academic work. Prohibited uses include generating or completing academic work with AI tools without appropriate

acknowledgement. Academic honesty is paramount, and students should accurately represent their individual effort and knowledge. Faculty will provide guidance on AI tool usage and incorporate discussions on AI ethics and academic integrity. Violations may lead to disciplinary actions, including academic penalties or suspension.

FACULTY BIOGRAPHY

I.H. Asper School of Business, The University of Manitoba

Ying Zhang, Ph.D., CFA
Department of Accounting and Finance
I.H. Asper School of Business

Dr. Ying Zhang is an Associate Professor of Finance and received her Ph.D. in Finance from Concordia University. She is also a CFA charterholder and currently serves on the CFA Society Winnipeg board as the Ethics Challenge Chair.

Dr. Ying Zhang has taught a variety of finance courses including Corporate finance, Investment, Fixed Income Securities and Financial modeling. Her research interests include corporate governance, financial restatement, executive compensation, and market microstructure. Her work has been published in refereed journals such as Journal of Corporate Finance, Journal of Business Finance and Accounting, Journal of International Financial Markets, Institutions, & Money, and the Journal of Multinational Financial Management. She has presented her works at primary academic conferences, and served as ad hoc reviewer for several academic journals and conferences. She is the recipient of Associates Achievement Award for Research, Associates Achievement Award for Engagement, and Best paper award on Trading by the Toronto Stock Exchange.