

**FBE-535: Applied Finance in Fixed Income Securities**

**3-Units, 5:00-6:20 p.m. MW, JKP 110**  
**Spring 2023**

**Instructor: Nik Bhatia**

**Office Hours: please email anytime to set up a Zoom/in-person meeting**

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**Course Description**

This course is a detailed study of the fixed income asset class and its role in the evolving international monetary system. The course covers fixed income industry basics and an overview of the major sectors within the bond industry. The course entails fixed income mathematics, including duration and spread duration calculation, portfolio attribution, and derivatives hedging. The course will introduce theoretical and conceptual frameworks for 1) deciphering the current and future international monetary system and for 2) the management of a US Aggregate Bond Index benchmarked portfolio. We will start each class with a discussion of current events in the financial markets, and the course will include guest lectures from fixed income practitioners from the corporate credit and securitized sectors.

**Learning Objectives**

Upon successful completion of this course, students will be able to:

1. Explain key concepts and fundamental aspects of fixed income markets.
2. Invest using duration measures and calculate portfolio attribution.
3. Measure risk in a multi-sector fixed income portfolio.
4. Adopt a theoretical and conceptual framework for the international monetary system.
5. Understand the implications of forthcoming central bank digital currencies (CBDCs).
6. Adopt a practical framework for fixed income portfolio management.

7. Invest using fixed income derivatives and calculate hedging strategies.

### **Required Reading and Course Notes**

There are 11 required readings. All pdf documents will be posted to Blackboard. Slides and other notes will be distributed on Blackboard. Reading materials are listed in the Course Outline section. Reading financial news such as Wall Street Journal, Financial Times, and Bloomberg are all strongly recommended to maximize learning. You can stream up to 30 minutes of Bloomberg TV each day for free.

### **Grading Policies**

The class average grade will be 3.5. Students will be ranked and awarded their grades accordingly.

### **Exam and Deliverables Dates**

The midterm will cover topics in Part 1 only. The paper must be about a topic from Part 2. The final exam will be cumulative.

Midterm	March 1st	25 points
Paper	April 5th	25 points
Final Exam	TBD by University	50 points

### **Course Outline**

#### Part 1: Fixed Income industry, sectors, duration, and risk

SIFMA (Securities Industry and Financial Markets Association) - *US Fixed Income Market Structure Primer* (pdf), 2018

California Treasury - *Duration Basics* (pdf), 2007

PIMCO - *Risk Management* (pdf), 2000

#### Part 2: The International Monetary and Financial System

Perry Mehrling - *The Inherent Hierarchy of Money* (pdf), 2012

Steffen Murau - *Offshore Dollar Creation and the Emergence of the post-2008 International Monetary System* (pdf), 2018

Mark Carney - *The Growing Challenges for Monetary Policy in the current International Monetary and Financial System*, 2019

BIS - *Central bank digital currencies: foundational principles and core features*, 2020

Part 3: Fixed Income portfolio management, derivatives, and hedging

Fidelity - *The Business Cycle Approach to Asset Allocation* (pdf), 2019

BIS - *Financial Conditions and Purchasing Managers' Indices: Exploring the Links* (pdf), 2019

CME Group - *Understanding Treasury Futures* (pdf), 2017

PIMCO - *Interest Rate Swaps* (pdf), 2016

## **STATEMENT ON ACADEMIC CONDUCT AND SUPPORT SYSTEMS**

### **Academic Conduct:**

Students are expected to make themselves aware of and abide by the University community's standards of behavior as articulated in the Student Conduct Code. Plagiarism – presenting someone else's ideas as your own, either verbatim or recast in your own words – is a serious academic offense with serious consequences. Please familiarize yourself with the discussion of plagiarism in *SCampus* in Part B, Section 11, "Behavior Violating University Standards" policy.usc.edu/scampus-part-b. Other forms of academic dishonesty are equally unacceptable. See additional information in *SCampus* and university policies on scientific misconduct at <http://policy.usc.edu/scientific-misconduct>.

### **Support Systems:**

*Student Health Counseling Services (SCS)* - (213) 740-7711 – 24/7 on call

Free and confidential mental health treatment for students, including short-term psychotherapy, group counseling, stress fitness workshops, and crisis intervention. <https://engemannshc.usc.edu/counseling/>

*National Suicide Prevention Lifeline* - 1-800-273-8255 – 24/7 on call

Free and confidential emotional support to people in suicidal crisis or emotional distress 24 hours a day, 7 days a week. <http://www.suicidepreventionlifeline.org>

*Relationship & Sexual Violence Prevention Services (RSVP)* - (213) 740-4900 - 24/7 on call

Free and confidential therapy services, workshops, and training for situations related to gender-based harm. <https://studenthealth.usc.edu/sexual-assault/>

*Office of Equity and Diversity (OED)/Title IX compliance – (213) 740-5086*

Information about how to get help or help a survivor of harassment or discrimination, rights of protected classes, reporting options, and additional resources for students, faculty, staff, visitors, and applicants. The university prohibits discrimination or harassment based on the following protected characteristics: race, color, national origin, ancestry, religion, sex, gender, gender identity, gender expression, sexual orientation, age, physical disability, medical condition, mental disability, marital status, pregnancy, veteran status, genetic information, and any other characteristic that may be specified in applicable laws and governmental regulations. <https://equity.usc.edu/>; [titleix.usc.edu](https://titleix.usc.edu)

*Bias Assessment Response and Support (213) 740-2421*

Incidents of bias, hate crimes and microaggressions need to be reported allowing for appropriate investigation and response. <https://uscsa.usc.edu/trojans-care-4-trojans>

*The Office of Disability Services and Programs - (213) 740-0776 [dsp.usc.edu](https://dsp.usc.edu)*

Support and accommodations for students with disabilities. Services include assistance in providing readers/notetakers/interpreters, special accommodations for test taking needs, assistance with architectural barriers, assistive technology, and support for individual needs.

USC is committed to making reasonable accommodations to assist individuals with disabilities in reaching their academic potential. If you have a disability which may impact your performance, attendance, or grades in this course and require accommodations, you must first register with the Office of Disability Services and Programs ([www.usc.edu/disability](http://www.usc.edu/disability)). Any student requesting academic accommodations based on a disability is required to register with Disability Services and Programs (DSP) each semester. A letter of verification for approved accommodations can be obtained from DSP. Please be sure the letter is delivered to me (or to your TA) as early in the semester as possible. DSP is located in GFS (Grace Ford Salvatori Hall) 120 and is open 8:30 a.m.–5:00 p.m., Monday through Friday. The phone number for DSP is (213) 740-0776. Email: [ability@usc.edu](mailto:ability@usc.edu).

*USC Support & Advocacy – (213) 821-4710*

Assists students and families in resolving complex issues adversely affecting their success as a student EX: personal, financial, and academic. <https://uscsa.usc.edu/about/>

*Diversity at USC – <https://diversity.usc.edu/>*

Information on events, programs and training, the Provost's Diversity and Inclusion Council, Diversity Liaisons for each academic school, chronology, participation, and various resources for students.

*USC Emergency – UPC: (213) 740-4321 – HSC: (323) 442-1000 – 24/7 on call.*

Emergency assistance and avenue to report a crime. Latest updates regarding safety, including ways in which instruction will be continued if an officially declared emergency makes travel to campus infeasible. [dps.usc.edu](https://dps.usc.edu/); [emergency.usc.edu](https://emergency.usc.edu)

*USC Department of Public Safety – Non-Emergency: UPC: (213) 740-6000, HSC: (323) 442-120 – 24/7 on call*

Non-emergency assistance or information. [dps.usc.edu](https://dps.usc.edu)