University of Pennsylvania The Wharton School Professor Marina Niessner

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SH-DH 2423

International Financial Markets and Cryptocurrencies

FNCE 219/719 Fall 2021

This class focuses on international aspects of financial markets and the effects of trends in technology, globalization, and regulation.

Currency exchange rates have a major impact on international transactions and on the environment businesses operate. The class studies the markets for foreign exchange. As the most liquid financial market, there are a variety of derivative contracts available on currencies such as forwards, futures, options and swaps. The class provides in-depth perspectives on these.

For many firms, exchange rates are primarily viewed as risks affecting operational and financial positions that need to be managed. Currency risk management is one of the class' main focuses.

For investors, currencies as well as international equity and bond markets represent opportunities that complement domestic investments. The class studies currency investment strategies such as carry trades, momentum and fundamental approaches. The class considers the optimal exposures to international stocks and bonds, and the role of currency risks in international portfolios.

Cryptocurrencies are a potentially disruptive new type of financial instrument. The class studies these from a finance perspective.

The target audience includes financial officers, banking, consulting, and investors.

FNCE 219/719 builds on skills acquired in introductory finance, economics and statistics classes. However, some initial review of major concepts used is provided. The class format, for the most part, is lecture-based, with several case discussions. Class assignments are quantitative in nature.

Webpage: Canvas

Prerequisites

The following introductory courses are recommended but not required

For 219: FNCE 100, FNCE 101 or ECON 102, STAT 101 For 719: FNCE 611(or 612), 1 cu of Corporate Finance

FNCE 613 or 615, at least 0.5 cu of Macroeconomics

Materials

• A customized eBook is available from https://create.mheducation.com/shop/ by entering the ISBN #: "9781307741087" or "Marina Niessner" in the "Looking for New materials Area?". Payment is by credit card and you will then get an email with the information about how to access the eBook. More detailed purchasing and downloading instructions for the eBook are available on the class webpage. If you encounter any issues purchasing the eBook, technical assistance is available at McGraw-Hill's support line 1-800-331-5094, press 2, press 2 (Create), press 1.

- 2 chapters from the book *International Finance Theory into Practice* by Piet Sercu will be available on Canvas through Study.Net Materials.
- Lecture notes, additional readings, assignments, homework questions and answers, and other material will be made available on Canvas. You may want to print lecture notes beforehand and bring them to class.

Course Requirements

• Mid-term Exams:

- Thursday, October 7, during class time
- Thursday, December 2, during class time

Each exam counts for 30% of the final grade. Unexcused absences from exams will result in a zero score in the calculation of the final grade. Excused absences from exams require approval prior to the exam. Exams are closed book, but you may prepare a letter sized sheet (8.5 by 11-inch) with your notes (on both sides).

• **Two Group Assignments** count together for 10% of the final grade. Each student is expected to join a <u>project group consisting of 3-4 members</u>. The project groups will jointly prepare and submit written assignments. The individuals constituting a group must remain the same over the semester.

Assignments will be available on the class webpage at least one week before they are due and are submitted on Canvas. LATE ASSIGNMENTS WILL NOT BE ACCEPTED. The written assignments will be discussed in class and answers will not be distributed.

- Four Individual Assignments count for 20% of the final grade. Individual assignments contain questions and problems that students work out and submit individually.
- Class participation, 10% of the final grade. Particularly during the discussion of assignments, you are expected to actively participate through comments and questions.

Re-grading exams and graded assignments

Any request for re-grading must be submitted in writing within two weeks from the date the exams or assignments have been returned. The exam or assignment that you wish to have regraded should be placed in my mailbox in the Finance Department or given to me in class.

"Homework" problem sets

Several problem sets will be posted during the semester and you will be given the answers to these. The purpose of these exercises is to give you the opportunity to make sure you fully understand topics covered in class. By regularly doing these exercises you get training for exams and assignments and you will maximize your return from this class. These problem sets will not be graded, and you should feel free to work in groups.

Course Outline

FX basics

- 1. Introduction: Derivative usage
- 2. Spot Foreign Exchange Markets

Manipulating exchange rates, FX market structure, arbitrage

3. LIBOR, Forward Contracts and Interest Rate Parity

Forward valuation, hedging with forwards, Non-deliverable Forwards

Derivatives

- **4.** Currency Futures: Futures markets
- **5.** Currency Options

Put-call parity, hedging with options, option pricing issues, Black-Scholes model, implied volatility, risk reversal

6. Currency and Interest Rate Swaps

Examples and motivations for swaps, swap valuation, counterparty credit risk

<u>Currency investments / Cryptocurrencies</u>

- 7. Exchange Rate Theories and Evidence: Purchasing power parity
- **8**. Trading and Risk Premia in Foreign Exchange Markets:

Uncovered interest parity, carry trade, value, momentum

- **9.** International Bonds: Markets, diversification, hedging FX risk
- 10. Cryptocurrencies: Bitcoin, stablecoins, investing in cryptocurrencies

Several current event topics are covered at various points in the semester.

Calendar

Tue, Aug 31	
Thu, Sep 2	
Tue, Sept 7	
Thu, Sept 9	
Tue, Sept 14	Individual Assignment #1 discussed. Assignments are due by 3pm the day before
Thu, Sept 16	
Tue, Sept 21	Group Assignment #1 discussed
Thu, Sept 23	
Tue, Sept 28	
Thu, Sept 30	Individual Assignment #2 discussed
Tue, Oct 5	
Thu, Oct 7	Mid-term Exam 1 — during class time
Tue, Oct 12*	
Thu, Oct 14	No Class: Fall break
<i>Tue, Oct 19*</i>	
Thu, Oct 21*	
Tue, Oct 26	
Thu, Oct 28	
Tue, Nov 2	Individual Assignment #3 discussed
Thu, Nov 4	
Tue, Nov 9	Group Assignment #2 discussed
Thu, Nov 11	
Tue, Nov 16	
Thu, Nov 18	Individual Assignment #4 discussed
<i>Tue, Nov 23*</i>	
Thu, Nov 25	No Class: Thanksgiving
Tue, Nov 30	
Thu, Dec 1	Mid-term Exam 2 — during class time
Tue, Dec 7	
Thu, Dec 9	

^{* 219} meets only!