

Economics 413:01 - Financial Economics
Rutgers University-New Brunswick
Spring 2022

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Office Hours: By Zoom

Class Meeting Times:

Monday/Thursday: 10:20-11:40, Murray 213

Until restrictions are lifted, the class will meet by synchronous Zoom at these times.

Goals:

We study the functioning of capital markets for stocks, bonds, housing, foreign exchange, commodities, and derivative securities on these underlying instruments. Students will also learn about the market microstructure of these securities.

Prerequisites: This is an upper level elective.

220:320 (Intermediate Micro) and 220:322 (Econometrics). A grade of C or better is required.

Texts:

Bodie, Z., A. Kane and A. Marcus (BKM), *Investments*, New York: McGraw Hill, 12th ed, 2021.

The bookstore has rentals, used copies, older editions, and e-book versions if you prefer. This is a widely used textbook, and you should not have any trouble selling back a used book.

Additional REQUIRED readings:

Supplemental reading will be made available through Canvas: <https://canvas.rutgers.edu/>

Grading:

Mid-term: 40%; **March 10, in class**
Final: 45%; **May 9, 09:00-11:00, in classroom**
Problem sets and participation: 15%

Problem Sets:

There will be 8 problem sets. Questions are in PDF files under “Problem Sets” in Canvas.

Submit your multiple choice answers in “Tests and Quizzes” by 10:00 AM before class starts on the due date. Late submissions are penalized 20% and cannot be submitted more than 24 hours late.

Date (3 classes)	1. Models of Risk and Return	Text readings
January 20	(a) Utility maximization	BKM 6
January 24	(b) Mean-variance analysis	BKM 7
January 24	(c) Efficient frontier	BKM 8
January 24	(d) CAPM and APT - Theory	BKM 9, 10;
January 27	(e) Empirical analysis of security returns	BKM 13
January 27	(f) Value at Risk	BKM 5.7
January 31	Problem Set #1 Due	

Date (5 classes)	2. The Equity Market	
January 31	(a) Valuation	BKM 18, 19;
February 1	Equity Trading Game Starts	
February 3	(b) Hedge funds, mutual funds and ETFs	BKM 4, 26; BKM 11, 12;
February 3	(c) Market Structure	BKM 3.2, 3.4;
February 7	(d) HFT, dark pools, Reg. NMS	BKM 3.6, 25;
February 10	Problem Set #2 Due	
February 10	(e) International markets	
February 10	(f) Security analysis and investment bkg.	BKM 3.1, 19;
February 14	(i) Current issues in the stock market	BKM 3.7-3.10
February 14	Problem Set #3 Due	
February 18	Equity Trading Game Ends (Friday)	
Date (4 classes)	3. Bond Markets	
February 17	(a) Theory of interest rates	BKM 14
February 17	(b) Term structure	BKM 15
February 21	(c) Duration	BKM 16
February 21	(d) Treasury market	BKM 2.1-2.2;
February 24	(e) Ratings agencies	BKM 14.5
February 24	(f) Corporate bond market	BKM 14.5
February 28	(h) Sovereign/municipal bond market	BKM 2.2
March 3	Problem Set #4 Due	

Date (3 classes)	4. Housing Market	
March 3	(a) Mortgage mathematics	BKM 16:530-33
March 3	(b) Mortgage backed securities	BKM 2:40-41, 16:511-13;
March 7	(c) Housing prices	BKM 1:22-23
March 10	MIDTERM EXAM	In Class
March 14-17	SPRING BREAK	
March 21	(d) The subprime crisis	

Date (2 sessions)	5. Structured Finance	
March 24	(a) Credit enhancement	BKM 1.7
March 28	Problem Set #5 Due	
March 28	(b) ABS, CDOs, CLOs and CMOs	BKM 2:40-41

Date (5 classes)	6. Swaps, Futures and Options	
March 31	(a) Intro to Derivatives	BKM 20
March 31	(b) Futures	BKM 22
April 4	(c) Interest rate swaps	BKM 23
April 7	(d) Credit default swaps	
April 11	(e.1) Options – risk neutral valuation	BKM 21

April 18	Problem Set #6 Due	
April 18	(e.2) Options – binomial, Black Scholes	
April 18	(e.3) Options – Hedging, exotics, strategy	
April 21	(f) Microstructure and OTC derivatives	
April 28	Problem Set #7 Due	

Date (2 classes)	7. Foreign Exchange Market	
April 21	(a) Determinants of the exchange rate	BKM 17.1
April 21	(b) Eurozone	
April 21	(c) Interest parity relations	BKM 23.1
April 25	(d) Foreign exchange derivatives	
April 25	(e) Exchange rate crises	

Date (2 classes)	8. The Commodity Market	
April 28	(a) ETFs and indices	BKM 23.5
April 28	(b) Metals	
April 28	(c) Energy and carbon	
May 2	(d) Digital assets	
May 3	Problem Set #8 Due	