

Economics 413 - Financial Economics
Rutgers University-New Brunswick
Spring 2017

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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, 10th ed, 2014,

The bookstore has rentals, used copies 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 Sakai: <http://sakai.rutgers.edu>

News items pertinent to the class can be found in my Evernote notebook on financial markets: <http://www.evernote.com/pub/mizrach/Finance>. When I post relevant items, I will Twitter a link to: <http://twitter.com/#!/BMizrach>.

Mobile Response Apps:

We will be using the phone/computer based Reef Polling from iclicker:

<https://reef-education.com/reef-products/reef-polling/>

I will be using ONLY the mobile app not the iclicker. Pricing for the semester starts at \$14.99. You will need to first create an account after you have paid for the license.

The procedure is described at:

<https://reef-education.com/get-started/for-students/>

After you have created your account, you then link your account to the class. This can be done by clicking on the REEF Polling App in the class Sakai site

Grading:

Mid-term:	40%;	March 9th in class.
Final:	45%;	May 4th: 9:00-11:00 AM
Problem sets and participation:	15%;	

Trading Games:

During our stock market and derivatives unit, we will play simulated trading games. Details will be provided in class.

Participation:

Clicker points equal 1 problem set point. There is no maximum.

Problem Sets:

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

Submit your multiple choice answers in “Tests and Quizzes” by 11:00 AM on the due date. Late submissions are penalized 20% cannot be submitted more than 24 hours late.

Date (4 classes)	1. Models of Risk and Return	Text readings
January 19	(a) Utility maximization	BKM 6
January 23	(b) Mean-variance analysis	BKM 7
January 23	(c) Efficient frontier	BKM 8
January 26	(d) CAPM and APT - Theory	BKM 9, 10, 13;
January 26	(e) Empirical analysis of security returns	BKM 5
January 30	(f) Value at Risk	BKM 5: 132-41;
January 30	Problem Set #1 Due	

Date (5 classes)	2. The Equity Market	
February 2	(a) Valuation	BKM 17, 18;
February 6	Equity Trading Game Starts	
February 6	(b) Hedge funds, mutual funds and ETFs	BKM 4, 26;
February 6	(c) NYSE	BKM 2.3, 3.2, 3.3;
February 9	Problem Set #2 Due	
February 9	(d) NASDAQ	BKM 3.5-3.8;
February 9	(e) International markets	BKM 3.4, 25;
February 13	(f) Security analysis and investment bkg.	BKM 3.1, 19;
February 13	(g) Efficient markets and behavioral finance	BKM 11, 12;
February 16	(h) HFT, dark pools, Reg. NMS	BKM 3.5
February 16	(i) Current issues in the stock market	
February 20	Problem Set #3 due	
February 24	Equity Trading Game Ends (Friday)	

Date (4 classes)	3. Bond Markets	
February 20	(a) Theory of interest rates	BKM 14
February 20	(b) Term structure	BKM 15
February 23	(c) Duration	BKM 16
February 23	(d) Treasury market	BKM 2.1-2.2;
February 27	(e) Ratings agencies	BKM 14.5
February 27	(f) Corporate bond market	BKM 14.5
March 2	(h) Sovereign/municipal bond market	BKM 2.2
March 6	Problem Set #4 Due (Fri.)	

March 9	MIDTERM EXAM	
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Date (3 classes)	4. Housing Market	
March 6	(a) Mortgage mathematics	BKM 16.2:530-33
March 13	NO CLASS Spring Break	
March 16	NO CLASS Spring Break	
March 20	(b) Mortgage backed securities	BKM 1:34-35, 16:527-29;
March 20	(c) Housing prices	BKM 4.1:95
March 23	(d) The subprime crisis	BKM 1.7
March 27	Problem Set #5 Due	

Date (2 classes)	5. Structured Finance	
March 27	(a) Credit enhancement	BKM 1.7:21
March 30	(b) ABS, CDOs, CLOs and CMOs	BKM 2.2

Date (4 classes)	6. Swaps, Futures and Options	
April 3	(a) Intro to Derivatives	
April 3	(b) Futures	BKM 20.1-20.4
April 6	(c) Interest rate swaps	BKM 23.4
April 6	(d) Credit default swaps	BKM 1.7
April 10	Derivatives game starts	
April 10	(e.1) Options – risk neutral valuation	BKM 20.1-20.4
April 13	Problem Set #6 Due	
April 13	(e.2) Options – binomial, Black Scholes	BKM 21.1-21.4
April 13	(e.3) Options – Hedging, exotics, strategy	BKM 20.7, 21.5
April 17	(f) Microstructure and OTC derivatives	
April 21	Derivatives game ends (Friday)	
April 24	Problem Set #7 Due	

Date (2 classes)	7. Foreign Exchange Market	
April 24	(a) Determinants of the exchange rate	BKM 17.1;
April 24	(b) Eurozone	
April 27	(c) Interest parity relations	BKM 25.2-25.3
April 27	(d) Foreign exchange derivatives	
April 27	(e) Exchange rate crises	

Date (1 class)	8. The Commodity Market	
May 1	(a) ETFs and indices	BKM 23.5
May 1	(b) Metals	BKM 22.1, 22.5;
May 1	(c) Energy and carbon	
May 1	Problem Set #8 Due	