

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

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Office Hours: M, Th 2:00-3:00 PM

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:

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|---------------------------------|---|
| Mid-term: | 40%; October 30th in class. |
| Final: | 45%; Sec 01: Dec. 19th, Sec 02: Dec. 21st 12:00-2:00 PM |
| 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 30 minutes before class starts 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 |
|-------------------------|--|----------------------|
| September 7 | (a) Utility maximization | BKM 6 |
| September 11 | (b) Mean-variance analysis | BKM 7 |
| September 11 | (c) Efficient frontier | BKM 8 |
| September 14 | (d) CAPM and APT - Theory | BKM 9, 10, 13; |
| September 14 | (e) Empirical analysis of security returns | BKM 5 |
| September 18 | (f) Value at Risk | BKM 5: 132-41; |
| September 18 | Problem Set #1 Due | |

| Date (5 classes) | 2. The Equity Market | |
|-------------------------|--|--------------------|
| September 21 | NO CLASS Rosh Hashanah | |
| September 25 | (a) Valuation | BKM 17, 18; |
| September 28 | Equity Trading Game Starts | |
| September 28 | (b) Hedge funds, mutual funds and ETFs | BKM 4, 26; |
| September 28 | (c) NYSE | BKM 2.3, 3.2, 3.3; |
| October 2 | Problem Set #2 Due | |
| October 2 | (d) NASDAQ | BKM 3.5-3.8; |
| October 2 | (e) International markets | BKM 3.4, 25; |
| October 5 | (f) Security analysis and investment bkg. | BKM 3.1, 19; |
| October 5 | (g) Efficient markets and behavioral finance | BKM 11, 12; |
| October 9 | (h) HFT, dark pools, Reg. NMS | BKM 3.5 |
| October 9 | (i) Current issues in the stock market | |
| October 12 | Problem Set #3 due | |
| October 13 | Equity Trading Game Ends (Friday) | |

| Date (4 classes) | 3. Bond Markets | |
|-------------------------|-------------------------------------|--------------|
| October 16 | (a) Theory of interest rates | BKM 14 |
| October 16 | (b) Term structure | BKM 15 |
| October 19 | (c) Duration | BKM 16 |
| October 19 | (d) Treasury market | BKM 2.1-2.2; |
| October 23 | (e) Ratings agencies | BKM 14.5 |
| October 23 | (f) Corporate bond market | BKM 14.5 |
| October 26 | (h) Sovereign/municipal bond market | BKM 2.2 |

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| October 26 | Problem Set #4 Due | |
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| October 30 | MIDTERM EXAM | |

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| Date (3 classes) | 4. Housing Market | |
| November 2 | (a) Mortgage mathematics | BKM 16.2:530-33 |
| November 6 | (b) Mortgage backed securities | BKM 1:34-35, 16:527-29; |
| November 6 | (c) Housing prices | BKM 4.1:95 |
| November 9 | NO CLASS | |
| November 13 | (d) The subprime crisis | BKM 1.7 |
| November 16 | Problem Set #5 Due | |

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| Date (2 classes) | 5. Structured Finance | |
| November 16 | (a) Credit enhancement | BKM 1.7:21 |
| November 20 | (b) ABS, CDOs, CLOs and CMOs | BKM 2.2 |

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| Date (4 classes) | 6. Swaps, Futures and Options | |
| November 21 | (a) Intro to Derivatives (Tuesday) | |
| November 21 | (b) Futures | BKM 20.1-20.4 |
| November 23 | NO CLASS - Thanksgiving | |
| November 27 | (c) Interest rate swaps | BKM 23.4 |
| November 27 | (d) Credit default swaps | BKM 1.7 |
| November 27 | Derivatives game starts | |
| November 30 | (e.1) Options – risk neutral valuation | BKM 20.1-20.4 |
| November 30 | Problem Set #6 Due | |
| November 30 | (e.2) Options – binomial, Black Scholes | BKM 21.1-21.4 |
| December 4 | (e.3) Options – Hedging, exotics, strategy | BKM 20.7, 21.5 |
| December 4 | (f) Microstructure and OTC derivatives | |
| December 7 | Problem Set #7 Due | |
| December 8 | Derivatives game ends (Friday) | |

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| Date (2 classes) | 7. Foreign Exchange Market | |
| December 7 | (a) Determinants of the exchange rate | BKM 17.1; |
| December 7 | (b) Eurozone | |
| December 7 | (c) Interest parity relations | BKM 25.2-25.3 |
| December 11 | (d) Foreign exchange derivatives | |
| December 11 | (e) Exchange rate crises | |

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| Date (1 class) | 8. The Commodity Market | |
| December 11 | (a) ETFs and indices | BKM 23.5 |
| December 11 | (b) Metals | BKM 22.1, 22.5; |
| December 11 | (c) Energy and carbon | |
| December 14 | Problem Set #8 Due | |