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MBA Financial Markets

Fall 2011

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Course Description

This is a core class that offers the basic concepts and tools necessary to understand how financial markets work, and how financial instruments are used for sound investment decisions. This knowledge is especially important in the present environment, in the aftermath of the Financial Crisis of 2007–2009, and at the onset of the current debt crisis in Europe and elsewhere.

Topics covered include the following: models of risk and return; time value of money and net present value; market efficiency, anomalies, and behavioral finance; asset allocation and modern portfolio theory; bonds and interest rates, forwards and futures, options; the structure and performance of the money management industry: pension funds, mutual funds, hedge funds. Effort will be made to relate the course material to current financial issues and problems relevant to practitioners.

The class material is targeted to all MBA students, whether they intend to continue in the Finance Track or not. Advanced material is provided as optional readings for those students that want a deeper understanding of the material.

Evaluation and Exams

The total score is based on 3 case/assignments (20%), 2 graded group cases (20%), the midterm exam (20%), and the final exam (40%). If the normalized midterm score is below the normalized final exam score, the midterm score will be dropped, and all the weight will be added to the final exam (60%). Thus, the midterm cannot hurt you, but it can help you. Weightings on the various components of the final grade are as follows:

Case/Assignments	20%		
Graded Group Cases	20%		
Midterm	20%	or	0%
Final	40%	or	60%

The **homework** (case/assignments and graded group cases) should be typed or written legibly, and submitted in hard copy at the beginning of class on the scheduled date. The homework may be discussed only with the members of your group. Only one solution per group should be handed in. No late submissions will be accepted.

Both **exams** are closed-book and closed-notes, with a calculator allowed but no other electronic device (ex. calculator software on a smartphone is not permitted). You are only allowed a "cheat sheet" provided by me, on which you can add your own hand-written annotations.

You will need a scientific calculator to complete the case studies and exams. A financial calculator is not necessary.

Exam Regrading Policy: You may request a regrade on any exam. Each regrade request must be accompanied by a concise written explanation of the request (email is acceptable). The request should be submitted to me within one week after exams are distributed. The whole exam will be re-graded, so your score can either increase or decrease as a result.

Class participation is very important. Many of you have useful professional experience that can undoubtedly benefit our class discussions. Do not hesitate to share your experience with the rest of the class!

Course Materials

- **Textbooks**

    1. Bodie, Zvi, Alex Kane, and Alan Marcus, *Investments and Portfolio Management*, McGraw-Hill, Global Edition (9th Edition), 2011.
    2. Malkiel, Burton, *A Random Walk Down Wall Street*, Norton, 9th Edition, 2007.

- **Lecture Slides**

    When presenting the class material, I tend to follow my lecture notes. These notes are not included in a packet, because I often update them with new information shortly before class. I will make these notes available to you before each class.

    Practice exams will also be posted on the class web page prior to the exams. I may also periodically hand out current newspaper and magazines articles relevant to the course topic.

Course Outline and Readings

This an *approximate* schedule of topics that will be covered. You should read the corresponding material in the text prior to the lecture. "BKM" refers to the book by Bodie, Kane and Marcus; and "RWDWS" refers to the book by Malkiel. Reading should be only done in enough detail so that you get a general idea about what is being discussed.

(*Required readings are denoted by "R", optional readings by "O".*)

Topic One – *The Financial System; Risk and Return* (October 4/6)

- Provide an overview of the financial system and financial instruments. Discuss the risk and return of various financial assets, and the market equity risk premium. Examine the historical trade-off between the risk and return for various financial instruments.

- **Case:** The Historical Risk of T-Bills, T-Bonds and Equities in the U.S.

- Reading

  - Course webpage: Lecture Notes Topic 1, slides 7–16 (**R**)
  - BKM: chapters 1, 2, 3, 5 (**R**), chapter 18 (**O**)
  - RWDWS: chapters 3, 13 (**O**)

Topic Two – *Time Value of Money; Net Present Value* (October 11/13)

- Determine the value of money received now compared to money received at some point in the future. Examine how this affects investment decisions. Compare NPV with the Internal Rate of Return (IRR). Understand annuities, perpetuities, interest rates, and compounding.

- **Case:** Is Getting an MBA a Positive NPV Project?

Topic Three – *The Capital Asset Pricing Model; Arbitrage Pricing Theory* (October 18/19/20)

Case/Assignment #1 Due (beginning of class)

- Study the Nobel Prize winning idea of relating the discount rate of a given security to its systematic risk, or its beta. Applications include computing the cost of capital for projects, and determining the risk-adjusted performance (alpha) of a security or a money manager. Compare CAPM with its main alternative, APT in its Fama-French 3-factor version.

- **Case:** The Cost of Capital for Apple and K-Mart

- Reading

  - BKM: chapters 9, 10 (**R**); chapters 8, 13 (**O**)
  - RWDWS: chapter 9 (**O**)

Topic Four – *Market Efficiency and Behavioral Finance*   (Oct. 25/26/27, Nov. 8/10)

Case/Assignment #2 Due (beginning of class)

- Discuss the notion of an efficient market. Can anyone predict future prices, or are they entirely random? Understand the Random Walk Hypothesis and its connection with Market Efficiency. Do investors behave rationally, or is the market dominated by "animal spirits"? Discuss Behavioral Finance and the Rational vs. Behavioral Debate. Give an example of "arbitrage" and describe some risks associated with it.

- **Case:** The Red Dollar versus the Blue Dollar

- Reading:

  - BKM: chapter 11 (**R**), chapter 12 (**O**)
  - RWDWS: chapters 2, 4, 5, 6, 7, 10, 11 (**O**)

Topics 1–4 – *Midterm Exam*   (November 4, 10:30–12:00)

MIDTERM EXAM

Topic Five – *Asset Allocation; Mean–Variance Analysis*   (November 15/17)

- Examine another Nobel Prize winning idea of selecting the optimal portfolio of securities which minimizes risk given a target expected return level. Explain how *diversification* among various financial instruments reduces risk. Study how this works in practice: optimal asset allocation for institutions and individual investors.

- **Case:** Harvard Management Company

- Reading

  - BKM: chapters 6, 7 (**R**), chapter 25, section 27.3 (**O**)
  - RWDWS: chapter 8 (**O**), chapters 12, 14 (**O**)

Topic Six – *Options*   (November 22/24)

Case/Assignment #3 Due (beginning of class)

- Options provide the right (but not the obligation) to buy or sell certain goods, currencies or financial instruments at a later date for a pre-specified price. Discuss the Nobel prize winning Black-Scholes option pricing formula.

- **Case:** Speculating with IBM Options

- Reading

  - BKM: chapters 17, 18 (**R**)

Topic Seven – *Futures*   (November 22/24)

- With futures (and forward) contracts it is possible to arrange the purchase or sale at a future time and at a pre-specified price of certain assets. Futures can be used both for hedging risk and for speculation.

- **Case:** Hedging Gasoline Prices with Futures

- Reading

    - BKM: chapter 19 (**R**), sections 20.1–3 (**O**)

Topic Eight – *Bonds and Interest Rates*   (November 29/December 1)

Graded Group Case #1 Due (beginning of class)

- Bonds provide a way to borrow money. Examine different types of bonds and their characteristics. Duration is the sensitivity of a bond or a portfolio of bonds to interest rates. Examine the relationship between the term structure of interest rates (also called the *yield curve*) and the business cycle.

- **Case:** Interpreting the Yield Curve

- Reading

    - BKM: chapters 14, 15 (**R**), chapter 16 (**O**)

Topic Nine – *The Money Management Industry*   (November 29/December 1)

Graded Group Case #2 Due (beginning of class)

- What does it take to be a good investor? Is there any skill in the money management industry? How do hedge funds work? How have they performed?

- **Case:** Long-Term Capital Management

- Reading

    - BKM: chapters 4, 26 (**R**), chapters 24, 27 (**O**)
    - RWDWS: chapter 15 (**O**)

Topics 1–9 – *Final Exam*   (December 8, 13:00–16:00)

FINAL EXAM