

FINANCIAL MARKETS

OBJECTIVE

The objectives of the course are:

- (1) to acquire a solid knowledge of the principles and practice of financial markets;
- (2) to develop the tools necessary to make good financial decisions.

OPTIONAL TEXTBOOKS

Investments, by Bodie, Kane, and Marcus, 8th Edition, McGraw-Hill.

Corporate Finance – Theory and Practice (CF) by Vernimmen, Quiry, Dallochio, Le Fur, and Salvi, 2nd Edition, Wiley.

Foundations of Financial Markets and Institutions (FFMI) by Fabozzi, Modigliani and Jones, 4th Edition, Pearson.

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.

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.

CONTENT AND ORGANIZATION

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. Topics covered include the following: time value of money, models of risk and return; asset allocation and modern portfolio theory; bonds and interest rates, forwards and futures, options; market efficiency, anomalies, and behavioral finance; pension funds, mutual funds, hedge funds; structured finance, rating agencies, and the financial crisis of 2007-2009. Effort will be made to relate the course material to current financial news and problems relevant to practitioners.

The class material is useful for MBA students in a non-finance track and those who take the Finance Track. Advanced material is provided as optional readings for those students that want a deeper understanding of the material. The advanced material is not counted towards the grade.

Each topic contains a case which helps illustrate some of the more important concepts for that topic. Questions about the case can be included in the case/assignments, graded group cases, or the midterm and final exams. Case/assignments and graded group cases must be submitted one per study group. There are 3 case/assignments and 2 graded group cases. The grade for a case/assignment can be: “2” for a very good assignment, “1” for a good attempt, and “0” for minimal attempt or no assignment submitted. For case/assignments only your best 2 out of 3 scores will be considered, as long as all the scores are 1 or higher. So for example, if you have one score of 1 and two scores of 2, the score of 1 will be dropped, and you will have a perfect 2 (the maximum). The graded group cases are scored from 1 to 10

Topic 1: The Financial System

Discuss various financial instruments and the financial system. Understand some of the mechanics of trading, such as buying on margin, and short-selling.

Optional reading: FFMI 1, 2 and CF 15, sections 1-4.

Case: Short-Selling and Arbitrage: The Red Dollar and the Blue Dollar.

Topic 2: Risk and Return

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.

Optional reading: CF 21, sections 1 to 3.

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

Topic 3: Time Value of Money (TVM) and Net Present Value (NPV)

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.

Optional reading: CF 16.

Case: Is Getting an MBA a Positive NPV Project?

Topic 4: The Capital Asset Pricing Model (CAPM) and Arbitrage Pricing Theory (APT)

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.

Optional reading: CF 22, 23.

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

Topic 5: Asset Allocation and Modern Portfolio Theory (MPT)

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

Optional reading: CF 21, sections 4 to 9.

Graded Group Case 1: Harvard Management Company.

Topic 6: Bonds

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 and the business cycle. Optional reading: FFMI 10, 11 and CF 24, 25.

Case: Interpreting the Yield Curve.

Topic 7: Forwards and Futures

With forwards and futures it is possible to arrange the purchase at a future time and at a pre-specified price of certain goods, currencies and financial instruments. They can be used both for hedging risk and for speculation. Optional reading: FFMI 26, FFMI 28 pp. 565-573.

Case: Hedging Gasoline Prices with Futures.

Topic 8: Options

Options provide another method to buy certain goods, currencies and financial instruments at a later date. However, options provide the right, not the obligation, to purchase. Discuss the Nobel prize winning Black-Scholes formula for option prices. Optional reading: FFMI 27, FFMI 28 pp. 574-586 and CF 28, sections 1 to 4.

Graded Group Case 2: Speculating with IBM Options.

Topic 9: Structured Finance, Rating Agencies, and the 2007-2009 Financial Crisis

Examine the financial crisis and its causes. Provide some background in structured products, and the role of rating agencies in the financial crisis. Optional reading: FFMI 23.

Case: Securitization, Credit Rating and the Financial Crisis of 2007-2009.

Topic 10: Market Efficiency, Behavioral Finance, and the Money Management Industry

Discuss the notion of an efficient market. Can anyone predict future prices, or are they entirely random? Do investors behave rationally, or is the market dominated by "animal spirits"? 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? Optional reading: FFMI 2, 7, 8 and CF 15, sections 5-7.

Case: What Does It Take to Get into the Top 5 All-Time Best Mutual Fund Managers?