FINC 550-01-03 Fundamentals of Finance

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FINC 550-01 and 550-03: Fundamentals of Finance, Fall 2017
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Office Hours: Zoom Session Office Hours: TBD and by email request

Course Objective

The purpose of this course is to provide MBA students with an understanding of both basic and advanced financial management theories and strategies. Students should be able to discuss and understand with some depth the financial system, how equity and debt securities are valued, the capital formation process, portfolio and capital market theory, capital structure, corporate investments, capital budgeting, mergers and acquisitions, and financial derivatives.

Student Leaning Objectives

Objective: At the end of this class students will be able to:
1. Value bonds, stocks, and derivatives
2. Statistically measure the expected return and risk of a security and portfolio
3. Apply modern portfolio theory to the construction of equity portfolios
4. Derive the Capital Asset Pricing Model
5. Explain the Arbitrage Pricing Theory
6. Value equity using fundamental DCF and multiplier approaches
7. Explain the financial anatomy of a company
8. Explain how the different financial markets function and how securities are traded
9. Explain the Efficient Market Theory in terms of its propositions and implications
10. Explain the weak-form, semi-strong-form, and strong-form-tests of the EMH and some of the empirical studies and methodologies used to tests these hypotheses.
11. Explain capital structure theory
12. Evaluate corporate investments using capital budgeting tools
13. Evaluate a merger
14. Explain how the options, futures, and swaps markets functions
15. Use the Bloomberg system to screen for securities, value stocks and bonds, access news and information, and construct and manage portfolios

Readings

- Chapters from Johnson, *Debt Markets and Analysis*, Bloomberg Press/Wiley (Canvas)
- Chapters from Johnson, *Introduction to Derivative*, Oxford University Press (Canvas)

Canvas Folders

- Modules: Assignments, Audio/PPTs, PPTs, Zoom lectures, end-of-chapter problems, test review material, solutions, chapter PDFs from debt and derivative book, and Excel programs can be downloaded from the modules
- Assignment: End-of-the Chapter Problems can be downloaded from the Modules and the work submitted by uploading from “Assignments”
• Assignment: Bloomberg Exercises can be found in the text and the work submitted by uploading from “Assignments “
• Discussions: Discussions are found in Assignment, Discussions, and Modules

Modules

Module 1: Equity and Bond Valuation
This module covers Chapter 3 from Equity Markets and Portfolio Analysis: bond and equity valuation.

SLO:
• Calculate the values and rates of return on bonds and stocks

Topics:
• Review of time value of money
• Bond valuation
• Bond price relations
• YTM
• Total return
• Spot rates and equilibrium bond prices
• Geometric mean
• Stock returns and valuation
• Fundamental stock valuation
• Two-stage and three-stage growth models

Readings and Assignments
• Read Chapter 3
• Chapter 3 Audio/PPTs and/or Zoom Lectures, Chapter 3, Parts 1 and 2
• Chapter 3 Problems

Module 2: Return and Risk, Portfolio Analysis, and Capital Market Theory
This module covers Chapters 6-10 in Equity Markets and Portfolio Analysis: Stock Return and Risk, Portfolio Evaluation, Markowitz Portfolio Selection, Capital Asset Pricing Model (CAPM), and Arbitrage Pricing Theory (APT).

SLOs:
• Estimate a stock’s return and risk using statistics
• Evaluate a portfolio in terms of its expected return and risk
• Construct a Portfolio using the Markowitz Portfolio Selection Model
• Derive the Capital Asset Pricing Model
• Compare and contrast APT to CAPM

Readings and Assignments:
• Read Chapter 6-10 from Equity Markets and Portfolio Analysis
• Lecture: Audio/PPTs covering the chapters and/or Zoom Lectures, Chapters 6-10
• Work select end-of-the-chapter problems from chapter 6-10
• Discussions
Module 3: Equity Markets, Trading, and Investment Funds
Module 2 covers Chapters 4 and 5 from *Equity Markets and Portfolio Analysis*

SLOs:
- Differentiate the major types of equity and investment funds in terms of their characteristics
- Explain how the different financial markets function

Assignments and Readings:
- Reading: Chapters 4 and 5 (or corresponding PPTs)
- View Zoom Recordings of Chapters 4 and 5

Test 1: Modules 1, 2, and 3
Test 1 draws from material covered in Modules 1, 2, and 3. The test will consist of problems, long questions, and short explain questions. The questions and problems on the test will be similar to the assigned chapter problem.

Trading-Room Session: Bloomberg System
This module includes a workshop class in the Fifth-Third Trading Room and viewings from Zoom Recordings covering Bloomberg applications.
- Access Bloomberg from your own account
- Navigate the Bloomberg system
- Search and screen for securities and news
- Access economic data and information
- Construct a portfolio
- Apply Excel to access Bloomberg information
- Create a Bloomberg Launchpad

Reading Material:
- Chapter 2 from *Equity Markets and Portfolio Analysis*
- Chapter 2 PPT

Bloomberg Assignments
- Work Bloomberg Exercises: Portfolio Construction, Chapters 3, 4, and 5

Module 4: Fundamental, Technical, and Efficient Market Analysis
This module covers Chapters 11, 12, 13, and 14 from *Equity Markets and Portfolio Analysis*: the financial anatomy of company, valuations of stocks and indexes using DCF and multipliers approaches, bottom-up and top-down stock portfolio construction, technical analysis, efficient market analysis, and equity-style investment

SLOs
- Explain the financial anatomy of company
- Value stocks using fundamental DCF and multiplier approaches
- Understand and apply technical tools
- Explain the Efficient Market Theory in terms of its propositions and implications
- Explain the weak-form, semi-strong-form, and strong-form-tests of the EMH and some of the empirical studies and methodologies used to tests the hypothesis.
Readings and Assignments:
- Read Chapters 11-15
- Lecture: Chapter 11-15 Audio/PPT
- Zoom Recording, Chapter 11
- Assigned end-of-the-chapter problems
- Bloomberg Assignment: Chapter 15

Module 5: Equity Derivatives
This module covers Chapter 16 and 17 from *Equity Markets and Portfolio Analysis*

SLOs:
- Evaluate fundamental option strategies in terms of profit graphs
- Explain how options trade on organized exchanges
- Evaluate a stock portfolio insurance strategy
- Derive BOPM
- Explain the futures market
- Explain the carrying-cost model
- Explain uses of futures for hedging and speculation

Reading Material and Assignments
- Chapters 16 and 17 from *Equity Markets and Portfolio Analysis* and corresponding PPTs
- Lecture: Chapter 16 and 17 PPTs
- PPTs covering BOPM
- View Recordings: Chapters 16 and 17 and the BOPM
- Assigned end-of-the-chapter problems
- Bloomberg Assignments: Chapters 16 and 17 and Portfolio Insurance

Module 6: Corporate Valuation, Capital Structure, Budgeting, and Mergers

Capital Structures Topics
- Corporate Valuation Revisited
- Old View of Capital Structure
- Modigliani and Miller
- Hamada
- Practical Considerations

Reading Material and Assignments:
- Capital Structure PPT
- Capital Structure Problem

Corporate Investment Decisions—Capital Budgeting

Capital Budgeting Topics
- Classification of capital budgeting projects
- Elements of the capital budgeting process
- Steps in capital budgeting process
- Approaches to estimating the cost of capital
- IRR
- NPV Profile
- IRR decision Rule
• When IRR and NPV approaches for mutually exclusive projects are inconsistent
• Nonconventional projects and NPV Profile
• TR for capital budgeting
• Operating leverage
• Financial leverage
• Rule for inflation adjustments
• Rule for choice of depreciation
• Equivalent Annual Net Benefits Approach to Evaluating Projects with Different Lives
• Replacement Frequency
• Dependence: Erosion and Enhancement
• Real Options: Definition, types, and examples
• Payback Method
• Discounted Payback Method
• Profitability Index
• Break-Even Analysis
• Decision-Tree Analysis

Reading Material and Assignments:
• Capital Budgeting
• Capital Budgeting Problems

Mergers and Acquisitions:

Topics
• Differences in acquisition, merger, consolidation, horizontal merger, vertical merger, conglomerate merger, tender offer, and synergy.
• Technical considerations to consider in a merger: corporate charter, tax treatment, accounting issues, and antitrust considerations
• Reasons for synergy
• Comparative analysis and valuation approaches to evaluating mergers
• Tactics used in an unfriendly merger by the potential acquiring firm
• Defensive tactics target companies may take to stop current or anticipated takeover

Reading Material and Assignments:
• Chapter 11, pp. 422-433
• Mergers PPT

Test 2: Modules 4, 5, and 6
Test 2 draws from material covered in Modules 4, 5, ad 6. The test will consist of problems, long questions, and short explain questions. The questions and problems on the test will be similar to the assigned chapter problem.

Module 7: Fixed-Income Evaluation, Securities, Debt Financing and Related Topics

Bonds Evaluation and Selection

Topics
• The Level and Structure of Interest Rates
• Bond Risk
• Bond Strategies
SLOs:
- Explain the determinants of interest rates and the term structure of rates
- Explain bond credit risk, call risk, and market risk
- Explain the relation between bond risk and bond spreads
- Explain duration and convexity
- Explain bond immunization
- Explain bond speculation strategies

Reading Material and Assignments:
- Readings: Chapters 4, 5, and 6 from Johnson's Debt Markets and Analysis
- Audio/PPT: Chapters 4-6
- Assigned Problems
- Bloomberg Exercises: Investment Grade Portfolio

Debt Securities and Markets
In this module, different debt securities and their markets are delineated in terms of the rules, participants, and forces that govern them, as well as investment strategies related to specific securities. Included in the readings and PPTs are chapters 7, 8, and 9 from Johnson, Debt Markets and Analysis: Chapter 7 describes the debt claims of businesses; Chapters 8 look at the types and markets for government securities—Treasury, federal agencies, municipals, and sovereigns, and Chapters 9 examines intermediary securities and investment funds.

SLOs:
- Differentiate the major types of bonds in terms of their characteristics
- Explain how the different debt markets function

Readings:
- Chapters 7, 8, and 9 from Johnson's Debt Markets and Analysis
- Or Readings: PPTs from Debt Markets and Analysis
- View Zoom Recordings: Bond Chapters 7, 8, and 9

Long-Term Corporate Financing and Related Issues

Topics
- Long-Term Debt Financing
- Refunding
- Leasing
- Project Financing
- Limited Partnership Financing
- Bankruptcy
- Agency Theory

Reading Material and Assignments
- Refunding and Leasing PPT

Module 8: Debt Derivatives: Swaps, Cap, Floors, and Exchange-Traded Derivative Topics
- Swaps
- Caps and Floors
- Exchange-Traded Debt Derivatives
Reading Material and Assignments

- Chapters 11, 12, and 14 from Johnson's *Debt Markets and Analysis*
- Audio/PPTs: Chapter 11, 12, and 14
- Assigned Problems

Final: Exam: Modules 7 and 8 and Tests 1 and 2

The final covers material from Modules 7 and 8 and from Tests 1 and 2. The final will consist of problems, long questions, and short explain questions. The questions and problems on the test will be similar to the assigned chapter problems and similar problems and questions on Tests 1 and 2.

Tests, Assignments, and Grading

1. **Tests**: Tests will be based on material from lectures, readings, and assigned study problems. There will be two tests during the semester and a quasi-comprehensive final.

   Make-up tests will be given only to students who receive permission from me in advance of the test date

2. **End-of-the Chapter Problems**: 19 Problem Sets

3. **Bloomberg Exercises**: Nine exercises

4. **Discussions**: Four Discussion Posts and Replies

5. **Grading Weights**
   - Test 1: 25%
   - Test 2: 25%
   - Final: 30%
   - Problems: 10%
   - Bloomberg Exercises: 7.5%
   - Discussions: 2.5%

**Grading Scale**:

- 93-100: A
- 89-92: A-
- 85-88: B+
- 80-84: B
- 77-79: B-
- 74-76: C+
- 65-73: C
- 50-64: C-
- 0-49: F

6. **Modifications**: The course is subject to modification during the semester.

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