DEPARTMENT OF ECONOMICS AND FINANCE
College of Management and Economics
University of Guelph

ECON*2560.02: Theory of Finance

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Office Hours: Tuesday and Thursday 4-5pm (or by appointment)

COURSE OUTLINE

In this theory of finance course we will study a set of financial decisions involving risk from two distinct points of view: (i) of an individual investor, and (ii) of a corporation. The first point of view is central to asset pricing, whereas the second point of view is central to corporate finance. Here is a sample of the questions we will address in this course:

From an <u>investor</u>'s point of view:

- *How do we value stocks and bonds?*

- *How do we measure risk and return and how is risk related to return?*

- *How can we build optimal portfolios and diversify risk?*

- *Can we consistently time the market to make excess returns?*

From a <u>corporation</u>'s point of view:

- *What projects should the firm invest in?* (the capital budgeting decision)

- *How should the firm raise funds to finance its investments?* (the financing decision)

- *What fraction of its profits should the firm pay out to its shareholders?* (the payout policy decision)

The objective of this course is to provide possible answers to these questions using the tools of modern finance theory. We emphasize our use of the term "possible answers." If you expect a "cookbook-style" collection of ready-to-use solutions, you will be disappointed. More often than not, the questions we will encounter do not have a unique correct answer. Depending on the angle from which it is studied, the very same problem may allow for different solutions. It is the aim of this course to provide students with the skills and tools necessary to critically evaluate these different angles, ultimately enabling them to reach their own conclusions based on all information available.

A WORD ABOUT MATHEMATICS

Finance is a quantitative subject. We will not be able to study finance without using some mathematics. However, we will do our best to keep the level of mathematical complexity to a minimum, and explain new concepts from first principles. We will need to use concepts such as:

- Basic calculus (simple computations, fractions, percentages, functions in one variable)
- Basic statistics (mean, variance, covariance, correlation and regression analysis)

Finance is not a "spectator sport" and students are expected to develop the set of quantitative skills that will allow them to solve finance problems. The best way to absorb the ideas explained in the lectures is by "learning-by-doing". Therefore, at the beginning of every topic, we will distribute a problem set. Students are expected to work out the problems on their own before we discuss them in class so they can participate in the class discussion. Students are also encouraged to solve more problems on their own from the end of the assigned chapters.

REQUIRED TEXTBOOK

"Fundamentals of Corporate Finance" by Brealey, Myers, Marcus, Maynes and Mitra. 4th Canadian Edition. McGraw-Hill Ryerson 2009

All other materials, including lecture notes, will be posted on courselink or distributed in class.

ASSESSMENT

Assessment for this course is based on three components:

- Midterm Test – **Thursday, March 1, 2012**, in-class: 20%
- Group assignment based on a case study – **Thursday, March 29, 2012**: 30%
- Final examination (comprehensive) – **Saturday, April 14, 2012, 2:30-4:30 pm** 50%

The midterm test will cover all material taught up to that date. It will consist of multiple choice questions. More details will be provided later.

The group assignment will be based on a case study. The case study will be distributed right after the midterm test. You will be asked to form a small number of groups and submit a solution to the case study.

The final exam will cover all the material taught in this course. Details on the format of the exam will be provided later.

Note that the week of Monday, February 20 is Reading Week and there will be no classes.

LECTURE TIMETABLE

INTRODUCTION

- Course Outline

TOPIC 1

- Financial Calculus
  - Compounding and future value
  - Discounting and present value
  - Annuities and perpetuities

- Valuing Bonds
  - Computing bond prices
  - The effect of the yield, coupon rate and time to maturity
  - Credit risk

- Valuing Stocks
  - Computing stock prices
  - The dividend discount model
  - The cost of equity
  - The present value of growth opportunities

- Problem Set 1

- Readings: Chapters 4, 5 and 6

TOPIC 2

- Portfolio Choice and Diversification
  - Measuring risk vs. return
  - Expected return, variance, standard deviation, covariance, correlation
  - Systematic and idiosyncratic risk

- The Capital Asset Pricing Model (CAPM)

- Market Efficiency
  - The efficient market hypothesis and the random walk model
  - Types of market efficiency: weak, strong and semi-strong
  - Empirical evidence and examples on market efficiency

- Problem Set 2

- Readings: Chapters 10 and 11

TOPIC 3

- Capital Budgeting
  - o Net present value (NPV)
  - o Internal rate of return (IRR)
  - o Other project evaluation methods (e.g., payback method)

- NPV in action: a detailed example

- Problem Set 3

- Readings: Chapters 7 and 8

TOPIC 4

- Financing and Capital Structure
  - o Irrelevance proposition in perfect capital markets
  - o The role of corporate taxes
  - o The role of personal taxes
  - o The role of bankruptcy and costs of financial distress
  - o The role of asymmetric information
  - o Empirical evidence

- Problem Set 4

- Readings: Chapters 12 and 15

TOPIC 5

- Payout Policy
  - o Dividends vs. share repurchases
  - o Irrelevance proposition in perfect capital markets
  - o The role of personal taxes
  - o The role of asymmetric information
  - o Empirical evidence

- Problem Set 5

- Readings: Chapter 16

TOPIC 6

- Initial Public Offerings
  - Initial public offerings
  - Seasoned equity offerings
  - Empirical evidence

- Mergers and Acquisitions
  - Synergies
  - Vertical/horizontal; Friendly/hostile
  - Valuation of mergers
  - Empirical evidence

- Readings: Chapters 14 and 23

FINAL REVIEW

- Final exam review and additional problems

- Open floor for any questions

YOUR RESPONSIBILITIES

It is your responsibility as a student to be aware of and to abide by the University's policies regarding academic misconduct, email communication, maintaining copies of out-of-class assignments, what to do when you cannot meet a course requirement and the drop date for this semester. To better understand these policies, visit:

http://www.economics.uoguelph.ca/student-responsibilities-policies.asp

You will be asked to complete an evaluation of this course at some time during the last two weeks of the semester. **This will be done in class.** The Department of Economics policy regarding the conduct and use of these evaluations will be found at:

http://www.economics.uoguelph.ca/course-evaluation.asp

As your teachers, we will do our best to deliver a course of the highest standard, and to create an enjoyable and productive learning experience. We are professionals, and we expect nothing less from you. Below are a few points to lay down the ground rules:

- **Be on time** for class. If you arrive late, take a seat in the back of the lecture theatre and try to minimize the distraction to your classmates.

- **Do not leave half-way through a lecture**. If you know in advance that you will have to leave before the end of the session, let your teacher know at the start of the session, take a seat in the back, and leave quietly when you have to.

- **Stay quiet** during classes.

- **Switch off your cell phone** before you come to class.

We hope you will enjoy the course and have a productive learning experience!