FIN 4414
Financial Management
Sections 2761 & 2762

Fall 2016

**** Updated 10/09/2016 ****

Class meetings

Section 2761: MW, Periods 5 & 6, HVNR 250
Section 2762: MW, Periods 7 & 8, HVNR 250

Professor: Farid AitSahlia
Office: 310 Stuzin Hall
Tel: (352) 392-5058
E-mail: farid.aitsahlia@warrington.ufl.edu

Course Objectives:

- Introduce economic models that help firms manage financial risks, make decisions on distributions to shareholders, and determine capital structure.
- Illustrate such models through applications and case analyses.

Textbook:

Title: *Fundamentals* of *Financial Management (9th* ed.)
Authors: E. F. Brigham and J. F. Houston

Detailed Overview of the Course Content

Introduction

The *objective* of this course is to build on previous finance course(s) that you have taken and extend your understanding of the decisions facing a financial manager of a business enterprise The major topics that will be covered include advanced capital budgeting and capital structure (real options and Monte Carlo simulation); financing (IPO's, SEO's, warrants, and convertible bonds); payout policy (dividends and stock repurchases); risk management (when should firms hedge, and the tools for hedging) decisions; performance evaluation and compensation (EVA, MVA, and ESOs) and corporate governance. The topics that are covered will require a significant application of derivatives, and therefore I will spend about twenty percent of the class time in developing a good understanding of derivatives. Prior knowledge of derivatives is not required.

The course objectives are pursued through lectures, assigned readings, case assignments, individual assignments, discussion of important developments in corporate finance as reflected in leading publications, and a final exam.

Module 1: Basic Concepts, Models, and Tools (Review)

In this module we will review some of the tenets, concepts, models, and tools of modern finance, and apply them in "real world" cases or situations. You will analyze a case to reinforce the concepts, models, and tools that are used by managers to make corporate finance decisions.

Module 1 will conclude with individual quiz 1. The questions for the quiz will be posted on Canvas and you will have ample time to work through the problems and post the answers. **The quiz will cover all the material mentioned in this module**.

The **first case** is based on "**Warren Buffet's" bid for GEICO**. Set in 1995 the case invites you to assess Berkshire Hathaway's bid for the remainder of GEICO that it does not own. The task is to perform a valuation of GEICO shares and to consider the reasonableness of the 26 percent premium that Buffett is offering for GEICO. The case also provides a look into Buffett's investment philosophy and his remarkable record at Berkshire. As a supplement to the case, I have also included a video of Buffett's talk at the University of Florida. This case will provide a basis to review and discuss the main tenets of modern finance. The case will reinforce several important concepts in finance including the following:

- Relation between risk and return
- Economic reality (i.e., not accounting reality)—cash is king!
- Time value of money
- The importance of aligning the interests of agents and owners or principals
- Stock prices and the present value of future equity cash flows
    - Discounted Cash Flow(DCF) valuation

The **second case** is a team assignment and it is based on the HBS case, **"Cost of Capital at Ameritrade."** Ameritrade Holding Corporation (AMTD) is a deep-discount brokerage firm that has recently completed an initial public offering (IPO). Management at Ameritrade is considering substantial investments in technology and adverting to exploit emerging economies of scale, but is unsure of the appropriate cost of capital. The case provides an opportunity to understand how capital market data and asset pricing model(s) can be used to estimate the cost of capital (or the required rate of return) for real investments. The specific learning objectives are the following.

- Estimate stock returns from prices by adjusting for stock splits and stock dividends
- Use the EXCEL to estimate stock betas from regression models using the appropriate market returns
- Estimate asset betas by un-levering equity betas
- Estimate the appropriate inputs for the CAPM (Risk free rate, market risk premium, and beta)
- Use of pure play companies to estimate cost of capital for firms

- Learn how to use data to estimate cost of capital using the Fama-French multi beta asset pricing model

In addition to the above cases, during the first three weeks of class, I expect you to review the following material. These should be familiar as the same textbook was used in FIN 3403 (Spring 2016). Even if you took FIN 3403 during a different term, using a different textbook, the topics below should be familiar for any graduating senior majoring in finance. In what follows, FFM stands for the text *Fundamentals* of *Financial Management* by E. F. Brigham and J. F. Houston.

- FFM Chapter 1: "An Overview of Financial Management"
- FFM Chapter 5: "Time Value of Money"
- FFM Chapter 7: "Bonds and Their Valuation"
- FFM Chapter 9: "Stocks and Their Valuation"
- FFM Chapter 11: "The Basics of Capital Budgeting"
- FFM Chapter 12: "Cash Flow Estimation and Risk Analysis"
- "Problems in Asymmetric Information" - a useful article to be posted on Canvas that discusses agency, lemons, and moral hazard problems, and how these problems affect corporate finance decision.

Quiz 1

Module 1 will conclude with individual in-class quiz 1. Practice questions for the quiz will be posted on Canvas prior to the test date. The quiz will cover all the material mentioned above.

Module 2: Capital Budgeting and Real Options

Capital Budgeting

Capital budgeting involves the application of various forms of NPV calculations for project selection. These calculations should be familiar by the time you are ready to take FIN 4414. However, we will take the opportunity of this module to review the main capital budgeting approaches (project selection based on NPV, IRR, and payback time) to also show the limitations of NPV-based decision-making in the face of uncertainty. As a result, we introduce the real-options alternative that accounts for the possibility of delaying the decision to choose whether or not to go ahead with a project, as well as incorporate the possibility of additional, unanticipated project investments in the future and the possible abandonment of projects that fail.

Introduction to Options

A major focus in this course is the application of derivatives for making corporate finance decisions. Many people associate derivatives such as *options* and *futures* with investments and financial markets rather than corporate finance. There are, however, wide ranging applications in corporate finance where knowledge of derivative pricing models and concepts are not only useful but critical. In capital budgeting or investment analysis, firms are faced with options to delay, abandon, or expand projects; option pricing theory and models provide useful insights into determining the value of these options. In financing decisions, option pricing theory is useful in designing and valuing securities with embedded options, such as warrants, convertible and callable bonds. Finally, options and futures are essential for managing risk.

After completing this module you should have good understanding of *options terminology, trading and price quotes, payoff and profit/loss diagrams, and valuation models for options (binomial, risk-neutral, and Black-Scholes).*

Main Types of Real Options

An important decision facing managers is the investment decision. Traditionally, managers have used the DCF analysis and NPV to decide on investments. DCF paradigm does not take into account the options that sophisticated managers can exercise. That is DCF does not reflect the value of management. Managers who hold *real options* have the flexibility to capitalize on new information that is revealed as time passes. This information is valuable in the investment

decision process, and it adds value as long as the future outcomes of the project are uncertain. In this module we will learn how to identify *real options* and how to value them.

This section takes you through applications of real options in capital budgeting. The lectures consist of an introduction and four types of real options: *Option to expand, option to delay, option to abandon, and flexibility option*.

The **"Arundel Partners," case** provides an opportunity to apply "real options" analysis to a corporate capital budgeting or investment decision. This is a team assignment and all the groups will be required to submit a report. In addition some groups will make a presentation and others will be required to provide a review of the presentations.

Quiz 2:
Module 2 will conclude with individual in-class quiz 2. Practice questions for the quiz will be posted on Canvas prior to the test date. The quiz will cover the material on traditional capita budgeting approaches.

Module 3: Optimal Capital structure and MC Simulation

Optimal Capital Structure

The topic has three lecture segments that cover capital structure theories and the tradeoff between more debt and the costs of debt.

Monte Carlo Simulation

When managers make financial decisions such as *investment, capital structure, and risk management*, they are faced with uncertainty. Uncertainty means that values variables that are used in the models to make the decisions are only estimates and can turn out to be different than what was assumed. Traditionally, managers have used *sensitivity and scenario analysis* to identify the impact of the crucial inputs on their decisions. These techniques, however, have significant limitations. They are not able to incorporate realistic distribution and the interrelationship between the variables used in the models and calculations. *Monte Carlo* simulation is a very powerful technique that allows one to incorporate sophisticated distributions correlations for the underlying input variables.

The **"Diageo" case** that examines the complexities involved in determining an "optimal" capital structure for firms. The case provides a vehicle to examine the application of MC simulation techniques to get a grasp on the uncertainties and difficulties associated with estimating the costs and benefits of debt. **This is a team assignment and all the groups will be required to submit a report. In addition some groups will make a presentation and others will be required to provide a review of the presentations.**

Quiz 3:
Module31 will conclude with individual in-class quiz 3. Practice questions for the quiz will be posted on Canvas prior to the test date. The quiz will cover material on capital structure optimization.

Module 4: Raising Capital and Valuation of Early Stage Companies

In this module, we will be taking a closer look at corporate financing decisions. That is how private and public companies raise capital. We will also look at how to value early stage companies, i.e., companies that are privately held and companies that are going public. The module consists of **three topics**.

In the ***first topic*** we examine the **valuation of early stage companies**. These companies have limited historical data and may have a product that is still in the developmental stage. We will use the "**Mindersoft" case** to learn how to value these companies. The case presents the opportunity to explore and contrast the entrepreneurs' perspective and their optimistic projections with the more conservative view of the venture capitalist (VC), driven mainly by return considerations. The case illustrates a typical first round of venture capital financing and provides an opportunity to understand the different perspectives on value placed by entrepreneur and the investors. Several methods of valuation are presented: *pre and post money* valuation, the *Venture Capital Method* based on targeted rates of return, and *discounted cash flow* which adjusts the cash flows for the probability of failure and the discount rate to reflect the firm's early stage of development. This case will be a team assignment. **This is a team assignment and all the groups will be required to submit a report. In addition some groups will make a presentation and others will be required to provide a review of the presentations.**

In the ***second topic*** we discuss the initial public offering process using the **case based on the "Google" IPO**. The issues discussed include *why firms go public*, the *costs and benefits of going public*, the *regulatory disclosures* that are required, the *role of underwriters*, and the *pricing process* including the *Dutch auction* used by Google. This will be an on-line discussion.

Under the ***third topic*** we will learn about the **embedded options** attached to some of the sophisticated securities issued by firms and how to value them and the reasons for issuing them. These include ***warrants*** **and** ***convertible*** **bonds**.

Quiz 4:

Module 4 will conclude with individual quiz 4 on capital structure involving embedded options, as practiced through the use of warrants and convertible bonds, and on the valuation of early stage companies.

Module 5: Payout Policy

In this section we will examine the different types of cash payouts by U.S. companies. There are two ways in which a firm can distribute cash to the shareholders—*dividend and stock repurchase*. In the second topic we examine the *information content in dividends and share repurchases* in detail. Then we go on to the dividend *controversy* by discussing the three schools of thought—the rightists, the radical left, and the middle-of-the-roaders — associated with the issue. Miller and Modigliani's Proposition on *dividend irrelevance* is illustrated and the module ends with a discussion on tax systems of other countries including imputation tax system.

We will use the case "Dividend Policy at FPL Group" to discuss the implication of dividend policy. A Wall Street analyst has just learned that FPL (the holding company for Florida's largest electric utility) may cut its dividend in several days despite a 47-year streak of consecutive dividend increases. In response to the deregulation of the electric utility industry, FPL has substantially revised its competitive strategy over the past several years. The analyst must decide whether a change in dividend policy will be a part of FPL's financial strategy in this deregulated environment. **The case will be used for discussion and a report is not required**.

Module 6: Risk Management

Some of the important tools for risk management are *options and futures*. We have already studied options in Module 2, and in this module we will introduce *futures and forward* contracts and their characteristics. We will also discuss how derivatives can be used to manage risk.

Should firms manage risk? It sounds like a simple question, but it is complicated by the fact that companies have to take risk to add value. Further, it is not clear that shareholders care about whether companies manage risks associated with interest rates, exchange rates, commodity prices or other factors. In this module we first examine the *conditions under which risk management may add value to the shareholders*. We then go on to learn how to *implement various risk management strategies.*

Quiz 5:

Modules 5 & 6 will conclude with individual quiz/assignment 5 on payout policy (Mod 5) and risk management.

Current Events and Special Topics

Some suggestions for special topics

- Behavioral Finance
- Employee Stock Options (valuation and incentive properties)

Final Exam

- **The final exam will be an in-class exam on the last day of class**.
- The format of the exam will be similar to the sample exam that will be distributed during the semester.
- **The final exam will be a comprehensive exam covering all the material including concepts from the cases**.

Assessment and Course Grade: Course grade will be calculated using the following points

Class Participation and Attendance	100	Individual
Case Presentation and Peer-evaluation	100	Individual
Quizzes	100	Individual
Cases	300	Group
Midterm Exam	200	In - Class
Final Exam	200	In-Class
Total Points	**1000**	

Final course grades will be based on the following numeric scale indicating the number of total points needed to achieve each letter grade

Minimum Points	Course Grade
900	A
870	A-
840	B+
800	B

770	B-
740	C+
700	C
670	C-
640	D+
600	D
570	D-