Fall 2009
Corporate Finance FNCE 100
Wharton School of Business

Syllabus

Course Description

This course provides an introduction to the theory, the methods, and the concerns of corporate finance. It forms the foundation for all subsequent courses such as speculative markets, investments and corporate finance. The purpose of this course is to develop a framework for analyzing a firm's investment and financing decisions. Since the emphasis is on the fundamental concepts underlying modern corporate finance, the approach will be analytical and rigorous, and some familiarity with accounting, mathematical, and statistical tools are advantageous. The topics covered in the course include: (1) discounted cash flow (time value of money); (2) capital budgeting techniques; (3) portfolio analysis and the Capital Asset Pricing Model (CAPM); (4) security market efficiency; (5) corporate financing and optimal capital structure, and (6) option pricing.

Grading:

There are two midterms, each counting 30%, and a final exam, counting 40%. The midterms are scheduled for Tuesday, October 13 and Thursday, November 19. Both midterms will be given from 6:15 – 8:15 PM.

In addition, there will be three cases. Each student must perform satisfactorily in the cases to pass the course. More will be said about the cases in class.

Required Reading:

The textbook used is ***Corporate Finance by Ross, Westerfield, and Jaffe, 8th edition*** and the accompanying solutions manual.

Readings:

a) Value and Capital Budgeting

Firms and individuals invest in a large variety of assets. The objective of these investments is to maximize the value of the investment. In this part, we will develop tools than can be used to determine the best investment from several alternatives.

Ch. 4 Net Present Value
Ch. 5 How to Value Bonds and Stocks
Ch. 6 Some Alternative Investment Rules
Ch. 7 Net Present Value and Capital Budgeting

b) Capital Structure

As with capital-budgeting decisions, firms seek to create value with their financing decisions. Therefore, firms must find positive NPV financing arrangements. However, to maximize NPV in financial markets, firms must consider taxes, bankruptcy costs, and agency costs. In this part, we will develop the methodology to maximize the value of the financing decision.

Ch. 13 Corporate-Financing Decisions and Efficient Capital Markets
Ch. 15 Capital Structure: Basic Concepts
Ch. 16 Capital Structure: Limited Use of Debt
Ch. 17 Valuation and Capital Budgeting for the Levered Firm

c) Risk and Portfolio Analysis

In this part, we will investigate the relationship between expected return and risk for portfolios and individual assets. This relationship determines the shareholders' required (expected) return and the firm's cost of equity capital. The capital-asset-pricing model is used to measure risk and expected return.

Ch. 9 Capital Market Theory: An Overview
Ch. 10 Return and Risk: The Capital-Asset-Pricing Model (CAPM)
Ch. 12 Risk, Return, and Capital Budgeting

DETAILED DESCRIPTION OF TOPICS

The first four topics deal with the time value of money and its application to capital budgeting:

TOPIC I – FUTURE AND PRESENT VALUE

This topic examines one of the most important concepts in all of corporate finance, the relationship between $1 today and $1 in the future.

Chapter 4	Compounding – the one period case
Assignment 1	Discounting – the one period case
	Compounding beyond one year
	Discounting beyond one year
	Compounding more rapidly than once a year
	Annual percentage rate vs. effective annual yield
	Continuous compounding
	Multiperiod valuation
	Short cuts for multiperiod valuation:
	Perpetuity
	Growing perpetuity
	Annuity
	Growing annuity
	Examples
	Pension fund and Mortgage

TOPIC II – THE RULES OF CAPITAL BUDGETING

This topic examines alternative approaches to capital budgeting.

Chapter 6	Definition of capital budgeting
Case: NETCO	The justification for net present value
	Independent vs. mutual exclusive projects
	Simple net present value example
	Payback example
	Problems with payback
	Internal rate of return (IRR)
	Problems of IRR with independent projects
	Borrowing vs. lending
	Multiple rates of return
	No internal rates of return
	Problems of IRR with mutually exclusive returns
	Timing
	Scale
	Replacement chains
	Profitability index

TOPIC III – THE PRACTICE OF CAPITAL BUDGETING

This topic considers the practical application of capital budgeting techniques. Most of the emphasis here is on the determination of cash flows.

Chapter 7	Brief review of capital budgeting
Case: Super Project	Relation between cash flow and accounting income
	Important considerations in determining cash flows
	Incremental cash flows
	Opportunity costs
	Taxes
	Stockholders vs. tax books
	Working capital and capital budgeting
	Inflation and capital budgeting
	Interest rates and inflation
	Cash flow and inflation
	Discounting: nominal vs. real
	Direct cash flow effects of purchase and sale of capital assets
	Initial outlay
	Depreciation
	Resale of used asset

TOPIC IV – VALUATION OF STOCKS AND BONDS

This topic uses earlier techniques (present value and future value) to value stocks and bonds.

Chapter 5	Stocks
Including appendix	Brief discussion of discount rate
at www.mhhe.com/rwj	Relationship between short-term investor and long-term investor
	Dividends vs. capital gains
Assignment 3	Estimating growth
	Difference between income and growth stocks
	Growth opportunities
	Price-Earnings ratio
	Pitfalls in applying dividend discount model and related approaches
	Bonds
	Pure discount bonds
	Coupon bonds
	Interest rates and bond prices
	Coupon vs. yield to maturity
	Term structure of interest rates
	Spot rates and yield to maturity
	Forward rates
	Explanation of term structure
	Corporate Debt

The next five topics deal with capital structure decisions.

TOPIC V – EFFICIENT CAPITAL MARKETS AND CAPITAL STRUCTURE

This topic defines efficient capital markets, presents empirical evidence, and shows why timing decisions on capital structure are suspect.

Chapter 13	Definition of efficient capital markets Types of market efficiency Empirical evidence Implications for corporate managers

TOPICS VI AND VII – CAPITAL STRUCTURE WITHOUT TAXES AND WITH TAXES

Topic VI and VII examine the basic issues of capital structure, finishing with the Modigliani-Miller relationship without taxes. Topic VII extends the Modigliani-Miller relationships to the world of corporate taxes.

Chapter 15 (pp. 423 - 439) Assignment 4	The goal of the manager: Maximizing the value of the firm The relationship between firm value and stock price How to maximize value: The traditionalist's approach A counter-example to traditionalist approach The effect of leverage on value: Modigliani-Miller (MM) Proposition I The effect of leverage on required equity return: Modigliani-Miller (MM) Proposition II Justification for equality between personal and corporate borrowing rate Example when inequality between rates occurs The concept of market value balance sheets
(pp. 439 – 448) Assignment 6 Case: Central Express	The basic paradigm: The pie chart Why the IRS treats interest more favorable than dividends The value of the tax shield The value of the levered firm: MM Proposition I The effect of leverage on required equity return: MM Proposition II Market value balance sheets Effect of leverage on stock prices

TOPIC VIII – ADJUSTED PRESENT VALUE, WEIGHTED AVERAGE COST OF CAPITAL AND FLOWS TO EQUITY

This topic shows how the earlier material on capital structure can be used to perform capital budgeting on levered firms.

Chapter 17 (excluding 17.7)	Adjusted Present Value (APV) The base case: Review of capital budgeting Tax shield Market Value Balance Sheets Weighted average cost of capital (WACC) The cost of equity The cost of debt Calculating WACC Flows to Equity Determining cash flows Determining discount rate EPS and shareholder risk Comparison of WACC and APV The scale enhancing project The known debt level case A suggested guideline Recapitalization LBO Example

TOPIC IX – COSTS OF DEBT AND OPTIMAL CAPITAL STRUCTURE

Topic IX shows why firms must balance the tax benefits of debt with agency costs of debt when considering capital structure.

Chapter 16 (excluding 16.8 and 16.9)	Relationship between MM theory with taxes and real world behavior The search for costs of debt: Bankruptcy Direct costs of financial distress Indirect costs of financial distress Who bears costs of financial distress Taxes vs. bankruptcy costs: The tradeoff The three determinants of debt level Decision-Making in the real world Agency costs of equity Application to LBOs Bonding the managers How LBOs reduce agency costs The future of LBOs

TOPIC X – ALTERNATIVE VALUATION METHODS

	Review of APV Review of WACC Review of Flow to Equity Price / Earnings Ratio Market / Book Value Ratio Breakup Value Liquidation Value

The next three topics deal with the relationship between risk and returns in its application to the determination of the discount rate in capital budgeting.

TOPIC XI – STATISTICAL CONCEPTS AND AN OVERVIEW OF CAPITAL MARKETS

Chapter 9	Preview of the next three topics Review of definition of return Risk statistics for an isolated stock Variance Standard deviation Risk statistics for a diversified investor Covariance Correlation An historical perspective to risk and return

TOPIC XII – RETURN AND RISK

The topic develops the relationship between the expected return on a stock and its risk.

Chapter 10	Statistical parameters for a portfolio Expected return on a portfolio Variance and standard deviation of a portfolio The efficient frontier Efficient set for 2 assets Efficient set for many assets Efficient set and diversification Efficient frontier and riskless borrowing and lending The relationship between risk and return Beta: The measure of risk for individual security in context of a large portfolio

	Expected return as compensation for beta The capital asset pricing model (CAPM) Empirical evidence on CAPM
	Determining beta in the real world Formula for calculating beta

TOPIC XIII – THE CAPM AND CAPITAL BUDGETING

This topic shows how discount rates for projects can be determined from the relationship between risk and return.

Chapter 12	Review of rationale for choosing a discount rate Relationship between beta of a stock and beta of a project Determinants of beta of a project Practical application of CAPM to capital budgeting