SLOAN SCHOOL OF MANAGEMENT
MASSACHUSETTS INSTITUTE OF TECHNOLOGY

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Financial Management
15.414
Summer 2003

Syllabus – 15.414

This course studies corporate finance and capital markets, emphasizing the financial aspects of managerial decisions. The course touches on all areas of finance, including the valuation of real and financial assets, risk management and financial derivatives, the trade-off between risk and expected return, and corporate financing and dividend policy. The course draws heavily on empirical research to help guide managerial decisions.

Readings

R. Brealey and S. Myers, *Principles of Corporate Finance*, 7th edition, Irwin/McGraw Hill.
'Brealey and Myers' is the world's most popular finance textbook. It provides a thorough introduction to financial theory and practice.

Class notes
Class notes will be available on Sloanpace and distributed in class. They cover material not found in Brealey and Myers and provide an alternative treatment of the major ideas.

Reading packet
The reading packet, available from Copy Tech, contains cases and additional readings.

Supplements (not required)

Z. Bodie, A. Kane, and A. Marcus, *Investments*, 4th edition, Irwin/McGraw Hill, 1999.
BKM focus exclusively on capital markets. They provide a more rigorous and thorough analysis of investments than Brealey and Myers.

J. Hull, *Introduction to Futures and Options Markets*, 3rd edition, Prentice Hall, 1998.
Hull provides a straightforward introduction to options, futures, and swaps (collectively called financial derivatives). The book discusses the valuation of these securities, the mechanics of trading, and the use of financial derivatives in managing risk.

Course requirements and grading

Grades will be determined by your performance on the cases and problem sets (45%), final exam (40%), and class participation (15%).

As noted in the course outline, there will be approximately 9 written assignments, consisting of both problem sets and cases. The problem sets should be fairly straightforward. The cases are more difficult and longer, and we will typically discuss them in class. **You should work together on the assignments in groups of four.**

The outline also lists recommended – not required – problems from Brealey and Myers. The problems help illustrate material covered in class.

Teaching assistants

Jiro Kondo, jekondo@mit.edu
Volkan Muslu, vmuslu@mit.edu
Jieying Zhang, jieying@mit.edu

Jiro will teach the weekly recitations; he will either review material covered in class or discuss assigned and recommended problems. Jiro, Volkan, and Jieying will all be available for additional help outside of class.

Administrative assistant

Alexandra West, E52-430, 253-9747, awest@mit.edu.

Web pages

http://sloanspace.mit.edu

The web site will be used to distribute course material. It contains information about the course, lecture notes, homework assignments, and announcements.

http://wrds.wharton.upenn.edu

Wharton Data Research Services (WRDS) provides Web-based access to stock and accounting data for nearly all publicly-traded companies in the U.S (plus a limited number of international companies). We will use this data periodically during the course, and you can freely access it whenever desired. **The username and password can be found on Sloanspace**.

http://web.mit.edu/lewellen/www/

My web page includes links to the syllabus, course web site, and a variety of financial pages with free data (macroeconomic data, stock indices, bond prices, etc.)

Course outline (brief)

This is an approximate outline for the course; some material may take longer or shorter to cover than the time alloted.

Week	Session	Date	Topic	Assignment (date due)
1	1	Jul 22	Introduction	
	2	Jul 23	Principles of valuation	
	3	Jul 24	Capital budgeting	Problem set
2	4	Jul 28	Case	Case
	5	Jul 29	Real options	
	6	Jul 30	Firm valuation	
	7	Jul 31	Firm valuation (2)	Case
	8	Aug 1	Case	Case
3	9	Aug 4	Risk and return, Introduction	
	10	Aug 5	Portfolio theory	
	11	Aug 6	CAPM	
	12	Aug 7	Discount rates in practice	Problem set
4	13	Aug 11	Case	Case
	14	Aug 12	Raising capital	Case
	15	Aug 13	Capital structure (1)	
	16	Aug 14	Capital structure (2)	
	17	Aug 14	Case	Case
5	18	Aug 18	Case	Case
	19	Aug 19	Market efficiency	
	20	Aug 20	Options	
	21	Aug 21	Final exam	Exam

Recitations

Week	Session	Date	Topic
1	1	Jul 23	Discounting
2	2	Jul 28	Project cashflows
	3	Jul 30	Firm valuation
3	4	Aug 4	Statistics of risk and return
	5	Aug 6	CAPM
4	6	Aug 11	Cost of capital
	7	Aug 13	Leverage and risk
5	8	Aug 18	Review

Course outline (details)

Chapters refer to Brealey and Myers; articles in the reading packet are referenced using the authors' last names. The study questions listed after each class are recommended, not required, and can be found at the end of the chapter under 'Practice Questions.'

Part 1. Introduction

July 22	Introduction What is finance? What types of questions will we answer?	Chapter 1 Dial and Murphy (1995)
July 23	Principles of valuation Opportunity cost of capital; present value; discount rates; comparables Study questions: Ch. 2: 6, 7, 10 Ch. 3: 1, 3, 5, 10, 12, 21, 27, 30	Chapter 2, 3

Part 2. Project and firm valuation

July 24	Evaluating projects Net present value; measuring cashflows, using accounting data Study questions: Ch. 3: 4, 7, 6, 13 Ch. 6: 6, 8, 9, 11, 18	Chapter 6, 12.1 – 12.3 Myers (1984)
July 28	Acid rain: The Southern Company (A)	Case
July 29	Evaluating projects (2) Real options, internal rate of return Study questions: Ch. 5: 3 – 8, Ch. 10: 3 – 5, 10, 11	Chapter 5, 10, 11
July 30	Firm valuation Growth and free cashflows Study questions: Ch. 4: 5 – 8, 11	Chapter 4
July 31	Firm valuation (2) Valuation models, accounting vs. economic returns Study questions: Ch. 4: 1, 10, 12, 17, 19	Chapter 12.4 – 12.6, Kim and Ritter (1999) Case: Wilson Lumber

Aug. 1	Cooper Industries, Inc.	Case

Part 3. Risk and return

Aug. 4	Introduction to risk and return Historical evidence; measuring the risk of a portfolio; statistics review Study questions: Ch. 7: 1, 3, 4, 5	Chapter 7 (p. 153–165)
Aug. 5	Portfolio theory Risk in a portfolio context, diversification; optimal optimal portfolios Study questions: Ch. 7: 6 – 11, 15; Ch. 8: 2 – 4	Chapter 7 (165–end), 8.1
Aug. 6	CAPM Quantifying the trade-off between risk and return; measuring the risk of a stock Study questions: Ch. 8: 1, 5, 7, 8, 11 – 13	Chapter 8.2 – 8.5
Aug. 7	Discount rates in practice Estimating betas, market risk premium, multifactor models, WACC Study questions: Ch. 9: 1, 3, 5 – 9, 14	Chapter 9, Graham and Harvey (2000, p. 1 – 10)
Aug. 11	Cost of capital at Ameritrade	Case

Part 4. Financing policy

Aug. 12	Raising capital Sources of funds; trade-offs; empirical evidence; stock market reaction	Chapter 14, 15 Smith (1986) Case: Wilson Lumber
Aug. 13	Capital structure (1) The choice between debt and equity; MM theorem; leverage and risk; fallacies Study questions: Ch. 17: 2 – 6, 10 – 13	Chapter 17 Graham and Harvey (p. 10 – 22)

Aug. 14	Capital structure (2) Taxes and the after-tax WACC, financial distress, debt overhang Study questions: Ch. 18: 1 – 7, 10 – 12	Chapter 18, 19.1 – 19.4 Myers (1983), Bank of America Roundtable (1997)
Aug. 14	UST Inc.	Case
Aug. 18	Massey-Ferguson, 1980	Case

Part 5. Miscellaneous topics

Aug. 19	Market efficiency Empirical evidence; implications for corporate managers Study questions: Ch. 13: 1, 2, 3, 11, 13	Chapter 13, Ball (1995)
Aug. 20	Options Risk management, option strategies, Black-Scholes model, implied volatility Study questions: Ch. 20: 3, 4, 8 – 10, 16 Ch. 21: 10, 14, 15	Chapter 20, 21 Case: Sally Jameson

Aug. 21	**Final exam**