Hong Kong University of Science & Technology
School of Business and Management

FINA 512 – CORPORATE FINANCE
FALL 2003

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#1: "Finance. Eat your spinach. Finance is at the core of so many successful companies that no CEO aspirant can afford to avoid schooling in it. . . This will help you understand, among other things, how your company raises and allocates capital. It will also make clear why that new product your team has designed might not be launched, despite its sensational showing in test markets: The numbers indicate that most likely the returns on the item will never clear the hurdle rate that will cover the cost of capital it requires and deliver a profit as well."

Really important things you need to know (to advance your career today), Fortune magazine, January 15, 1996, p. 36

COURSE OUTLINE

This core course provides a framework for analyzing the major types of investment and financing decisions made by firms. We start with corporate investment decisions and then move to an understanding of how firms decide between alternative sources of financing their investments. We also examine the concept of risk and return and learn how to estimate the cost of debt, the cost of equity, and the weighted average cost of capital (WACC). A good knowledge of the topics in this course is important for anyone thinking of a career in investment banking, consulting, and corporate management.

PREREQUISITES

A strong background in financial accounting, microeconomics, and business statistics is essential. In addition, you need basic Excel spreadsheet skills.

READINGS

Required Text

- The text for the course is: *Corporate Finance* by Stephen A. Ross, Randolph W. Westerfield, and Jeffrey A. Jaffee, Richard D. Irwin Inc., 6th edition, 2002 (RWJ).

- *Case studies and readings*

Supplementary Readings

- *Principles of Corporate Finance* by Richard Brealey and Stewart C. Myers, McGraw-Hill, 7th Edition (BM). This is another excellent text giving a similar treatment to the Ross, Westerfield, and Jaffe textbook.

- *Corporate Finance: A Valuation Approach* by Simon Benninga and Oded Sarig (McGraw Hill, 1997). This textbook looks at applied corporate finance issues with particular emphasis on financial modeling techniques. The text provides a good theoretical understanding behind corporate valuation issues.

- *Capital Ideas: The Improbable Origins of Modern Wall Street,* by Peter Bernstein.

- *Asian Wall Street Journal*

OFFICE HOURS

Office hours are by appointment. Questions can be asked via e-mail at any time.

GRADING

Your grade in this course is based on class participation, problem sets, case analyses, and a final exam.

Class participation	5%
Problem sets	15%
Case analyses	30%
Final exam	50%

Problem sets: There are three problem sets. Working on these problems will help you in understanding the material of this course without "grade pressure". If I can see you are making a good-faith effort to work the problems, you will receive full credit. Each homework solution turned in counts five-percentage point for a total of 15 percentage points towards your final grade.

Please turn in your answers before class begins. We are not able to accept late answers as solutions are made available immediately after your answers have been turned in. Your student number should appear in the upper right hand corner next to your name. All pages of your solution should be stapled together.

Case write-ups: Case write-ups are to be turned in at the beginning of class on due dates. Late submissions are not graded. Cases can be done in groups of up to 5 students. Please hand in one copy of the write-up with names of all group members. At the end of the course, you will evaluate each of your group members on the contribution they made to the group assignments. A sample peer-review form is enclosed. Your group members' assessment of your contribution will enter into your class participation grade.

Final examination: The final exam is closed book but you can bring a 5×7 card (on which you can write anything you want) into the exams. Financial calculators are not needed for the course, but a regular calculator will be required. You cannot take the final exam early and there will be NO MAKEUP exam for those who miss it. If you miss the exam, you will have to take it in the following year.

WEEKLY HANDOUTS

There will be a weekly handout at the end of each session giving administrative details.

TEACHING ASSISTANT

Teaching assistant for this course is Ms. Stella Lien. Stella's e-mail is stellacc@ust.hk and her telephone number is 2358-7674. Stella will also answer questions via e-mail and meet with you by appointment.

AUDITING, CLASS PARTICIPATION, ATTENDANCE, SEATING

Auditing: Students may not audit this course. If you want to take this course, you would have to be registered in the course with the expectation of receiving a letter grade. Once registered, you cannot convert this into an audited course or expect to get an incomplete. Your only options are to drop the course during add/drop period or withdraw if permissible under 'Regulations Governing Postgraduate Studies'.

Class participation and attendance: Class participation counts 5 percent towards your final grade. An important pre-condition to getting points on class participation is that you come to class. You cannot participate if you are frequently absent. The class starts at the scheduled time precisely.

Seating: The course has fixed seating. It is easier for us to accurately record your class participation grades if you sit in the same place each time. By the second week of classes, you pick a seat where you would like to sit for the rest of the term. Once chosen, the position is fixed. There would be name cards in front of your seat at the beginning of each class session. Please do not take the cards away; it is our responsibility to remove them from the holders at the end of each session.

Academic Integrity: It is expected that you will support and maintain a high standard of academic integrity. Cheating on exams, problem sets, cases and other academic misconduct will result in a failing grade and additional sanctions. A gross violation of Academic Regulations would be using solutions to the cases and home-works from previous years, be it someone's class notes or case solutions, whether verbal or written (see section 12.1 Academic Dishonesty of the Academic Calendar 2000-01). Please ensure that telephones and pagers are switched off during class period.

E-MAIL

I will occasionally send email to the class list. If you are registered for this course and have an e-mail address with the ARR, your name should be on the list. The email will go to your HKUST e-mail account.

We also have a webpage for this course. Some of the information on the webpage includes: (i) announcement relevant for the course, (ii) current schedule of lectures, office hours, (iii) e-mail addresses, phone numbers and office numbers; and (iv) course material such as notes, handouts, and spreadsheets. The URL for the homepage is: http://www.bm.ust.hk/~fina512

COURSE SCHEDULE, READINGS AND DUE DATES

1.	September 6, 2003	i. Syllabus. Introduction and Vocabulary. ii. Fundamentals of valuation a. Theory of value: present value. b. Perpetuities and annuities *Readings:* RWJ: Chapters 1, 3, 4, and 13
2.	September 13, 2003 PROBLEM SET 1 DUE	Valuation of bonds and stocks *Readings:* RWJ: Chapter 5
3.	September 20, 2003 **(Class starts at 4 p.m. and ends at 7 p.m.)** PROBLEM SET 2 DUE	Net Present Value rule and creation of value *Readings:* RWJ: Chapters 2, 6 and 7 Copeland, "Cutting costs without drawing blood…"
4.	September 27, 2003 CASE DUE	Investment decisions and creation of value Project evaluation *Readings:* RWJ: Chapter 8 *Case*: E.I. du Pont de Nemours and Co.: Titanium Dioxide, Harvard Business School case # 9-284-066.
5.	October 4, 2003 PROBLEM SET 3 DUE	Financial leverage and firm value Capital structure: Limits to the use of debt *Readings:* RWJ: Chapters 14, 15, and 16 Rajan and Zingales: "What do we know about…"

		Myers, "The Capital Structure Puzzle"
6.	October 11, 2003 CASE DUE	Capital structure and the cost of capital Estimating the cost of equity and cost of debt (with a brief overview of CAPM and its applications) *Readings:* RWJ: Chapters 9, 10, 12, and 17 Damodaran, "Estimating risk-free rates" Damodaran, "Estimating risk parameters" Damodaran, "Estimating equity risk premiums" *Case*: American Home Products Corporation, Harvard Business School case # 9-283-065
7.	October 18, 2003 CASE DUE	Divisional cost of capital Review of the course *Readings:* *Case:* New World Development Company Limited: Diversify or Focus? Centre For Asian Business Cases: HKU166, 2001
8.	October 25, 2003	Final Exam

Course Objectives

By the end of the term, you should be able to:

Fundamentals of valuation

1. Examine the mechanics of calculating present value (PV) and Future Value (FV)
2. Estimate the PV and FV of multiple cash flows
3. Solve for the present and future values of a constant stream of cash flows, with and without growth, using short cuts such as annuities and perpetuities.
4. Apply the PV and FV concepts in valuation of assets – both real and financial.
5. Treat inflation properly

Valuation of bonds and stocks

1. Determine the value of pure discount bonds and level coupon paying bonds
2. Value stocks using dividend discount models

Net Present Value rule and creation of value

1. Determine an investment's relevant costs and benefits.
2. Analyze investment decisions using payback method, internal rate of return (IRR) and net present value (NPV) techniques.
3. Compare and contrast among various investment decision rules in addition to NPV: (i) Internal rate of return; (ii) Payback period; (iii) Accounting Rate of Return; (iv) Profitability index; and (v) Discounted payback
4. Determine how capital budgeting process should be organized to make better investment decisions.
5. Illustrate when the NPV and IRR rule lead to identical investment decisions
6. Illustrate when the NPV and IRR rule may yield different investment rankings
7. Consider why managers use payback and other investment rules despite their apparent weaknesses
8. Compare two mutually exclusive investments with different lives

Project evaluation

1. Extract cash flows from accounting statements
2. Explain in your own words why firms should evaluate new projects using the incremental cash flow principle
3. Determine a project's net working capital
4. Identify relevant cash flows
5. Explain what sunk costs are and what should companies do with them in determining project cash flows
6. Determine how companies should treat excess plant capacity costs, overhead and project externalities
7. Incorporate incidental factors in project valuations

Financial leverage and firm value
Capital structure: Limits to the use of debt

1. Determine the conditions under which financing decisions are irrelevant
2. Analyze the effects of corporate and personal taxes on leverage decisions
3. Examine how costs of financial distress affect firm value
4. Evaluate the games that shareholders can play at the expense of bondholders
5. Examine debt covenants and the role they play in mitigating incentive conflicts between shareholders and bondholders
6. Differentiate between the trade-off theory and the pecking order theory in terms of their predictions about a firm's optimal capital structure
7. Determine why firms may use a pecking order in their external financing decisions
8. Examine why stock prices decline when firms issue equity
9. Predict how firms determine their optimal capital structure
10. Connect capital structure and financing decisions with the operating strategy of firms
11. Analyze different ways of designing financial claims to achieve optimal outcomes

Capital structure and the cost of capital
Estimating the cost of equity and cost of debt

1. Explain in your own words the economic meaning of systematic or priced project risk
2. Determine what risk free rate and equity risk premium should be plugged into the CAPM equation
3. Estimate the beta of an asset using capital markets information
4. Distinguish between a firm's equity beta and its asset beta
5. Determine the weighted average cost of capital
6. Explain in non-technical language what a weighted average cost of capital is, and how it helps managers evaluate investment decisions.
7. Examine the role that weighted average cost of capital plays in investment decision making

Divisional cost of capital

1. Estimate a divisional equity beta using comparable, levered firms
2. Estimate cost of capital of a private company or of divisions of a multidivisional firm.

ARTICLES

Copeland, T., 2000. Cutting costs without drawing blood. Harvard Business Review (September-October), 3-7.

Damodaran, A., Estimating risk-free rates, working paper 2000 Stern School of Business New York, NY

Damodaran, A., Estimating risk parameters, working paper 2000 Stern School of Business, New York, NY

Damodaran, A., Estimating equity risk premiums, working paper 2000 Stern School of Business New York, NY

Myers, Stewart C., 1984. The capital structure puzzle. Journal of Finance XXXIX 3, July, 575-592.

Rajan, R., Zingales L., 1995. What do We Know about Capital Structure? Some Evidence from International Data. Journal of Finance 50, 1421-1460.

Peer Review Form for Group Assignments

NAME OF GROUP MEMBER BEING EVALUATED: _____

1	2	3	4	5	Works well with group and treats all group members as colleagues
1	2	3	4	5	Completes individual task requirements to achieve group goals
1	2	3	4	5	Attends all group meetings or provides advance notice when absent
1	2	3	4	5	Is open to feedback, listens to and considers others' point of view
1	2	3	4	5	Offers ideas and alternative approaches on how to achieve group goals. Encourages innovative thinking
1	2	3	4	5	Works to enable group to move ahead efficiently; goes beyond the requirements of the tasks; looks for opportunities to improve

1. Would you like to work with this person again?

2. Evaluate this group member overall on a scale of 1 to 10 (10 being the highest): _____