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York University
AP/Econ 4400 3.0 sections B and C
Financial Economics
Fall 2019

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Time and Location. Section B: Th, 7-10pm, CB 219. Section C: Fr, 11:30am-2:20pm, SC 216.

Instructor: Adam Wilczynski, VH 1054, tel.416-736-2100, ext. 20577

Email: wilczyns at yorku dot ca;

Office Hours: Th 6-6:45pm, F 2:40-3:30pm or by appointment

TA: TBA

Textbook: Main text: *Corporate Finance*, McGraw Hill, 7th Canadian Edition by Ross, Westerfield, Jaffe, Roberts. Alternative: *Fundamentals of Corporate Finance*, 6th Canadian Edition by Brealey, Myers, Marcus, Maynes, Mitra. The two texts are close substitutes. Coverage in RWJR is more exhaustive, BM is a slightly easier read. Another optional textbook is *Corporate Finance*, 3rd Canadian Edition, Pearson Canada, by Berk, DeMarzo, Stangeland.

Prerequisites: Introductory calculus and linear algebra; basic probability theory and statistics; intermediate microeconomics

Course Description:

How do corporations raise capital? What determines prices of their securities? What is a firm's optimal capital structure? The goal of the course is to familiarize students with modern thinking on these subjects. Topics include cash flow analysis under uncertainty, models of asset pricing, theories of financial markets efficiency, and capital.structure questions like debt versus equity.

Outline:

Part I. Introduction and Preliminaries: Math Refresher (if necessary/requested) and Basic Accounting. (1.5 weeks)

I.1. Role and significance of financial markets and intermediaries. Review of relevant mathematics: Infinite series, convergence and limit; Probability theory: random variable, mean, variance, covariance. Statistical inference.. Reference: class notes, any texts you used in calculus, linear algebra, probability theory and statistics classes.

I.2. Accounting in a nutshell: balance sheet, income statement, distinction between cash flow and accounting income. References: chapters 2,3 of RWJR, chapter 3 of BM.

Part II. Valuing Cash Flow Streams, Capital Budgeting. (5 weeks)

II.1.Time value of money: the present value (PV) approach to assessing cash flow streams. Present values of annuity and perpetuity. Applications in occupational choice, retirement saving, returns to schooling, insurance, home mortgages. Effect of compounding frequency on PV. Interplay between taxation and time value of money. References: Class lecture notes; RWJF chapters 4, 5; BM chapter 4; BDS chapter 4.

II.2. Valuing bonds and stocks; the discounted dividend model. References: Class notes; RWJR chapters 5, 6 and 26.5; BM chapters 5, 6; BDS chapters 8, 9.

II.3. The Net Present Value (NPV) approach to evaluating investment opportunities. Alternative investment rules: Average Accounting Return, Internal Rate of Return, Payback Period, Profitability Index. Interplay between the rules. References: RWJR chapter 7, BM chapter 7, BDS chapter 6.

II.4. Additional topics in business project assesment: effect of corporate taxes on business project value; calculating cash flows in presence of capital cost allowance; "What if" questions: sensitivity, scenario, and break-point analysis. Value of option to extend/terminate when project cashflows are uncertain. References: RWJR chapters 8, 9; BM chapters 8, 9; BDS chapter 7

Part III. Risk Pricing (4-5 weeks)

III.1. Basic measures of asset risk and how financial markets incorporate them in valuation. Empirical return statistics.

III.2. Portfolio theory, Capital Asset Pricing Model (CAPM), the beta coefficient approach,

III.3. Replicating portfolios, the no-arbitrage principle.

III.4. Models based on Arbitrage Pricing Theory (APT).

References: RWJR chapters 10-12, BM chapters 10-11, BDS 10-13 Material in III.3 - class notes, BDS chapter 3.

Part IV. Cost of Capital, Market Efficiency

IV.1 Cost of capital as a function of firm's investment project, firm's overall risk, operational and financial leverage, taxes, and agency problems. Reference: RWJR ch. 13, BM ch. 12, BDS ch. 14.

IV.2 Can investors time the market? Alternative forms of Efficient Markets Hypothesis. Empirical tests. Reference: RWJR ch.14.

Grading: There will be a midterm exam (40% of final grade) tentatively scheduled on Thursday, October 24 for section B and on Friday, October 26 for section C. There will also be final exam (60%) in December. Exam weights are non-transferable.The midterm will cover parts I and II of the syllabus. The final will be comprehensive. One or two problem sets may also be distributed in class. Those will be for practice only and will not count towards final grade. In marginal cases, class activity may count.

Missed Exam Policy: A student absent from writing an exam(s) will receive a mark of '0' for the missed exam.

Academic Honesty Policy: Conduct that violates the ethical or legal standards of the University community or of one's program or specialization may result in serious consequences. Students should look at the SENATE POLICY ON ACADEMIC HONESTY found in the following locations:

1. The New Students' Handbook (p. 109):

http://www.yorku.ca/laps/students/pdf/NSH09-10.pdf

2. The York University Secretariat:

http://www.yorku.ca/secretariat/policies/document.php?document=69