Corporate Finance, Spring, 2011
Final Exam
Wednesday, June 8th, 2011

Writing time: 5 hours
Use of calculators is allowed

Points per each question as indicated. Maximum score is 80 points for Corporate Finance (8 ECTS) students, and 65 points for Corporate Governance (6 ECTS) students. **The Corporate Governance students do not answer question number 5 (if you are uncertain about it, you are probably not a Corporate Governance student)**. 50% of the available points are required for a passing grade. In your answers to the essay questions, avoid going beyond one page. A collection of financial formulas is provided on the last page for your convenience.

1. For each question in this section, choose the one most correct option. Unclearly marked choices do not score points. (each of the 6 sub-questions below is worth 2.5 points)

1.1. The pecking order theory suggests that the order in which firms use financing sources is:

a) External equity, debt, internal equity
b) Debt, external equity, internal equity
c) Internal equity, debt, external equity
d) External equity, internal equity, debt

1.2. If a firm with 10 million in debt pays a 5% fixed rate for their debt, and their corporate tax rate is 36%, what is the present value of their interest tax shield (assume infinite maturity for the debt)?

a) 180,000
b) 320,000
c) 500,000
d) 3,600,000

1.3. What is the main benefit of using the APV method in presence of interest tax shields?

a) It allows use of a lower discount rate for the tax shield
b) It treats all corporate cash flows equally
c) It rejects all negative NPV projects
d) It accounts automatically for the unequal lives problem

1.4. How does the certainty equivalent approach compare to the more traditional risk adjustment methods in capital budgeting?

a) It is easier to use
b) It is more intuitive to adjust cash flows than to adjust the discount rate
c) It can consider differences among project cash flows both through time and through different cash flow types
d) It uses more advanced methods, based on differential calculus

1.5. Should personal taxes affect corporate capital structure decisions?

a) They should not affect them, as personal taxes are outside the control of the firm
b) Personal taxes should play a role, as they affect shareholder wealth
c) Personal taxes vary by shareholder groups, which makes them impossible to account for in corporate decision-making
d) Personal taxes tend to be lower than corporate taxes, giving an incentive to pay out maximum dividends

1.6. In pure play method, project risk is determined by

a) Similar publicly traded firms
b) The firm's historical return patterns
c) The Monte Carlo simulation method
d) Scenario analysis

2. Explain the differences between the M&M Proposal 1, and the static trade-off theory. What are the main factors behind the static trade-off theory (15 points).

3. Assume a project with the following cash flows:

year	CF
0	-830
1	530
2	530
3	530
4	-1200
5	530
6	530
7	530
8	-1200

In separate calculations, calculate the NPV of the project if the firm's cost of capital is either 3%, 9%, or 15%. Would you recommend that the firm takes the project if its WACC is estimated to be somewhere between 9% and 11%? Without calculations, discuss the merits of using the IRR method to evaluate this project (10 points).

4. During a guest lecture by Pekka Sääskilahti, the use of real options and game theory were discussed. Explain the application of the mentioned methods at Nokia Corp. (no numerical analysis needed) (10 points)

5. Why do different dividend clienteles exist? What are the implications of their existence for corporate management? Do firms tend to take their ownership structure into account when making payout decisions (15 points)?

6. **STUDENTS ENROLLED IN HANKEN'S CORPORATE GOVERNANCE PROGRAM DO NOT ANSWER THIS QUESTION** Discuss the arguments for and against corporate hedging of company-specific risks. In your own opinion, should a firm hedge or not (15 points)?

$$FV_n = PV(1+i)^n = PV(FVIF_{i,n})$$

$$FV_n = PV\left(1+\frac{i}{m}\right)^{mn}$$

$$PV = FV_n\left[\frac{1}{(1+i)^n}\right] = FV_n(PVIF_{i,n})$$

$$FV_n = PMT\left[\frac{(1+i)^n - 1}{i}\right] = PMT(FVIFA_{i,n})$$

$$PV = PMT\left[\frac{1-[1/(1+i)^n]}{i}\right] = PMT(PVIFA_{i,n})$$

$$PV = \frac{PP}{i}$$

$$k_j = k_{rf} + \beta_j(k_m - k_{rf})$$

$$P_b = \sum_{t=1}^{n}\frac{Coup_t}{(1+k_d)^t} + \frac{Mat}{(1+k_d)^n}$$

$$YTM = \frac{Coup + \frac{Par - Market}{n}}{\frac{Par + 2(Market)}{3}}$$

$$P_p = \frac{Div}{k_p}$$

$$V_{cs} = \frac{D_1}{k_{cs} - g}$$

$$g = ROE * r$$

$$WACC = w_d k_d (1-t) + w_{ps} k_{ps} + w_{cs} k_{cs}$$

$$r = \frac{(1+n)}{(1+i)} - 1$$