SEMESTER 1 EXAMINATIONS 2014-15

CORPORATE FINANCE

DURATION: 120 MINUTES (2 HOURS)

This paper contains **THREE** questions.

Answer **TWO** questions in total.

An outline marking scheme is shown in brackets to the right of each question.

Only University approved calculators may be used.

A foreign language translation dictionary (paper version) is permitted provided it contains no notes, additions or annotations.

1.

(a) An analyst uses a temporary supernormal growth model to value a common stock. The company paid a $2 dividend last year. The analyst expects dividends to grow at 15% each year for the next three years and then to resume a normal rate of 7% per year indefinitely. The analyst estimates that investors require a 12% return on the stock. What is the value of this common stock?

[40 marks]

(b) Critically discuss the three assumptions that lie behind the Modigliani–Miller theory in a world without taxes. Are these assumptions reasonable in the real world?

[30 marks]

(c) Explain why share price drop on the ex-rights day.

[30 marks]

2.

(a) Use the following information to answer the questions:

The company has a target capital structure of 40% debt and 60% equity.

Bonds with face value of $1,000 pay a 10% coupon (semi-annual), mature in 20 years, and sell for $849.54 with yield to maturity of 12%.

The company stock beta is 1.2.

Risk-free rate is 10%, and market risk premium is 5%.

The company is a constant-growth firm that just paid a dividend of $2, sells for $27 per share, and has a growth rate of 8%.

The company's marginal tax rate is 40%.

(i) What is the company's after-tax cost of debt?

[10 marks]

(ii) What is the company's cost of equity using the capital asset pricing model (CAPM)?

[10 marks]

(iii) What is the company's cost of equity using the dividend discount model?

[10 marks]

(iv) What is the company's weighted average cost of capital (using the cost of equity from CAPM)?

[10 marks]

(b) What do you understand by the term "value maximization"? Who maximizes this value and why? Explain.

[20 marks]

(c) Discuss why NPV is considered as a superior method of evaluating the cash flows from a project.

[20 marks]

(d) Explain the capital asset pricing model (CAPM), including its underlying assumptions and the resulting conclusions.

[20 marks]

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3.

(a) Biosys Ltd has developed a patented procedure that is able to reverse genetic mutations in mice. Initial human trials have been successful and the company expects this procedure to be prohibitively expensive for its competitors to develop or mimic. Once the procedure is fully implemented the company expects to generate net after-tax cash flows of $12,000,000 next year with the cash flows expected to grow at a constant rate of 8% per annum in perpetuity. The initial investment required for the development and further testing of the procedure is $90,000,000. The company uses a discount rate of 20% to evaluate its projects.

(i) Compute the project's net present value. What decision would the firm make?

[10 marks]

(ii) Compute the project's internal rate of return. What decision would the firm make now?

[10 marks]

(iii) Are there any conflicts in your decisions in parts (i) and (ii) above? If so, explain why these conflicts may exist.

[10 marks]

(b) Define the concept of capital market efficiency. What is meant by the weak, semi-strong and strong forms of market efficiency? How does the concept of market efficiency differ from the concept of capital market *inefficiency*?

[30 marks]

(c) At Litchfield Chemical Corp. (LCC), a director of the company said that the use of dividend discount models by investors is "proof" that the higher the dividend, the higher the stock price.

(i) Using a constant-growth dividend discount model as a basis of reference, evaluate the director's statement.

[20 marks]

(ii) Explain how an increase in dividend payout would affect each of the following (holding all other factors constant):

(1) Sustainable growth rate.

[10 marks]

(2) Growth in book value.

[10 marks]

END OF PAPER