FACULTY OF COMMERCE

DEPARTMENT OF FINANCE

MASTER OF SCIENCE IN FINANCIAL ENGINEERING DEGREE

FINAL EXAMINATION - DECEMBER 2014

ADVANCED CORPORATE FINANCIAL STRATEGY CFI 5102

TIME: 3 HOURS

INSTRUCTIONS TO CANDIDATES

Answer any FOUR (4) questions

Write legibly.

INFORMATION FOR CANDIDATES

The businesses in this question paper are intended to be fictitious

This question paper contains FIVE (5) questions

All questions carry equal marks [25 marks]

ADDITIONAL MATERIAL

Standard Normal Distribution Tables

Question One

a. Explain the relationship between financial strategy of a firm and its growth pattern. **[15 marks]**

b. It has been said that, in the long term the ideal position for both existing and prospective investors would be to have the company trading at its fundamental value. Outline the reasons why the market value of company may diverge from fundamental (or intrinsic value). [**10 marks]**

Question Two

a. Suppose, a company has a target debt-equity ratio of 1:1, and target payout ratio of 40%. The company wants to achieve a growth rate of 20% per annum. The company is expecting before tax return on assets of 21%. Its sales-to-assets ratio is 1.8 times. The current interest rate is 12%, and corporate tax rate is 35%. Determine the ability of the company to sustain its intended growth rate, hence recommend the strategies (if any) that should be adopted to achieve the growth rate. **[6; 2 marks]**

b. Compare and contrast the Capital Cash-flow (CCF) and the Adjusted Present Value (APV) methods of valuation. Examine any practical challenges that one may face in using the CCF valuation method? **[4; 3 marks]**

c. Amalgamated Electrical Company's (AEC) debt capacity is 50%, of market value of its assets, and its equity beta is 1.4. Average market premium is 12%, and average return on short-term treasury bills is 9%. The company is considering an investment project in an existing line of business, which requires $100million, and expected to generate $15million in after-tax free cash flows in perpetuity. Currently, corporate tax rate is at 40%. The project will be financed partly, through a loan of 45% of its total cost.

i. Without any calculations, explain how the use of 45% debt in financing the new project, would affect its attractiveness. **[7 marks]**

ii. Is it possible to improve the attractiveness of a project by merely varying its debt-to-equity structure? Explain in detail. **[3 marks]**

Question Three

a. HydroChems Ltd. sells chemicals and systems for cleaning, sanitizing and maintenance. It reported earnings per share of $2.35 in 2011 and expected earnings growth of 15.5% a year from 2012 to 2016 and 6% a year after that. The capital expenditure per share was $2.25 and depreciation was $1.125 per share in 2011. Both are expected to grow at the same rate as earnings from 2012 to 2016. Working capital is expected to remain at 5% of revenues and revenues, which were $1,000 million in 2011, are expected to increase by 6% a year from 2011 to 2016, and 4% a year after that. The firm currently has a debt ratio (D/(D+E)) of 5%, but plans to finance future investment needs (including working capital investments) using a debt ratio of 20%. The stock is expected to have a beta of 1.00 for the period of the analysis, average return from the stock market is 9.8% and the Treasury bond rate is 6.50%. (There are 63 million shares outstanding). Assuming that capital expenditures and depreciation offset each other after 2016, estimate the value per share. **[15 marks]**

b. Suppose Great Gifts Pvt Ltd (GG), which operates restaurants and gift shops, reported dramatic growth in earnings and revenues between 2004 and 2014. During this period, earnings grew from $0.08 per share in 2004 to $0.78 per share in 2014. The dividends paid in 2014 amounted to only $0.02 per share. The earnings growth rate was expected to ease to 15% a year from 2015 to 2019 and to 6% a year after that. The payout ratio is expected to increase to 10% from 2015 to 2019 and to 50% after that. The beta of the stock is currently 1.55, but it is expected to decline to 1.25 for the 2015-19 time period and to 1.10 after that. The Treasury bond rate is 7% and average return from the stock market is 9.8%.

i. Estimate the PE ratio for GG. **[5 marks]**

ii. Estimate how much higher the PE ratio would have been, if it had been able to maintain the growth rate in earnings that it had posted between 2004 and 2014 (Assume that the dividend payout ratios are unaffected.) **[5 marks]**

Question Four

a. GN Ltd (GN), a construction company focusing on housing developing and construction in the SADC region, is considering entering into a joint venture to build town houses in Zimbabwe, Gwanda, with a local real estate developer. The development is expected to cost $1 billion overall and, based on GN's estimate of the cash flows, generate $900 million in present value cash flows. GN will have a 40% share of the joint venture (requiring it to put up $400 million of the initial investment and entitling it to 40% of the cash flows) but it will have the right to sell its share of the venture back to the developer for $300 million after 10 years.

i. If the standard deviation in real estate values in Zimbabwe is 30% and the riskless rate is 5%, estimate the value of the abandonment option to GN. **[6 marks]**

ii. Would you advise GN to enter into the joint venture? Explain in detail. **[5 marks]**

b. Examine the applicability of Real Option Analysis (ROA) as an investment appraisal technique from an emerging or developing market perspective (e.g. Zimbabwe). Your assessment should provide an insight on how ROA may (or may not) add economic value to investment projects and the managerial implications it provides for decision-making. **[14 marks]**

Question Five

a. ABC Ltd is considering the acquisition of XYZ Corporation. XYZ is currently in financial distress and has $500 million in zero-coupon debt outstanding, due in five years. The firm had earnings before interest and taxes of $40 million in 2013 (the tax rate is 40%). These earnings are expected to grow 5% a year in perpetuity and the firm paid no dividends. The firm had a return on capital of 12% and a cost of capital of 10%. The annualized standard deviation in firm values of comparable firms is 12.5%. The five-year bond rate is 5%.

   i. Estimate the fair value of XYZ Corporation. **[3 marks]**

   ii. Determine the estimated value of XYZ's equity. **[6 marks]**

   iii. Estimate the market value of debt and the appropriate interest rate on the debt. **[2 marks]**

b. Why is it important for an acquirer to conduct a due diligence, before concluding a merger deal, even in the midst of 'exciting evaluation figures'? **[5 marks]**

c. Illustrating your answer with examples (both local and international), examine the main challenges faced by Developing and Emerging Economies (DEEs) in regulation of mergers and acquisitions in the 21st century. **[9 marks]**

END OF EXAMINATION PAPER