স্কুল অব বিজনেস

Bangladesh Open University
MBA Program
Semester 162 (4th Level)

Course: Corporate Finance   **Due on: October 20, 2017**

Instructions

- ➢ **Answer all the questions in your <u>own handwriting</u> on <u>A4 size white paper</u>.**
- ➢ **The assignment must be submitted on the assigned date to the Coordinator of the study center you are attached with.**
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Questions

1. (a)   What is Corporate finance? What are the basic questions of corporate finance?

    (b)   Why an agency relationship exists in the corporate form of organization? In this context, what kind of problems can arise? How it can be solved?

2. (a)   Define cash budget. What is the main purpose of cash budget?

    (b)   The S. company has an ROE of 13.1% and a payout ratio of 40%.
    - i)   What is the company's sustainable growth rate?
    - ii)   Can the company's actual growth rate be different from its sustainable growth rate? Why or why not?
    - iii)   How can the company increase its sustainable growth rate?

3. (a)   Differentiate between lease and loan.

    (b)   What is option? Why are options purchased or sold?

    (c)   What factors that determine the value of options?

    (d)   What is Efficient market? Define the three forms of market efficiency?

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Course: Corporate Finance   **Due on: December 15, 2017**

(Answer all the questions in own handwriting on A4 size white pages)

1. (a) What is stock purchase warrant? Why are warrants issued?

   (b) What is put call parity?

   (c) H. Corporation recently issued Tk. 3 million worth of 8% convertible debentures. Each convertible bond has a face value of Tk. 1000. Each convertible bond can be converted into 22 shares of common stock anytime before maturity. The stock price is Tk. 38, and the market value of each bond is Tk. 1080.
      - i. What is the conversion ratio?
      - ii. What is the conversion price?
      - iii. What is the conversion premium?
      - iv. What is the conversion value?

2. (a) What is a mergers? How does a merger differ from the other forms of acquisitions?

   (b) Assume that Firm P acquires Firm Q via an exchange of stock at a price of Tk. 20 for each share of Q's stock. Both P and Q have no debt outstanding. Consider the following premerger information about Firm P and Q:

Item	Firm P	Firm Q
Earnings available for common stock	Tk.2,100	Tk.700
Number of shares of common stock outstanding	900	300
Market Price Per Share	Tk.60	Tk.17

      - i. What will the EPS, of Firm P be after the merger?
      - ii. What will firm P's price per share be after the merger if the market incorrectly analyses this reported earnings growth? (that is the P/E ratio does not change)
      - iii. What will the P/E ratio of the post merger firm be if the market correctly analyses the transaction?

3. (a) Define financial distress using the stock-based and flow-based approaches.

   (b) What is prepackaged bankruptcy? What is the main benefit of prepackaged bankruptcy?

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Semester: 162 (4th Level)

Course: Investment Analysis and Portfolio Management   Due on: October 20, 2017

Instructions

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Questions

1. (a) Discuss the three components of an investor's required rate of return on an investment.

   (b) Briefly discuss the five fundamental factors that influence the risk premium of an investment.

   (c) On February 1, you bought 100 shares of stock in the Francesca Corporation for $34 a share and a year later you sold it for $39 a share. During the year, you received a cash dividend of $1.50 a share. Compute your HPR and HPY on this Francesca stock investment.

2. (a) Why would you expect a relationship between economic activity and stock price movements?

   (b) What are the stages in the industrial life cycle and how does the life cycle stage affect the sales estimate for an industry?

   (c) How do skills, resources, and organizational requirements needed to successfully apply in cost leadership and differentiation strategies. Explain with a table.

3. (a) Briefly explain the alternative Bond Portfolio Strategies,

   (b) The Mills Company bond, which currently sells for $1,080, has a 10% coupon interest rate and $1,000 par value, pays interest annually, and has 10 years to maturity. What is the bond's YTM?

   (c) Four years ago, your firm issued $1,000 par, 25-year bonds, with a 7 percent coupon rate and a 10 percent call premium.

   i. If these bonds are now called, what is the approximate yield to call for the investors who originally purchased them?

   ii. If the current interest rate on the bond is 5 percent and the bonds were not callable, at what price would each bond sell?

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(Answer all the questions in own handwriting on A4 size white pages)

1. Given the monthly returns that follow, how well did the passive portfolio track the S&P 500 benchmark? Find the R^2, alpha, and beta of the portfolio. Compute the average return differential with and without sign.

Month	Portfolio Return	S&P 500 Return
January	5.0%	5.2%
February	−2.3	−3.0
March	−1.8	−1.6
April	2.2	1.9
May	0.4	0.1
June	−0.8	−0.5
July	0.0	0.2
August	1.5	1.6
September	−0.3	−0.1
October	−3.7	−4.0
November	2.4	2.0
December	0.3	0.2

2. Consider the following data for two risk factors (1 and 2) and two securities (J and L):

$\lambda 0 = 0.05$ $bJ1 = 0.80$

$\lambda 1 = 0.02$ $bJ2 = 1.40$

$\lambda 2 = 0.04$ $bL1 = 1.60$

                 $bL2 = 2.25$

   i. Compute the expected returns for both securities.

   ii. Suppose that Security J is currently priced at $22.50 while the price of Security L is $15.00. Further, it is expected that both securities will pay a dividend of $0.75 during the coming year. What is the expected price of each security one year from now?

3. (a) What is portfolio? Explain with an example.

   (b) Describe how the Jensen measure of performance is calculated.

   (c) An analyst wants to evaluate Portfolio X, consisting entirely of U.S. common stocks, using both the Treynor and Sharpe measures of portfolio performance. The following table provides the average annual rate of return for Portfolio X, the market portfolio (as measured by the Standard and Poor's 500 Index), and U.S. Treasury bills (T-bills) during the past eight years.

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	Annual Average Rate of Return	Standard Deviation of Return	Beta
Portfolio X	10%	18%	0.60
S&P 500	12	13	1.00
T-bills	6	n/a	n/a

    i.   Calculate both the Treynor measure and the Sharpe measure for both Portfolio X and the S&P 500. Briefly explain whether Portfolio X underperformed, equaled, or outperformed the S&P 500 on a risk-adjusted basis using both the Treynor measure and the Sharpe measure.

Based on the performance of Portfolio X relative to the S&P 500 calculated in Part a, briefly explain the reason for the conflicting results when using the Treynor measure versus the Sharpe measure.

4. **Go through the case and answer the question below the case.**

Determination of Securities Valuation

Based on five years of monthly data, you derive the following information for the companies
Listed:

Company	Intercept(a_i)	Standard Deviation (σ_i)	Correlation Coefficient (r_{im})
Intel	0.22	12.10%	0.72
Ford	0.10	14.60	0.33
Anheuser Busch	0.17	7.60	0.55
Merck	0.05	10.20	0.66
S&P 500 (Market)	0.00	5.50	1.00

Hint# $COV_{i,m} = (r_{im})(\sigma_i)(\sigma_m)$

a. Compute the beta coefficient for each stock.

b. Assuming a risk-free rate of 8 percent and an expected return for the market portfolio of 15 percent, compute the required return for all the stocks and plot them on the SML.

c. Plot the following expected return for the next year on the SML and indicate which stocks are undervalued or overvalued.

 Intel—20 percent
 Ford—15 percent
Anheuser Busch—19 percent
Merck—10 percent

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Bangladesh Open University
MBA Program
Semester: 162 (4th Level)

Course: Bank Management and Financial Services **Due on: October 20, 2017**

Instructions

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Questions

1. (a) Define bank and bank Management? How has banking changed in recent years? Can you explain why many of these changes have led to significant problems for bank managers and stakeholders?

    (b) According to the theory of finance why do banks and other financial intermediaries' exist in modern society?

2. (a) What are off-balance-sheet items, and why are they important to some financial firms?

    (b) What is the return on assets (ROA), and why is it important in banking?

    (c) What are the principal components of Return on Equity (ROE) and what does each of these components measure?

3. (a) Differentiate between Asset management, Liability management and fund management strategy.

    (b) Merchants State Bank has recorded the following financial data for the past three years (taka in millions):

	Current Year	Previous Year	Two Years Ago
Interest revenues	Tk. 57	Tk. 56	Tk. 55
Interest expenses	49	42	34
Loans (excluding nonperforming loans	411	408	406
Investment securities and interest-bearing			
deposits in other banks	239	197	174
Total deposits	487	472	467
Money market borrowing	143	118	96

What has been happening to the bank's net interest margin? What do you think caused the changes you have observed? Do you have any recommendations for Merchant's management team?

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Semester: 162 (4th Level)

Course: Bank Management and Financial Services   **Due on: December 15, 2017**

(Answer all the questions in own handwriting on A4 size white pages)

1. (a)   What is mean by electronic banking? Identify the concurrent problems of electronic banking in Bangladesh and offer rational solutions to mitigate such problems.

    (b)   What are the principal money market and capital market instruments available in Bangladesh? What are their most important characteristics?

    (c)   What is mean by IS gap? XYZ association has interest sensitive assets of Tk. 400 million, interest sensitive liabilities of Tk. 325 million, and total assets of Tk.500 million. What is the bank's dollar interest – sensitive gap? What is XYZ's relative interest sensitive gap? What is the value of its interest sensitivity ratio? Is it asset sensitive or liability sensitive?

2. (a)   Why do financial institutions face significant liquidity management problems?

    (b)   What are the fundamental purposes of regulating capital in commercial bank? Explain.

3. (a)   Offer a comparative picture of Basel I, II and III as a regulatory requirement for capital.

    (b)   What is cash-flow analysis? What can it tell about a business borrower's financial condition and prospects?

4.   Form the following descriptions please identify what type of business loan is being discussed.

    (a)   A temporary credit supports the construction of homes, apartments, office buildings, and other permanent structures.

    (b)   A loan is made to an automobile dealer to support the shipment of new cars to the dealer's showroom floor.

    (c)   Credit extended on the basis of a business's accounts receivable.

    (d)   The term of an inventory loan is being set to match the exact length of time needed to generate sufficient cash to repay the loan.

    (e)   Credit is extended for up to one year to purchase raw materials and cover a seasonal peak need for cash.

    (f)   A government security dealer requires credit to add new government bonds to his security portfolio.

    (g)   Credit is granted for a term longer than a year to support the purchase of plant and equipment.

    (h)   A group of investors wishes to take over a firm using debt financing and improve its management and its earnings.

    (i)   A business firm receives a three-year line of credit against which it can borrow, repay, and borrow again if necessary during the loan's three-year term.

    (j)   Credit is extended to support the construction of a toll road.

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Semester: 162 (4th Level)

Course: Development of Financial Markets and Institutions   **Due on: October 20, 2017**

Instructions

- ➢ **Answer all the questions in your <u>own handwriting</u> on <u>A4 size white paper</u>.**
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Questions

1. (a) How does the location of the money market differ from that of the capital market?
    (b) What the major instruments traded in the capital markets are?
    (c) What are the different types of financial institutions? What services do financial institutions perform?

2. (a) Discuss the major functions of Bangladesh.
    (b) What are the monetary policy tools used by Bangladesh Bank? Explain each of them
    (c) How does the purchase and sale of domestic currency to sell and buy foreign currency in the foreign exchange market affect the Bangladesh Bank's balance sheet, the money supply, and foreign exchange rate?

3. (a) What are the three characteristics common to money market securities?
    (b) A T-bill that is 225 days from maturity is selling for $95,850. The T-bill has a face value of $ 100,000.
         i.   Calculate the discount yield and bond equivalent yield on the T-bill.
         ii. Calculate the discount yield and bond equivalent yield on the T-bill if it matures in 300 days.
    (c) You have just purchased a four-month, $500,000 negotiable CD, which will pay a 5.5 percent annual interest rate.
         i.   If the market rate on the CD rises to 6 percent, what is its current market value?
         ii. If the market rate on the CD falls to 5.25 percent, what is its current market value?

4. (a) Describe briefly the different types of bonds.
    (b) What factors are used to determine a firm's bond issue rating? Explain.
    (c) Hilton Hotels Corp. has a convertible bond issue outstanding. Each bond, with a face value of $1,000, can be converted into common shares at a rate of 61.2983 shares of stock per $1,000 face value bond (the conversion rate), or $16.316 per share. Hilton's common stock is trading (on the NYSE) at $15.90 per share and the bonds are trading at $ 975.
         i.   Calculate the conversion value of each bond.
         ii. Determine if it is currently profitable for bond holders to convert their bonds into shares of Hilton Hotel common stock.

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Course: Development of Financial Markets and Institutions　　　Due on: December 15, 2017

(Answer all the questions in own handwriting on A4 size white pages)

1. (a)　What are the differences between a spot foreign exchange transaction and a forward foreign exchange transaction?
   (b)　What is the relation between interest rate, inflation, and exchange rates? Discuss.

2. (a)　What is a derivative security? What is the difference between a spot contract, a forward contract, and a futures contract?
   (b)　What I an option? Differentiate between a call option and put option.

3. (a)　How credit unions differ from commercial banks and savings institutions?
   (b)　Define ICB. Briefly discuss its functions.
   (c)　What is the most recent value for total net assets, number of funds, and number of shareholder accounts in DSE?

3. **Go through the case and answer the question below the case.**

Dhaka Stock Exchange: A Brief Description

The Dhaka Stock Exchange (DSE) was first incorporated as the East Pakistan Stock Exchange Association Limited on April 28, 1954. Formal trading of EPSE began in 1956 with 196 securities listed on the EPSE with a total paid up capital of about Rupees 4 billion (Chowdhury1994). It was renamed as the Dhaka Stock Exchange (DSE) Limited on June 23, 1962. After the liberation of the country, until 1976, the trading activities of the Stock Exchange remained closed due to the liberation war and the economic policy pursed by the then government. The trading activities resumed again in 1976. At that time only 9 companies were listed having paid up capital of Taka 137.52 million on the stock exchange (Chowdhury1994). At the end of 2005 it stood 260 securities listed on the DSE with market capital of Taka 228,574.85 million.

After the establishment of the SEC, investment friendly rules and regulations were introduced. This has increased public interest to invest in the capital market. Foreign portfolio investment stared to stream in due to favorable regulatory conditions. In October 1996, a group of brokers, foreign portfolio managers and sponsors of listed companies, manipulated stock prices. All Share Price Index crossed 3600 from less than 1000 within six weeks. As a result, at the end of 1996, only a few local and foreign investors got a huge gain. Conversely, general public was trended to invest and faced a huge loss.

In order to revive the confidence of the investors and to ensure a level playing field for all the market participants, the SEC forced the DSE to automate its trading system and introduced new settlement rules. The daily netting system of settlement (which means that an investor will have to pay money or provide securities only on the net amount of a day's transaction) was introduced in DSE. Regular transaction of the securities was made through

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and automated on-line system: (1) Public Market: Only for market lot share, (2) Spot Market: Only for spot transactions which must be settled within 24 hours, (3) Block Market: Only for bulk quantities of shares, (4) Odd Lot Market: Only for odd lot scripts. In the Public Market and Spot Market, securities are traded through automatic matching and Block Market and Odd Lot Market is traded through pick and fill basis.

Questions:
  i.   What is Stock Exchange? Critically explain the role of Stock Exchange.
  ii. How many stock markets in Bangladesh are in present? Define one of them.
  iii. What are the vision and objectives of Dhaka Stock Exchange (DSE)?
  iv. Briefly discuss the general function of DSE
  v.   What types of markets in the system followed by DSE? Explain each of them.

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Semester 162 (4th Level)

Course: Business Research Methods   **Due on: October 20, 2017**

Instructions

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Questions

1. (a)   What is research? Why should there be any question about the definition of research?

   (b)   Describe the characteristics of the scientific methods.

2. (a)   What is the difference between data, information, and intelligence?
   (b)   What are the characteristics of useful information?
   (c)   What is the key question distinguishing relevant data from irrelevant data?

3. A business school at a particular university has 25 full-time faculty. The following table shows the number of faculty grouped by years of teaching experience.

Years of Teaching Experience	Number of Faculty
5 to under 10	11
10 to under 15	7
15 to under 20	5
20 to under 25	2

   What is the approximate standard deviation for years of teaching experience for this population?

4. Distinguish among the following sets of items and suggest the significance of each in a research context:
   (a) Descriptive and Causal
   (b) Concepts and Construct
   (c) Concept and variable
   (d) Hypothesis and proposition
   (e) Theory and model.

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5. Steve Taylor is the owner of Home Plus, which is a chain of home improvement stores. He would like to investigate the relationship between month advertising and monthly sales. The table below shows the amount spent on advertising, in millions of dollars, over several months along with the corresponding sales, also in millions of dollars.

Month	Advertising (Tk. millions)	Sales (Tk. millions)
1	3	11
2	3	13
3	4	12
4	5	21
5	1	7

(a)   Use the Home Plus data to determine the correlation coefficient for this data and interpret its meaning.

(b)   Use the Home Plus data to perform a hypothesis test to determine if the population correlation coefficient is different than zero using $\alpha = 0.05$.

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Course: MBA: Business Research Methods   **Due on: December 15, 2017**

(Answer all the questions in your own handwriting on A4 size white pages)

1. (a) Distinguish among response error, interview error and non-response error.
   (b) Under what kind of conditions would you recommend:

   (i) A probability sample? A non-probability sample?

   (ii) A simple random sample? A cluster sample? A stratified sample?

   (iii) Using the finite population adjustment factor?

2. Discuss the relative merits and problems with:

   (a) Rating versus ranking scales.
   (b) Likert versus differential scales.

3. You conduct a survey of a sample of 25 members of this year"s graduating class and find that their average GPA is 3.2. The standard deviation of the sample is 0.4.Over the last 10 years, the average has been 3.0.

   Is this year's class significantly different from the long run average? At what alpha level would it be significant?

4. A professor would like to test the hypothesis that the average grade for a student taking a 10 AM statistics class averages five points higher than the average grade from a student in an 8 AM statistics class. The following data shows the sample size and average grades for students in the two class times along with the population standard deviations.

	10 AM	8 AM
Sample mean	87.1	81.4
Sample size	32	30
Population standard deviation	3.4	3.2

Define Population 1 is defined as the 10 AM class and Population 2 the 8 AM class. Construct an 80% confidence interval for the difference in population mean and interpret

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the results.

5. Your are curious about whether the Professors and students at your school are of different political persuasions. So you take a sample of 20 professors and 20 students drawn randomly from each population. You find that 10 professors say that they are conservative while 6 students claim that they are conservative.

   Is this a statistically significant difference?

6. Gartner, Inc. reported that the market share for Smartphones is as follows:

Smartphone	Market Share
Android	56%
Apple	23%
Nokia	9%
BlackBerry	7%
Other	5%

   To test the validity of Gartner's report, a random sample of smartphone users was collected with the following results.

Smartphone	Frequency
Android	62
Apple	25
Nokia	12
BlackBerry	12
Other	9

   Using $\alpha = 0.05$, what conclusions can be made about Gartner's report?

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