WESTERN UNIVERSITY
DAN Management
Management and Organizational Studies 2310b
Finance

Section 650
Midterm Practice Examination
2013

Time: 2 hours

Instructor: Mary Anne deKergommeaux

Calculators permitted (no communication devices)

The equation sheet is the last page. If you use tables, use the ones in your text (note, both the equation sheet and tables will be provided in the exam.

Total of 10 pages
Total of 22 multiple choice questions (Exam will 27)
Total of 5 short answer questions

Multiple Choice Section (choose the best answer)

1. The primary operating goal of a publicly owned firm interested in serving its shareholders should be to do which of the following?
   a. **maximize the stock price per share over the long run, which is the stock's intrinsic value**
   b. maximize the firm's expected EPS
   c. maximize the firm's expected total income
   d. maximize the stock price on a specific target date

2. What is the most you would pay for a $1,000 t-bill if the yield is 10.45% and it matures in 60 days?
   a. **$983.11**
   b. $982.84
   c. $982.97
   d. $982.83

3. Swimmerton Clothing Company's balance sheet showed total current assets of $2,250, all of which were required in operations. Its current liabilities consisted of $575 of accounts payable, $300 of 6% short-term notes payable to the bank, and $145 of accrued wages and taxes. What was its net operating working capital that was financed by investors?
   a. $1,454
   b. **$1,530**
   c. $1,607
   d. $1,771

4. Stewart Inc.'s latest EPS was $3.50, its book value per share was $22.75, it had 215,000 shares outstanding, and its debt ratio was 46%. How much debt was outstanding?
   a. $3,572,356
   b. $3,760,375
   c. $3,958,289
   d. **$4,166,620**

   BV=4,891,250 (Total Equity)
   Debt/Total Assets= 0.46 then Total Equity/Total Assets= 0.54
   so Total Assets=4891250/0.54 = 9,057,870
   so Debt = 9,057,870 x 0.46 = 4,166,620

5. Merchants Bank offers to lend you $30,000 at a nominal rate of 6.0%, simple interest, with interest paid quarterly. Gold Coast Bank offers to lend you the $30,000, but it will charge 7.0%, simple interest, with interest paid at the end of the year. What's the **DIFFERENCE** in the effective annual rates charged by the two banks?

a. 1.49%
b. 1.24%
c. 1.04%
d. **0.86%**

6. You want to buy a new sports car 3 years from now, and you plan to save $4,200 per year, **BEGINNING IMMEDIATELY**. You will make three deposits in an account that pays 5.2% interest. Under these assumptions, how much will you have 3 years from today?
a. **$13,956.42**
b. $14,654.24
c. $15,386.95
d. $16,156.30

7. Suppose you hold a diversified portfolio consisting of a $10,000 investment in each of 12 different common stocks. The portfolio's beta is 1.25. Now suppose you decided to sell one of your stocks that has a beta of 1.00 and to use the proceeds to buy a replacement stock with a beta of 1.34. What would the portfolio's new beta be?
a. 1.15
b. 1.21
c. **1.28**
d. 1.34

8. Hocking Manufacturing Company has a beta of 0.65, while Levine Industries has a beta of 1.40. The required return on the stock market is 11.00%, and the risk-free rate is 4.25%. What is the difference between Hocking's and Levine's required rates of return?

a. 4.34%
b. 4.57%
c. 4.81%
d. **5.06%**

9. Among various sources of financing, which of the following will receive favourable tax treatments by issuers?
a. **long-term debt**
b. common stock
c. retained earnings
d. preferred stock

10. Suppose you borrowed $12,000 at a rate of 9% and must repay it in 4 equal installments at the end of each of the next 4 years. How much would you still owe at the end of the first year, after you have made the first payment?
    a. $7,636.79
    b. $8,038.73
    c. $8,461.82
    d. **$9,375.98**

11. Assume that you are the portfolio manager of the Coastal Fund, a $3 million hedge fund that contains the following stocks. The required rate of return on the market is 14.00% and the risk-free rate is 6.00%. What rate of return should investors expect (and require) on this fund?

	Amount	Beta
Stock A	$1,075,000	1.20
Stock B	675,000	0.50
Stock C	750,000	1.40
Stock D	500,000	0.75
	$3,000,000	

    a. 13.44%
    b. 13.79%
    c. **14.14%**
    d. 14.49%

12. Which of the following statements best describes the income statement?
    a. The focal point of the income statement is the cash account, because that account cannot be manipulated by "accounting tricks."
    b. EBIT is a truer measure of financial strength than are net income and free cash flow.
    c. If a firm follows the International Reporting Standards, its reported net income and net cash flow will be the same.
    d. **The income statement for a given year is designed to give us an idea of how much the firm earned during that year.**

13. On its 2012 balance sheet, Barngrover Books showed $510 million of retained earnings, and exactly that same amount was shown the following year. Assuming that no earnings restatements were issued, which of the following statements is correct?
    a. Although the company lost money in 2012, it must have paid dividends.
    b. The company must have had zero net income in 2012.
    c. The company must have paid no dividends in 2012.
    d. **Dividends could have been paid in 2012, with amounts equal to the earnings for the year.**

14. Which of the following statements best describes the Du Pont analysis?
    a. **Suppose a firm's total assets turnover ratio falls from 1.0 to 0.9, but at the same time its profit margin rises from 9% to 10% and its debt increases from 40% of total assets to 60%. Under these conditions, the ROE will increase.**
    b. Suppose a firm's total assets turnover ratio falls from 1.0 to 0.9, but at the same time its profit margin rises from 9% to 10% and its debt increases from 40% of total assets to 60%. Without additional information, we cannot tell what will happen to the ROE.
    c. The modified Du Pont equation provides information about how operations affect the ROE, but the equation does not include the effects of debt on the ROE.
    d. Suppose a firm's total assets turnover ratio falls from 1.0 to 0.9, but at the same time its profit margin rises from 9% to 10%, and its debt increases from 40% of total assets to 60%. Under these conditions, the ROE will decrease.

15. Taggart Technologies is considering issuing new common stock and using the proceeds to reduce its outstanding debt. The stock issue would have no effect on total assets, the interest rate Taggart pays, EBIT, or the tax rate. Which of the following is likely to occur if the company goes ahead with the stock issue?
    a. The ROA will decline.
    b. The tax bill will increase.
    c. Net income will decrease.
    d. The times-interest-earned ratio will decrease.

16. Which of the following statements is correct?
    a. The beta of a portfolio of stocks is always smaller than the betas of any of the individual stocks.
    b. If you found a stock with a zero historical beta and held it as the only stock in your portfolio, you would by definition have a riskless portfolio.
    c. The beta coefficient of a stock is normally found by regressing past returns on a stock against past market returns. One could also construct a scatter diagram of returns on the stock versus those on the market, estimate the slope of the line of best fit, and use it as beta. However, this historical beta may differ from the beta that exists in the future.
    d. It is theoretically possible for a stock to have a beta of 1.0. If a stock did have a beta of 1.0, then, at least in theory, its required rate of return would be equal to the risk-free (default-free) rate of return, r_{RF}.

17. What does an asset having a negative beta value imply?
    a. non-existence because negative beta assets are theoretically impossible
    b. a necessary component to get a fully diversified portfolio
    c. a risk-reducing property when added to a portfolio
    d. the higher expected return of this asset

18. Stock A's beta is 1.5 and Stock B's beta is 0.5. Which of the following statements **MUST** be true, assuming the CAPM is correct.
    a. Stock A would be a more desirable addition to a portfolio than Stock B.
    b. In equilibrium, the expected return on Stock B will be greater than that on Stock A.
    c. Stock B would be a more desirable addition to a portfolio than Stock A.
    d. In equilibrium, the expected return on Stock A will be greater than that on Stock B.

19 .Consider the following information for three stocks, A, B, and C, and portfolios of these stocks. The stocks' returns are positively but not perfectly positively correlated with one another, i.e., the correlation coefficients are all between 0 and 1.

Stock	Expected Return	Standard Deviation	Beta
Stock A	10%	20%	1.0
Stock B	10	10	1.0
Stock C	12	12	1.4

Portfolio AB has half of its funds invested in Stock A and half in Stock B. Portfolio ABC has one third of its funds invested in each of the three stocks. The risk-free rate is 5%, and the market is in equilibrium, so required returns equal expected returns. Which of the following statements is correct?
    a. Portfolio AB has a standard deviation of 20%.
    b. Portfolio AB's coefficient of variation is greater than 2.0.
    c. Portfolio AB's required return is greater than the required return on Stock A.
    d. Portfolio ABC's expected return is 10.67%.

20. Which of the following statements is correct?
    a. A stock's beta is less relevant as a measure of risk to an investor with a well-diversified portfolio than to an investor who holds only that one stock.
    b. If an investor buys enough stocks, he or she can, through diversification, eliminate all of the diversifiable risk inherent in owning stocks. Therefore, if a portfolio contained all publicly traded stocks, it would be essentially riskless.
    c. Portfolio diversification reduces the variability of returns (as measured by the standard deviation) of each individual stock held in a portfolio.
    d. A security's beta measures its nondiversifiable, or market, risk relative to that of an average stock.

21. Which of the following statements is correct?
    a. A large portfolio of randomly selected stocks will always have a standard deviation of returns that is less than the standard deviation of a portfolio with fewer stocks, regardless of how the stocks in the smaller portfolio are selected.
    b. Company-specific (or diversifiable) risk can be reduced by forming a large portfolio, but normally even highly diversified portfolios are subject to market (or systematic) risk.
    c. A large portfolio of randomly selected stocks will have a standard deviation of returns that is greater than the standard deviation of a one-stock portfolio if that one stock has a beta less than 1.0.

d. If you add enough randomly selected stocks to a portfolio, you can completely eliminate all of the market risk from the portfolio.

22. Stock A has a beta of .5 and Stock B has a beta of 1.5. Which of the following MUST be true according to CAPM?
    a. Stock B's return will be higher than Stock A's return this year.
    b. If inflation is expected to increase but the market risk premium is unchanged, the required returns of the two stocks will increase by the same amount.
    c. Stock B's return has a higher standard deviation than Stock A's.
    d. If the market risk premium declines, but the risk free rate is unchanged, Stock A will have a larger decline in its required return than Stock B.

Short Answer Section Midterm

Question 1: Parts International made a net investment in operating capital of $30 million. The share price is $18 and it has 10 million shares outstanding. What is its Free Cash Flow?

Sales		$250
Operating Costs		$170
Depreciation		$20
EBIT		$60
Interest		$10
EBT		$50
Tax		$15
EAT		$35

Question 2: Complete the following Financial Statement data.

Debt Ratio					50%		
Quick Ratio					.8X		
Total Asset Turnover					1.5x		
Day's sales outstanding (based on 365 days)					36.5 days		
Gross Profit/Sales.. (sales-cgs)/sales					25%		
Inventory Turnover					5x		
Balance Sheet:							
	Cash		?		Accounts Payable		?
	Accounts Receivable		?		Long term debt		$60,000
	Inventory		?		Common Stock		?
	Fixed assets		?		Retained earnings		$97,500
	Total assets		$300,000		Total Lia. & equity		?
Income Statement:							
	Sales		?				
	Cost of Goods Sold		?				

a) Sales
b) CGS
c) Common Stock
d) Accounts Payable
e) Inventory
f) Fixed Assets
g) Accounts Receivable
h) Cash
i) Total Liabilities & Equity

Question 3: You need to borrow $24,000 but because of your poor credit history, you will be charged 16%. Payments will be made quarterly over 2 years. What is your quarterly payment?

Question 4: Discuss the CAPM.

Question 5: Company A has an expected return of 14% and a standard deviation of 42%. Company B has an expected return of 10% and a standard deviation of 22%. Which company would you invest in and why?

Finance Equations for Mid Term

Future and Present Value:

$$FVIF_{k,n} = \left(1+\frac{k}{m}\right)^{m} \qquad EAR = \left(1+\frac{k}{m}\right)^{m} - 1 \qquad FVIFA_{k,n} = \sum_{t=1}^{n}(1+k)^{t-1} = \left[\frac{(1+k)^{n}-1}{k}\right]$$

$FVIFADue = FVIF^{A_{k,n}} * (1-k)$

$$PVIF_{k,n} = \frac{1}{(1+k)^{n}} \qquad PVIFA_{k,n} = \sum_{t=1}^{n}\frac{1}{(1+k)^{t}} = (1-\frac{1}{k(1+k)^{n}})/k \qquad PV_{p} = PMT/k$$

Standard Deviation of a Portfolio:

$$\sqrt{w_1^2\sigma_{1+}^2\, w_2^2\sigma_{2+}^2\, 2w_1w_2r_{1,2}\sigma_1\sigma_2}$$

Rate of return for period t:

$$k_t = \frac{P_t - P_{t-1} + C_t}{P_{t-1}}$$

Expected value of a return for probabilistic data:

$$\bar{k} = \sum_{i=1}^{n} k_i \times \Pr_i$$

Standard deviation for probabilistic data:

$$\sigma_k = \sqrt{\sum_{i=1}^{n} \left(k_i - \bar{k}\right)^2 \times \Pr_i}$$

Coefficient of variation:

$$CV = \frac{\sigma_k}{\bar{k}}$$

Portfolio return:

$$k_p = \sum_{j=1}^{n} w_j \times k_j \text{, where } \sum_{j=1}^{n} w_j = 1$$

CAPM:

$$k_j = R_F + \left(b_j \times \left(k_m - R_F\right)\right)$$

Portfolio beta:

$$b_p = \sum_{j=1}^{n} w_j \times b_j$$

Risk-free rate of return:

$$R_F = k^* + IP$$

More Formulas: for midterm

Ratios:
Current= current assets/current liabilities
Quick= (cash+marketable securities+AR)/current liabilities
Age Inventory= inventory/CGS
AR Collection = AR/(sales/365)
AP Payment= AP/CGS
FA Turnover= sales/netFA
Total Asset Turnover= Sales/FA
Debt Ratio= total liabilities/total assets
Times Interest Earned= EBIT/interest

Bond Par Value=Price now*(1+((yield*days to maturity)/365))