

College of Applied Business (CAB)

Sent-up Examination, February 2015

BBA / Seventh Semester / BFN 205: Investment Analysis - I

Candidates are required to give their answers in their own words as far as practicable.

Section 'A'

Time: 20 minutes

Brief answer questions:

[10×1=10]

Indicate whether the following statements are "True" or "False". Support your answer with reason.

1. Short position has more risk than long position strategy of investment.
2. The optimal portfolio consisting two assets has the highest level of risk if their correlation coefficient is perfectly positive one.
3. The coefficient of variation is the relative measures of risk which considers to trade-off both risk and return.
4. Market value weighted index does not consider to the number of shares but considers the market price only.
5. A stock with higher beta than market is defensive stock and has lower required rate of return than the market return.
6. Total return from investing in a portfolio is 10.87 percent and inflation rate is 3.13 percent then the real inflation adjusted total return is 14 percent.
7. The cumulative wealth index for a series is equal to the product of cumulative dividend yield component of total return and the cumulative price change component of total return.
8. An investor investing in the 28 percent marginal tax bracket municipal bond yielding 5 percent which is equal to the taxable bond's yield of 3.6 percent.
9. If an investor invests 140 percent of his fund in a market portfolio with 10 percent expected return and 8 percent standard deviation where risk free rate is 5 percent then his/her risk and return ratio (relative risk) from the investment is 0.9333.
10. The APT is more general than the CAPM if two or more factors exist and the both models can be shown to be identical when only one factor exists.

Section 'B'

Time: 30 minutes

Short answer questions: [Any two]

[2×5=10]

11. Define investment analysis. Explain the process of investment analysis.
12. Explain the role of NEPSE in the development of Nepalese security market.
13. Consider the information on stock X, Y and Z:

Stock	No. of shares	Price on 31-12-2013 (Rs)	Price on 31-12-2014(Rs)
X	1,000	80	85
Y	2,000	60	60
Z	3,000	20	25

- i. Calculate price weighted average for the three stocks on 31-12-2013 and 31-12-2014.
 - ii. What is the percentage change in average between two dates?
 - iii. Calculate value weighted average for the three stocks on 31-12-2013 as a base period and assign a value of 50 for base level.
 - iv. What is the value weighted index on 31-12-2014?
 - v. Explain the differences in the percentage change price weighted index and value weighted index.
- 14 Bibek opens a margin account at a local brokerage firm to purchase 100 shares of Rock & Sand Company on margin at Rs 50 per share.
- i. Suppose the initial margin requirement is set to 60 percent, how much Bibek can borrow from the brokerage firm?
 - ii. If Bibek borrows Rs 2,000 from the brokerage firm to complete the purchase, what will be the collateral in Bibek's account at the time of the purchase?

- iii. If the maintenance margin is set to 30 percent, and Bibek borrows Rs 2,000, what is the minimum amount of collateral required?
- iv. Calculate the price of Rock & Sand stock that will trigger a margin call.
15. The Lumbini Fund has sold 150,000 shares (units) to investors. Currently, the fund has accrued investment management fee obligations of Rs 50,000. The fund's portfolio is shown below.

Stock	No. of Shares	Price per share
P	50,000	Rs 10
Q	20,000	7
R	35,000	30
S	10,000	100

- i. Calculate the fund's net asset value.
- ii. Calculate offering price if load fee is 2.5 percent.
- iii. Calculate premium/discount if current market price per share is Rs 50.

Section 'C'

Time: 80 minutes

Comprehensive answer questions:

[2×10=20]

16. Consider the following data:

State of economy	Probability	Return of stock X (%)	Return of stock Y (%)
First	0.3333	9	6
Second	0.3333	12	12
Third	0.3333	15	18

- i. Calculate standard deviation and make decision which on stock is better to invest based on total risk.
- ii. If an investor construct two portfolios: portfolio P₁ consisting equal investment in each stock and portfolio P₂ consisting 80 in stock Y and remaining in treasury bill with 5 percent return. Which portfolio is better based on total risk?
- iii. If standard deviation of market is 6 percent, correlation coefficient between market and stock X is 0.70 and between market and stock Y is 0.90, calculate beta of each stock and interpret the results.
- iv. Which portfolio is the best portfolio based on beta?
- v. If market risk premium is 7 percent what are the required rate of returns of stock X, stock Y, portfolio P₁ and portfolio P₂? Are each stocks and portfolios in equilibrium? Would you like to purchase each of portfolios?
17. a. Assume that a British investor and a US investor each purchased 100 shares of British stock one year ago. At that time, the stock was worth 40 pounds per share. The exchange rate of the pound was \$ 1.80 at that time. Today, both investors sold their British stock for 50 pounds per share. The exchange rate of the pound today is \$2.00.
- i. What is the holding period return for the British investor?
- ii. What is the holding period return for the US investor?
- b. Suppose you are attempting to estimate an appropriate expected return for a particular common stock. Assuming return from treasury bills is 7 percent. The return on NEPSE is 14 percent and beta of the stock is 1.20.
- i. Calculate expected return using CAPM.
- ii. Assume four factors in the market F₁, F₂, F₃, F₄ of market price of risk 6 percent, 2 percent, 3 percent and 4 percent with their sensitivity index of 1.1, 0.8, 1, and -0.9 respectively. Estimate the expected return.
- iii. Interpret your results of (i) and (ii).