## CHUKA



## UNIVERSITY

## UNIVERSITY EXAMINATIONS

SECOND YEAR EXAMINATION FOR THE AWARD OF DEGREE OF MASTER OF BUSINESS ADMINISTRATION

## MBAD 833: INVESTMENT FINANCE

STREAMS:
TIME: 3 HOURS
DAY/DATE: WEDNESDAY 6/10/2021
2.30 P.M - 5.30 P.M

## INSTRUCTIONS

Answer question one and any other three questions

## QUESTION ONE

(a) In what respects is direct investing different from indirect investing. [6 marks]
(b) Discuss factors that an investor may take into account in determining their investment policy. marks]
(c) Explain the security analysis stage of the investment process.
[6 marks]
(d) Allan is considering investing in a bond currently selling for ksh 878.50. The bond has four years to maturity, ksh 1000 par value and $8 \%$ coupon rate. The next annual interest payment is due one year from today. The approximate discount factor for investments of similar risk is $10 \%$. Calculate the intrinsic value of the bond and state whether Allan should purchase the bond?
[6 marks]
(e) Centum plc has proposed to undertake investment in two assets, A and B. The investment research department of the firm has estimated the following risk and return characteristics of the two assets.

| Asset | A | B |
| :--- | :--- | :--- |
| Standard deviation | $25 \%$ | $30 \%$ |
| Expected return | $18 \%$ | $22 \%$ |

The correlation coefficient between the return of the two assets is positive 0.65 .

Determine;
(i) The nature of co movement between returns on stock A and B . [4 marks]
(ii) The proportion of investment in each security that will minimize the portfolio risk for the investor.
(iii) The risk of the portfolio. [4 marks]
(iv) Suppose the company adjusts the investment weighs such that $40 \%$ of investible wealth is put in security A and the rest in security B. Further it is given that the expected return on the market portfolio is $12 \%$ with a standard deviation of $4 \%$. The risk free rate of interest is estimated at $5 \%$. Analyze the portfolio pricing using capital market line model.
[4 marks]

## QUESTION TWO

(a) Explain the following concepts as they apply to portfolio theory.
(i) Portfolio revision
(ii) Portfolio evaluation
[2 marks]
(b) Suppose the standard deviations, betas and average rates of return of several managed portfolios are given below, along with the standard deviation and average rate of return of the market index. The beat of the index is assumed to be 1.0. Further assume the T- bill rate averaged $7 \%$ during the time period performance measurement.

| Fund | Average return | Std deviation | Beta | Non systematic risk |
| :--- | :--- | :--- | :--- | :--- |
| A | $15 \%$ | $25 \%$ | 1.25 | $12 \%$ |
| Market | $12 \%$ | $25 \%$ | 1.00 | $0 \%$ |

Compare the funds performance using:

| (i) | Sharpe ratio | $[3$ marks $]$ |
| :--- | :--- | :--- |
| (ii) | Treynor | $[3$ marks $]$ |
| (iii) | Jensen's alpha | $[3$ marks $]$ |
| (iv) | Information ratio | $[3$ marks $]$ |

(c) The current dividend per ordinary share of B.OC. Ltd is 2 per annum. The dividends are expected to grow at an above average rate of $20 \%$ p.a over the coming 3 years, then at a
rate of $10 \%$ over the next three years and finally at a rate of $5 \%$ p.a to perpetuity. The capitalization rate for the company is $9 \%$. Suppose the current market price of B.O.C ltd is ksh 109.25 , would you recommend a sale or buy decision to the investor? Explain using dividend growth model.
[6 marks]

## QUESTION THREE

(a) Explain how active bond management strategy differs from indexing management strategy. [4 marks]
(b) A 10 year $15 \%$ corporate bond whose par value is ksh 1000 is currently priced at ksh 944 to yield $18 \%$.
(i) Calculate the bond modified duration. [4 marks]
(ii) Suppose the market interest rate rises from $18 \%$ to $24 \%$, explain the consequences of this change in yield to the risk position of a bond holder.
(c) A portfolio manager constructed two portfolios at the end of first quarter of 2019, one consisting of ordinary shares and the other consisting of corporate bonds. The ordinary shares at the time of constructing the portfolio were valued at ksh 80,000 . The investor opts to use constant value plan strategy for portfolio revision and fixes a revision point of $10 \%$. The share prices at the end of April, May and June are ksh 90 , ksh 85 and ksh 75 respectively. Determine the total portfolio value after revision at the end of June 2019. marks]

## QUESTION FOUR

(a) Discuss the following risks in bond management.
(i) Re - investment risk
(ii) Interest rate risk
(b) Discuss factors that generally affect the call option value.
(c) Consider the following option on a single stock:

Market price of the option
ksh 36
Historical standard deviation of the underlying stock returns. $40 \%$

## Exercise price of the call option ksh 40

The current annualized market interest rate for T-bills 10.00\%
Time remaining before expiration. 90 days
(i) Derive the value of the call option.
(ii) Hence use put call parity to calculate the value of put on the share.
(iii) Analysts the expected stock price volatility is estimated at $50 \%$. In your view, why would the volatility of an underlying stock be an important consideration while purchasing or selling an option?

## QUESTION FIVE

(a) Discuss the characteristics specified in a futures contract.
(b) Distinguish between the following investment concepts;
(i) Zero coupon bonds and straight bonds [4 marks]
(ii) Fixed income securities and equities.
(iii) Bond duration and yield to maturity.

