ZCAS University
BBF1301-INTRODUCTION TO FINANCIAL MARKETS
Thursday 30ᵗʰ, May 2024
TIME
12:30 to 15:30

TIME ALLOWED: THREE HOURS (plus 5 minutes to read through the paper)

INSTRUCTIONS:

1. **Section A: Question One in Section A is compulsory.**

2. **Sections B: Answer *ANY THREE (3)* questions from this section.**

3. **This examination paper carries a total of 100 marks.**

4. **Candidates must not turn this page until the invigilator tells them to do so.**

QUESTION ONE

"MONEY MAKES THE WORLD GO AROUND"

Understanding the dynamics of financial markets, institutions, assets, and regulatory frameworks is essential for investors, policymakers, and financial professionals. A well-functioning financial system requires effective regulation, market transparency, risk management, and investor protection. By fostering trust, stability, and innovation, financial markets can fulfil their vital role in allocating capital, fostering economic growth, and improving living standards. Financial markets are the backbone of modern economies, facilitating the allocation of capital, enabling risk management, and fostering economic growth. However, the complexity of financial systems requires a robust regulatory framework to ensure stability and protect investors. Financial markets are platforms where buyers and sellers trade financial assets such as stocks, bonds, currencies, and derivatives. These markets can be categorized into primary and secondary markets. The primary market is where new securities are issued and sold to investors, while the secondary market facilitates the trading of existing securities among investors. Financial markets can also be classified based on the type of assets traded, such as equity markets, debt markets, foreign exchange markets, and commodities markets.

Financial institutions play a crucial role in intermediating between savers and borrowers, providing essential services such as deposit-taking, lending, investment banking, and asset management. These institutions include commercial banks, investment banks, insurance companies, mutual funds, hedge funds, and pension funds. Commercial banks are the cornerstone of the financial system, offering a wide range of financial services to individuals, businesses, and governments. Investment banks assist companies in raising capital through underwriting and advisory services, while insurance companies provide protection against various risks. Mutual funds, hedge funds, and pension funds pool funds from investors to invest in diversified portfolios of financial assets, aiming to generate returns while managing risks.

Financial assets represent ownership or claims to future cash flows or other economic benefits. Common types of financial assets include stocks, bonds, currencies, and derivatives. Stocks, also known as equities, represent ownership stakes in companies and provide investors with a share of the company's profits and voting rights. Bonds are debt securities issued by governments, corporations, or municipalities, promising fixed or floating interest payments and

repayment of principal at maturity. Currencies are used as a medium of exchange in international trade and investment, with exchange rates determined by supply and demand dynamics. Derivatives are financial instruments whose value is derived from the performance of an underlying asset, index, or rate, enabling investors to hedge risks or speculate on price movements.

Financial systems regulators are tasked with overseeing and regulating financial markets, institutions, and participants to maintain stability, integrity, and investor confidence. These regulators include central banks, financial regulatory authorities, securities commissions, and supervisory agencies. Central banks are responsible for monetary policy formulation and implementation, aiming to achieve price stability and full employment. They also serve as lenders of last resort and oversee payment systems to ensure smooth functioning of financial markets. Financial regulatory authorities are responsible for supervising and regulating financial institutions to ensure compliance with prudential standards and consumer protection rules. Securities commissions oversee securities markets and regulate securities issuers, intermediaries, and investors to promote transparency, fairness, and efficiency.

Required

a) Briefly explain what financial intermediation is and why this role is so important to the economy of Zambia. [4Marks]

b) It has been argued time and again that financial intermediation is Low in Zambia. briefly explain what can be done to improve the efficiency and effectiveness of financial intermediation in the Zambia. [5Marks]

c) List and explain the three regulators of the Zambian financial system and also explain How do market surveillance and regulation contribute to maintaining market integrity [5Marks]

d) Explain the differences between primary and secondary markets, providing examples of the types of assets that are traded in each market [6Marks]

e) Explain the difference between Money and Capital markets, providing examples of the types of assets that are traded in each market. [5Marks]

f) Explain who a broker is and the role they play in the capital markets. [3Marks]

g) Differentiate between Technical analysis and fundamental analysis [4Marks]

h) Differentiate between IPO and Private Placement [4Marks]

i) What measures can be taken to prevent financial market crises [4Marks]

Section B: Answer any THREEE (3) questions from this section

QUESTIONS TWO

The primary objective of the Bank of Zambia (BoZ) is to formulate and implement monetary and supervisory policies that achieve and maintain price stability and promote financial system stability in the Republic of Zambia (Bank of Zambia Act No. 43 of 1996).

a) Explain what monetary policy is   [2Marks] ✓

b) Explain the difference between Expansionary and Contractionary Monetary policies and their impact on the economic growth   [6Marks]

c) List and explain the Monetary policy instruments that BOZ uses for Monetary policy

d) Outline the Monetary policy targets of Bank of Zambia   [4Marks]

e) Muunga a fourth-year student at Zcas University plans to buy a brand-new car from Top Brands Motors limited **5 years** from now at a Cost of **K200,000**. How much should he commit in a fixed deposit account that pays interest at **12%** compounded monthly to enable him realize his Dream?   [4Marks]

f) Big Boss Investment Managers, are running a promotion stating that whatever amount of investment you commit with them, they are able to double it in **4years**.what rate of interest compounded Monthly is implied?   [4Marks]

[Total:20Marks]

QUESTION THREE

You are a financial manager at a multinational corporation operating in several countries. The company imports raw materials from Asia, manufactures products in Europe, and exports finished goods to North America. Recently, there has been significant volatility in currency exchange rates, particularly between the Euro (EUR), US Dollar (USD), and Chinese Yuan (CNY). Your CEO has expressed concerns about the potential impact of exchange rate fluctuations on the company's profitability and cash flow. As the head of forex management, you are tasked with developing a strategy to mitigate these risks and optimize currency exposure.

a) Differentiate between fixed exchange rate and floating exchange rate systems.

[2Marks]

b) Differentiate between currency Devaluation and currency Depreciation.   [2Marks]

c) List and explain the factors that influence Market exchange rate .   [6Marks]

d) Discuss the types of hedging instruments and techniques you would recommend for managing foreign exchange market volatility

[6Marks]

e) Mr. and Mrs. Nguzu wants to accumulate **K1,000,000** by December **31,2029** to enable them buy a house in Area 43, Mean-Wood Ibex. They make **10** equal annual deposits starting **January 1,1990**.if interest is at **12%** compounded annually, what annual deposit is needed.

[4Marks]

[Total:20Marks]

QUESTION FOUR

Bond valuation is a fundamental concept in finance, particularly in fixed-income securities analysis. Bond valuation involves determining the fair price of a bond, which represents the present value of its future cash flows. Bonds typically pay periodic interest payments, known as coupons, and return the principal amount, also called the face value or par value, at maturity. The valuation process considers these cash flows and discounts them back to the present using an appropriate discount rate, typically the bond's yield to maturity (**YTM**).

a. Explain the difference between a premium bond and discount bond **[2Marks]**

b. Suppose we have a 10-year bond with a face value of 10,000. paying annual coupons of K500. The current market interest rate (YTM) for similar bonds is 6%. Compute the value of the Bond. **[4Marks]**

c. Differentiate between a Share and a Dividend ? **[2Marks]**

d. Calculate the intrinsic value of a stock using the dividend discount model (DDM) if it has just paid an annual dividend of K25, the required rate of return is 10%, and the dividends are expected to grow at a constant rate of 5% indefinitely. **[4Marks]**

e. Using the price-to-earnings (P/E) ratio method, if a company has earnings per share (EPS) of K35 and the industry average P/E ratio is 20, what is the estimated value of the stock? **[3Marks]**

f. What is a Derivative? Give four examples **[3Marks]**

[Total:20Marks]

QUESTION FIVE

Consider the investments in the two Public Listed Company Stocks A and B.

STATES OF THE ECONOMY	PROB.	STOCK-A	STOCK-B
RECESSION	60	20	35
NORMAL	20	17	27
BOOM	20	14	40

Required:

a) Compute the risk and return of the above two stocks. **[4Marks]**

b) Justify using your answers in part A as well as any other empirical computation which of the two stocks you prefer. **[2Marks]**

c) Given a Risk-Free Rate (RFR) of 15%, draw the Security Market Line (SML) clearly plotting the two stocks. **[4Marks]**

d) Compute the Covariance ($COVAB$) and Correlation Co-efficient of the above two stocks and interpret your computation. **[4Marks]**

e) If you decide to invest in both stocks, and you decide to put 50% in stock A and the Remainder in B, what will be your Portfolio Expected Return and the volatility of the portfolio? **[4Marks]**

f) Explain the importance of Diversification in investment and Management

$$FV_N = (PV)(1+r)^N$$

$$FV_N = (PV)\left(1 + \frac{r_s}{m}\right)^{mN}$$

$$FV_V = (PV)\,e^{r_s N}$$

$$PV_N = A\left[\frac{1 - \frac{1}{(1+r)^N}}{r}\right]$$

$$FV_N = A\left[\frac{(1+r)^N - 1}{r}\right]$$

$$PV_N = \frac{A}{r}$$

$$HPR = \frac{END + DIVIDEND}{BEG}$$

$$HPY = HPR - 1$$

$$r_{BD} = \left(\frac{D}{F}\right)\left(\frac{360}{t}\right)$$

$$EAY = \left[(1 + HPY)^{\frac{365}{t}}\right] - 1$$

$$r_{MM} = \left(\frac{D}{F-D}\right)\left(\frac{360}{t}\right)$$

$$E(R_i) = RFR + \beta_i(R_M - RFR)$$

where:

$$AM = \sum HPY/n \qquad GM = \left[\pi\,HPR\right]^{1/n} - 1$$

$\sum HPY$ = the sum of annual holding period yields

π = the product of annual HPR

Covariance:

$$\sum \frac{(A - \bar{A})(B - \bar{B})}{N} \qquad or \qquad \Sigma P(A - \bar{A})(B - \bar{B})$$

$$Correlation = \frac{COV_{AB}}{\sigma_A \sigma_B}$$

Semi Variance:

$$\frac{\Sigma_{for\ all\ X_i \le \bar{X}}\,(X_i - \bar{X})^2}{n-1}$$

$$T = \frac{(\bar{R}_i - RFR)}{\beta_i} \qquad S_i = \frac{\bar{R}_i - \overline{RFR}}{\sigma_i}$$

$$ER_p = w_1 ER_1 + w_2 ER_2$$

$$\sigma_p = \sqrt[2]{w_1^2 \sigma_1^2 + w_2^2 \sigma_2^2 + 2 w_1 w_2 r_{12} \sigma_1 \sigma_2}$$

$$V_j = \frac{D_1}{(1+k)} + \frac{D_2}{(1+k)^2} + \frac{D_3}{(1+k)^3} + \dots + \frac{D_\infty}{(1+k)^\infty}$$

$$= \sum_{i=1}^{n} \frac{D_i}{(1+k)^i}$$

$$V_j = \frac{D_1}{k - g}$$