

BACHELOR OF FINANCIAL SERVICES
END OF SEMESTER EXAMINATIONS
BFS 1201: MONETARY AND FINANCIAL SYSTEMS

Date: Wednesday, 23rd March 2022

Time: 2 Hours

INSTRUCTIONS:

Answer question one (compulsory) and any other two questions

QUESTION 1 (30 MARKS)

- a) You are provided with the following extract from the CBK annual report FY 2020/2021 showing the reserve money and its components for FY 2019/20 and FY 2020/21.

Table 5.3: Reserve Money and its Components

	End Month Level		Annual Growth Rate (Percent)		Annual Absolute Change (KSh Billion)	
	2019/20	2020/21	2019/20	2020/21	2019/20	2020/21
1. Net Foreign Assets	918.1	831.7	-2.4	-9.4	-22.9	-86.3
2. Net Domestic Assets	-491.2	-382.0	-2.0	-22.2	10.0	109.2
2.1 Government Borrowing (net)	-62.8	-50.2	-66.9	-20.0	126.9	12.6
2.2 Commercial banks (net)	-131.0	-6.1	514.2	-95.3	-109.7	124.9
2.3 Other Domestic Assets (net)	-300.7	-328.8	2.4	9.3	-7.1	-28.1
3. Reserve Money	426.9	449.8	-2.9	5.4	-12.9	22.9
3.1 Currency outside banks	210.9	225.9	7.1	7.1	13.9	15.0
3.2 Bank reserves	216.0	223.9	-11.0	3.6	-26.8	7.8
3.2.1 Required Reserves	153.5	167.0	-12.2	8.8	-21.4	13.5
3.2.2 Cash in Till	46.9	51.2	-10.7	9.2	-5.6	4.3
3.2.3 Excess Reserves	15.5	5.6	1.6	-64.0	0.2	-9.9

The checkable/ demand deposits amounted to 1350 billion in FY 2019/2020 and 1,409.9 billion in FY 2020/21.

Required:

- i. Compute the Money supply as measured by monetary aggregate M1 for both years. **(1 mark)**
- ii. Compute the Monetary base for both years. **(1 mark)**
- iii. Calculate the value of the currency deposit ratio (c) for both years. **(2 marks)**
- iv. Calculate the value of the excess reserve ratio (e) for both years. **(2 marks)**
- v. Given a Cash Reserve Ratio (CRR) of 4.25% for FY 2019/2020 and 5.25% for the FY 2020/21, calculate the value of the money multiplier (m) for both years.

(4 marks)

- b) Suppose that you are the bank manager of Twaweza Bank. The bank has suffered a deposit outflow that has led to violation of the required reserves requirement by the central bank. Discuss **three** options you would consider exploring and the cost associated with each of these options. (5 marks)
- c) Family Bank receives new demand deposits of 3 million in addition to the existing deposits of 15 million. Additionally, the bank has Shs.2,955,000 as excess reserves and 300,000 as deposits with the Central Bank. These deposits are not yet invested. The current cash reserve requirement (CRR) is 5.25%.

Required:

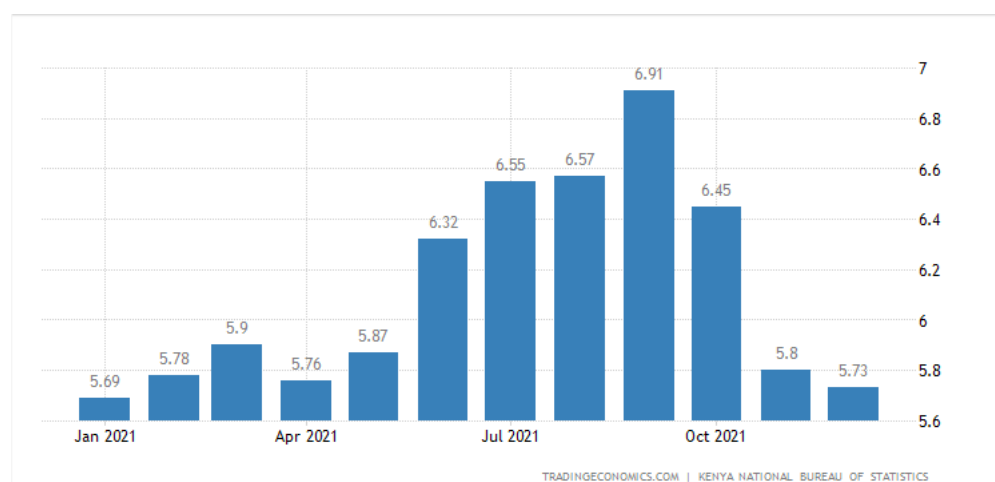
Compute the cash in till of the bank.

(3 marks)

- d) Central banks undertake policies to control the money supply in an economy and the channels by which money is supplied. Discuss **four** main goals of central banks in their conduct of monetary policy. (8 marks)
- e) What is the difference between:
- (a) Structural unemployment and frictional unemployment. (2 marks)
 - (b) Expansionary and contractionary monetary policies. (2 marks)

QUESTION 2 (20 MARKS)

- a) The figure below shows the annual inflation rate in Kenya from January to December 2021.



Required:

- i. Explain **two** possible reasons that can be attributed to the rising inflation rate from May to September 2021. (4 marks)
- ii. Were the inflation rates throughout the year still within the target specified by the cabinet secretary of finance? (1 mark)

iii. Inflation targeting is a commitment of the central bank to price stability as the primary, long-run goal of monetary policy. Discuss **two** advantages and **two** disadvantages of having an inflation target. **(4 marks)**

b) You are provided with the extract below from Tujimudu Bank Statement of financial position for the financial year 2020/2021.

Assets		Liabilities and capital	
Reserves	100 million	Demand deposits	350 million
Securities	100 million	Bank capital	50 million
Loans	200 million		
Total	400 million		400 million

Required:

- i. Compute the Return on Assets (ROA), the equity multiplier (EM), and Return on Equity (ROE) if the net profit for the year was 20 million. **(3 marks)**
 - ii. Suppose you are considering holding shares of Tujimudu bank or Tujikaze Bank. The ROA for both banks is the same. Tujikaze bank has an ROE of 15%. In which bank would you prefer to hold an equity stake? Explain. **(2 marks)**
- c) Capital adequacy management is one of the key principles of bank management. Discuss the importance of bank capital. **(6 marks)**

QUESTION 3 (20 MARKS)

- a) Monetary policy is conducted by Central Banks using a variety of tools. Discuss how the Central Bank of Kenya controls the money supply in the economy through open market operations, the Central Bank Rate, and the Cash Reserve Ratio. **(8 marks)**
- b) Monetary policy changes made through the Central Bank Rate occur with a lag. This makes policymakers to be more concerned with adjusting policy according to changes in the expected inflation rate rather than the current inflation rate. In light of this, assume that the monetary policy committee employs Taylor's rule, what should be the Central Bank Rate target if the equilibrium real CBR is 5%, the positive output gap is 5%, the target inflation rate is 4% and the actual inflation rate is 6%? **(3 marks)**
- c) Using a well labelled diagram, describe the financial system. Discuss the key function of the system, the various participants, and direct vs indirect financing. **(5 marks)**
- d) Assume that Monetary aggregate (M2) is given as 1300 billion. The amount of demand deposits is 570 billion, while savings and time deposits amount to 500 billion. What is the value of the monetary base if the total amount of reserves (R) is at 170 billion? **(3 marks)**
- e) How will the money supply M2 given above change if you are provided with additional

information that the amount of excess reserves has increased from 20 billion to 30 billion everything else is constant? **(1 mark)**

QUESTION 4 (20 MARKS)

- a) For a commodity to function effectively as money, and be accepted as payment for goods and services or in the repayment of debts it has to meet several criteria. Discuss **four** characteristics of money. **(4 marks)**
- b) You are provided with the following data for the FY 2019/20 and FY 2020/2021 of an economy showing various components.

Component	Amount (Billions) 2019/2020	Amount (Billions) 2020/2021
Public debt	240	360
Demand deposits	1350	1500
Tax revenues	680	940
Currency in circulation	220	500
Imports	550	700
Residents foreign currency deposits	550	630
Time deposits	430	540
Exports	650	900
Savings deposits	460	680

Required:

Compute the M0, M1, M2, and M3 aggregates for the two years. **(4 marks)**

- c) The IS curve describes the relationship between real interest rates and aggregate output when the market for real goods and services is in equilibrium. The curve shifts whenever there is a change in some factors. Discuss **three** of these factors and the direction the IS curve takes assuming there is an increase in each of the factors. **(8 marks)**
- d) Financial innovation may lead to major changes in the financial systems and contribute to financial institutions potentially making profits. The innovations are stimulated by drastic changes in the financial and economic environment. Discuss **two** types of financial innovation. **(4 marks)**

QUESTION 5 (20 MARKS)

- a) The quantity theory of money demand defines the velocity of money as the average number of times a shilling is spent in buying the total amount of final goods and services produced during a given time period. You are provided with the data below for money supply (M) and the annual nominal Gross Domestic Product (PY) of an economy for five years. The money supply has been growing at 5% per year.

P is the price level and Y is aggregate output (income).

	2017 (Billion)	2018 (Billion)	2019 (Billion)	2020 (Billion)	2021 (Billion)
M	200	210	220.5	231.53	243.10
PY	1,800	2,200	2,500	2,700	2,900

Required:

- i. In accordance with the quantity theory of money demand, compute the velocity of money for each of the five years. **(5 marks)**
 - ii. Calculate the nominal GDP for the year 2022 assuming that the velocity remains the same as that of 2021 and the money supply grows by 7%. **(3 marks)**
- b) Distinguish the Keynesian theories of money demand from the quantity theory of money. **(3 marks)**
- c) According to portfolio theories of money demand, people decide how much of an asset, including money, they want to hold as part of their overall portfolio of assets. Discuss **three factors** that determine money demand according to these theories. **(6 marks)**
- d) With the aid of an example, explain the process of asset transformation performed by a financial institution. **(3 marks)**