FINANCIAL INSTITUTIONS AND MARKETS

ATTEMPT QUESTION ONE AND TWO OTHER QUESTIONS

TIME: 2 HRS

1.

a. "In a world without information and transaction costs, financial intermediaries would not exist". Is this statement true or false? Explain. (6 mks)

SOLUTION

- ***True***[U1]

Financial intermediaries serve some important functions that relate to lowering information and transaction costs.

- ***Resolve pre contract information asymmetry and duplicated screening***
  By virtue of their scale of operations and the fact that they can avoid duplicated screening, costs of pre contract information asymmetry are reduced[U2]***.***
- ***Resolve post contract information asymmetry***
  The financial intermediaries are able to monitor their customers post contract and hence reduce moral hazards[U3]***.***
- ***Information costs are reduced primarily through economies of scale in information gathering and processing, examples include banks seeking information about customers***[U4]

b. How does risk sharing benefit both financial intermediaries' and private investors? (4 mks)

Risk is the chance that the value of financial assets will change relative to what you expect. One advantage of using the financial system to match individual savers and borrowers is that it allows the sharing of risk. For example, if you buy a share of Safaricom stock for Ksh. 3.50, that share may be worth Ksh. 1.00 or Ksh. 5.00 in one year's time, depending on how profitable it is. Most individual savers seek a steady return on their assets rather than erratic swings between high and low earnings. One way to improve the chances of a steady return is by holding a portfolio of assets. For example, you might hold some bonds, some shares of stock, and some shares in a mutual fund. Although during any particular period one asset or set of assets may perform well and another not so well, overall the returns tend to average out. This splitting of wealth into many assets is known as diversification. The financial system provides risk sharing by allowing savers to hold many assets. The ability of the financial

system to provide risk sharing makes savers more willing to buy stocks, bonds, and other financial assets. This willingness, in turn, increases the ability of borrowers to raise funds in the financial system. The financial system also helps reduce risk through provision of pure insurance services, life or general, wholesale and retail, which enable people or businesses to lay off exposure to risks by pooling their exposures with others*[U5]*.

c. Discuss some of the manifestations of the globalization of world capital markets. (6 mks)

- **Increased cross border capital flows and investments.**
- **Liberalization- breaking down of barriers to foreign investments.**
- **Countries and corporations floating securities outside of their jurisdictions e.g. countries floating international bonds**[U6]**.**
- **Local companies floating their shares outside their home countries like cross listing.**

d. calculate the value of a Ksh. 100 zero coupon bond with 5 years to maturity if the yield to maturity is 6%. (2 mks).

N=5

R=6%

$$\mathbf{v} = \frac{\mathbf{100}}{(\mathbf{1} + \mathbf{6\%})^{\mathbf{5}}} = \mathbf{Ksh.\,74.7}\text{[U7]}\mathbf{3}$$

e. Discuss the pros and cons of financial innovation. (6 mks)

Case for: expected to discuss 4 of the following points

- **Raise capital out of the regulatory balance sheet.**
- **Balance sheet management.**
- **Funding diversification.**
- **Improve firm liquidity**[U8]**.**
- **Lower cost of funds.**
- **Raise strategic profile.**
- **Matched funding.**
- **Transfer of risk.**
- **Systems.**

Case against[U9]:

- **Raises moral hazards once firms offload loans assets.**
- **Misuse of securitization may have led to build up of excessive risk during the global financial crisis.**
- **Complexity of products makes it hard to assess their riskiness.**

2. Although real assets comprise the true productive capacity of an economy, it is hard to conceive of a modern economy without well-developed financial markets and security types. How would the productive capacity of the Kenyan economy be affected if there were no markets in which one could trade financial assets? (23.5 mks)
   Here, the discussion revolves on the roles of financial markets and the intermediaries, as noted below;

- **Asset transformation**

Financial intermediaries match non-matching providers and users of funds, enabling the pattern of providers' assets to differ from the pattern of users' liabilities. This intermediation of non-matching assets and liabilities entails four functions.

- **Pooling of risks; for example, each depositor in a bank has an indirect claim on all the mortgages, business loans, or credit card receivables owed to the bank rather than a claim to one specific mortgage or loan. The same is true for a holder of unit trusts in a mutual fund.**
- **Maturity transformation via balance sheet intermediation; a good example is banks that[U10] lend at longer average maturities than they borrow. The risk inherent in this transformation is offset by the equity (capital) cushion and the holding of a reserve of highly liquid asset (liquidity insurance achieved through lines of credit from other banks and the central bank as a lender of last resort).**
- **Maturity transformation via provision of liquidity; this gives the holder of a contractually long term asset (e.g. a share or a bond) the option of selling it immediately in a liquid market.**
- **Risk-return transformation; this is via the creation of a different mix of debt and equity investment options for savers. Under this securitization, liabilities of borrowers are 'tranched' with some investors buying bank subordinated debt, some senior debt and some making deposits.**

- **Resolve pre-contract information asymmetry (adverse selection and duplicated screening).**
- **Resolve post contract information asymmetry (moral hazards)**
- **Transaction costs**
- **Liquidity**
- **Financial intermediation**

The financial system mediates between the providers of funds (savers) and users of funds (investors/ consumers). This intermediation service plays a crucial role in capital allocation within the economy.

3.

a. "A country is always worse off when its currency weakens (falls in value)." Is this statement true, false, or uncertain? Explain your answer (4 mks).
Uncertain. A weak currency makes imports expensive (that may benefit industries producing for the domestic market). On the other hand, it makes exports cheaper, boosting revenues for exporters[U11].

b. Short-term interest rates are 2% in Kenya and 4% in the United States. The current exchange rate is 102 shillings per dollar. What is the expected forward exchange rate? (4 mks).

1 + ik = F / S * (1 + ie), where

S = Spot exchange-rate

F = Forward ex-rate, same maturity.

ik = Interest rate in Kenya on bond or CD

(1+2%) = F/0.009804[U12]*(1+4%) = 0.009615

The rate will be Ksh. 104 to the dollar, a depreciation of the shilling.

c. Discuss the following terminology[U13]:

i. The law of one price.

If two countries produce an identical good, and transportation costs and trade barriers are very low, the price of the good should be the same throughout the world no matter which country produces it. Suppose that Kenyan coffee costs Ksh.1000 per ton and identical Ethiopian coffee costs 100 Birr per ton. For the law of one price to hold, the exchange rate between the shilling and The Birr must be 10 Shillings per Birr (Birr 0.1 per Shilling) so that one ton of Kenyan coffee sells for 100 Birr in Ethiopia (the price of Ethiopian coffee) and one ton of Ethiopian coffee sells for Ksh.1000 in Kenya (the price of Kenyan coffee).

ii. Purchasing power parity.

One of the most prominent theories of how exchange rates are determined is the theory of purchasing power parity (PPP). It states that exchange rates between any two currencies will adjust to reflect changes in the price levels of the two countries. The theory of PPP is simply an application of the law of one price to national price levels rather than to individual prices. Suppose, from the previous example, the price of Kenyan coffee rises to Ksh. 1200 per ton. This means that from the law of one price, the exchange rate must be Ksh. 12 to One Ethiopian Birr.

iii. Local arbitrage.

Local arbitrage arises when there exists discrepancies in the exchange rates of two currencies. For example, the Kenya shilling for Ksh. 25 to the Uganda shilling in location A, and Ksh. 29 at location B. there exists an arbitrage opportunity to make a riskless profit of Ksh. 4 less the transactions costs.

iv. Triangular arbitrage (8 mks).

When there exists an opportunity to take advantage of exchange discrepancies between three currencies to make a riskless profit as illustrated here. The Kenya shilling is trading at Ksh. 85 to the dollar, and Ksh. 9 to the Rand. We would expect the dollar to exchange at 9.44 to the Rand. If it happens to be trading at Ksh. 12, there is a chance for triangular arbitrage to make Rs. 2.56 per dollar.

d. Short-term interest rates are 2% in UK and 4% in Kenya. The current exchange rate is Ksh. 150 per sterling pound. If you can enter into a forward exchange rate of Ksh. 135 per sterling pound, how can you arbitrage the situation? (4 mks).

1 + ik = F / S * (1 + ie), where

S = Spot exchange-rate

F = Forward ex-rate, same maturity.

ik = Interest rate in Kenya on bond or CD

(1+4%) = F/0.006667*(1+2%) =0.006798

Rate of Ksh. 147 to the pound in future.

Can enter into a forward contract at Ksh[U14]. 135. The currency will be sold at Ksh. 147 in the market upon exercising the contract making a profit of Ksh. 12 per pound sterling.

4.

a. Discuss the pros and cons of the regulation of financial markets. (9 mks).

PROS (PURPOSE) OF FINANCIAL SECTOR REGULATION

1. **Governments primarily regulate industries with a view to protecting consumers. This, for example, is why Governments regulate public utilities which may use monopoly positions to exploit consumers.**
2. **Related to the above (Protecting consumers), another argument for government regulation is based on the existence of destructive, ruinous, or cutthroat competition. This may drive out firms from the industry leading to monopolies that may exploit consumers.**

3. **In the financial sector, an additional motivation for regulation is maintaining financial stability, which is a clear public good. Asymmetric information can lead to widespread collapse of financial intermediaries, referred to as a financial panic. Because providers of funds to financial intermediaries may not be able to assess whether the institutions holding their funds are sound, if they have doubts about the overall health of financial intermediaries, they may want to pull their funds out of both sound and unsound institutions. The possible outcome is a financial panic that produces large losses for the public and causes serious damage to the economy.**
4. **Asymmetric information in financial markets means that investors may be subject to adverse selection and moral hazard problems that may hinder the efficient operation of financial markets. Risky firms or outright crooks/ criminals may be the most eager to sell bad securities to unwary investors, and the resulting adverse selection problem may keep investors out of financial markets. Furthermore, once an investor has bought a security, thereby lending money to a firm, the borrower may have**[U15] **incentives to engage in risky activities or to commit outright fraud. The presence of this moral hazard problem may also keep investors away from financial markets. Government regulation can reduce adverse selection and moral hazard problems in financial markets and increase their efficiency by increasing the amount of information available to investors.**

DRAWBACKS OF FINANCIAL SECTOR REGULATION

1. **Regulation may depress the returns (Profits) earned by financial institutions by increasing costs needed for compliance with the regulations. An example is the minimum capital requirements of Ksh. 1 billion for commercial banks.**
2. **Regulation may lead to an increase in prices i.e. the commissions, accounts ledger fees charged to consumers. Alternatively, the financial institutions may resort to cost cutting measures that lower the quality of service. All this will be in a bid to meet the costs of regulation.**
3. **It has been found that with tighter regulations, financial institutions tend to engage in riskier behavior. For example, they issue riskier loans in order to make an adequate**[U16] **return on capital for the investor.**
4. **The cost of the regulatory process (to the government) must be emphasized. If regulation is truly to serve the public interest, it must increase the efficiency of the entire social system. That is, its benefits must exceed its costs. Too often the net benefits of regulation are overestimated because of a failure to consider its costs.**
5. **Regulations may make members of the public (Consumers) develop a false sense of safety. Experience shows that regulations are not an absolute insurance against failure of institutions. The fact is those financial crises occur even when regulations and regulators are present. Regulators often react to crisis by packaging new regulations- which raises the question of whether they have the moral authority to do so.**

   b. To what extent is self regulation applicable in the financial sector? (3 mks)

The extent of appropriate governance mechanisms and sanctions for firms that fail to meet the self prescribed standards of conduct may inform this. The Nairobi securities

exchange, for example has rules regarding firms listed at the bourse, and sanctions for not observing them. Financial markets cannot however be left to entirely self regulate due to the externalities involved when there is instability in the sector.

c. Under what circumstances might regulation decrease rather than increase the stability of an industry? (4 mks)

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d. How important is moral hazard as a determinant of people's behavior? Provide examples of moral hazard related to the financial services industry. (4 mks).
The change in behavior that take place when a party is insured against risk, e.g. by driving more carelessly once they have their vehicle insured[U18]**.**

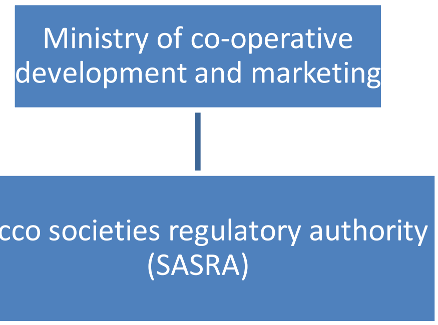
5.

"The existing regulatory framework for the financial sector in Kenya consists of a number of independent regulators each charged with the supervision of their particular sub sectors".

Discuss the structure of financial sector regulation in Kenya and highlight 4 GAPs and 2 OVERLAPS (Use diagrams where appropriate) (20 marks)

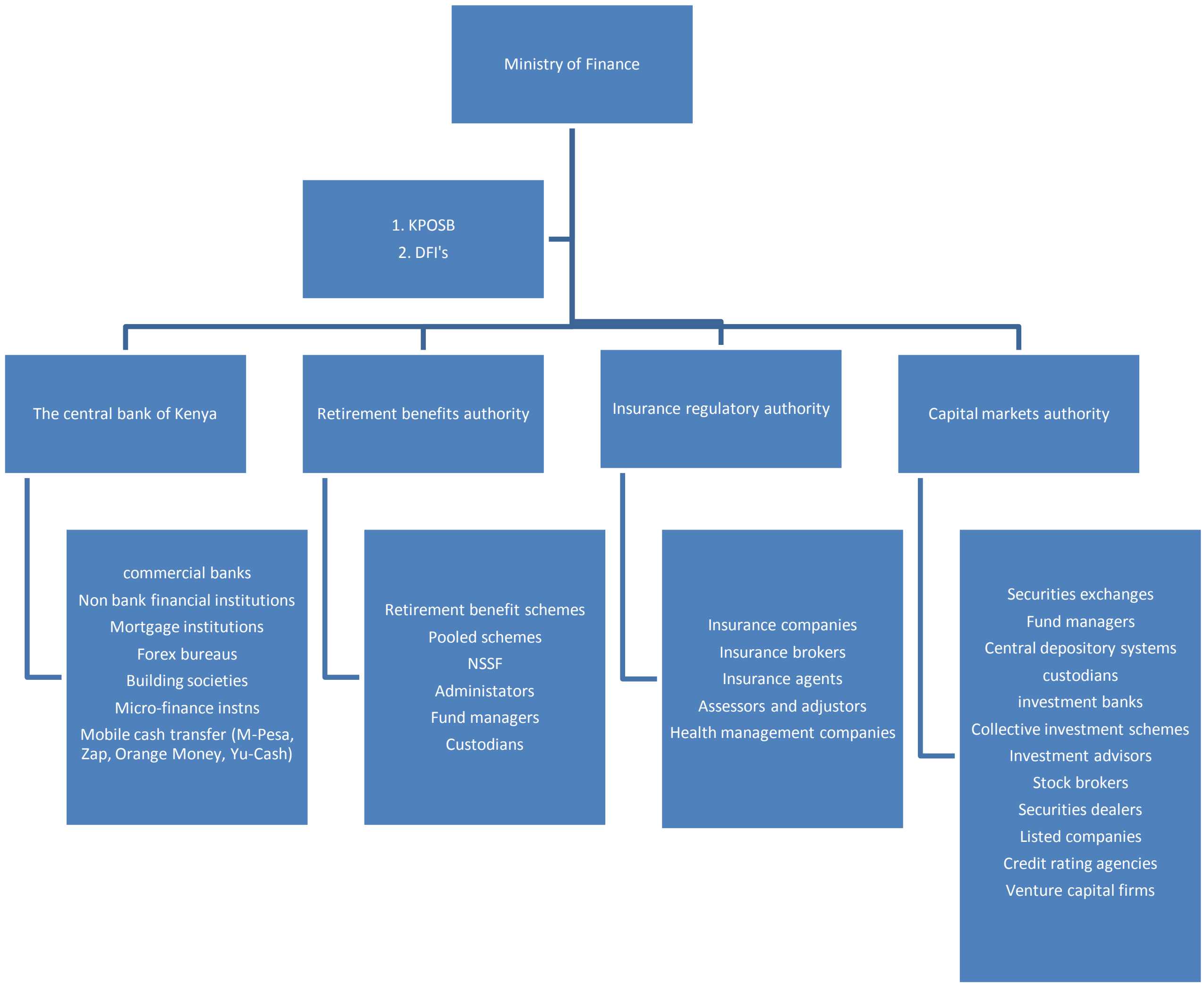
STRUCTURE OF FINANCIAL SECTOR REGULATION IN KENYA

SACCO SOCIETIES REGULATORY AUTHORITY (SASRA)



The Sacco Societies Regulatory Authority (SASRA) is established[U19] under the Sacco Societies Act of 2008 with the following mandate:

- License Sacco Societies to carry out deposit taking business;
- Regulate and supervise deposit taking Sacco Societies;
- Manage the Deposit Guarantee Fund under the trustees appointed under the Act;
- Advise the minister on national policy on deposit taking Sacco Societies in Kenya. (Refer www.sasra.go.ke)



[U20]

Overlaps:

Some sectors are under more than one regulatory body. This may lead to regulatory arbitrage. They include.

- Fund managers.
- Custodians

Gaps- Some bodies are under no regulation.

- Post office savings bank.
- Development banks.
- Electronic banking security issues.