## CHAPTER 3:

## Banks

# Textbook Questions

### Review questions

*The following questions appear in the textbook on page 79.*

*Answer the following questions.*

**Give definitions that demonstrate your understanding of the following concepts:**

1. **Money**
2. **Currency**
3. **Current account deposit**
4. **Cheque**
5. **Reserve ratio**

**a)** **Money**

**Money is something that is generally accepted as payment when products are exchanged. It is almost invariably present on one side of an exchange. If an exchange of goods were to take place without money, we would refer to it as a barter transaction rather than a money transaction. Money can assume different forms. In modern economies it exists in the form of coins, banknotes and demand deposits (cheque accounts).**

**Money is not only a medium of payment, but also a unit of account and a store of value. Other items can from time to time perform the functions associated with such characteristics, but money is the only item that performs all three functions simultaneously. Money is a unit of account because we measure the value of (other) items in terms of it. Other items can also perform this role. For example, in Britain the value of horses was once measured in terms of guineas (21 shillings) rather than in British pounds (20 shillings). This took place even when there was no such thing as a 21-shilling note. The existence of barter indicates that money does not have to be present when goods and services are exchanged. And while money is a store of value, other things – such as gold – can also be stores of value.**

**b) Currency**

**Money exists in the form of coins, banknotes and demand deposits. Coins and banknotes are referred to as currency. Value-wise, the percentage of exchanges that take place with the aid of currency is relatively small. When we add up the total amount of coins, banknotes and demand deposits in the hands of the private non-bank sector, we arrive at the so-called narrow definition of money, usually referred to as M1. Suppose that there were R10 million coins and R90 million banknotes in circulation in South Africa and that demand deposits (current accounts) added up to R900 million. M1 would then be given as follows:**

**M1 = (R10m + R90m) + R900m = R1000m**

**The figures between brackets represent the total value of the currency in this example.**

**c) Current account deposit**

**In the example just given, demand deposits are R900 million. A demand deposit is often referred to as a current account. It is an account out of which transfers can be made by means of writing a cheque. In the last few decades, of course, such transfers have increasingly been made with the aid of the Internet, through what are known as electronic fund transfers or EFTs. In both cases instructions are being made to a bank to transfer funds out of a bank deposit. Such deposits are termed demand deposits because the individuals holding them can demand the money at any time. From the bank’s point of view, a demand deposit is a liability.**

**d) Cheque**

**A cheque represents a written instruction to a bank to transfer funds out of one bank deposit into another. These days the instructions tend to take place electronically. One can also withdraw currency out of one’s demand deposit account with the aid of a cheque and one can also withdraw funds electronically (via an ATM). The cheque itself is not money – it is simply a written instruction. The actual money involved has to do with what is in the bank account. These days fewer and fewer transactions are being performed with the aid of cheques. When, however, we transfer funds from our bank account to somebody else’s electronically with the aid of the Internet, we are still using a process that involves an instruction to our bank. The way in which we instruct our bank to make a transfer may have changed, but the process involved is still similar to the one that in the past was performed with pen and paper.**

**e) Reserve ratio**

**The reserve ratio under discussion in this chapter has to do with the amount of reserves held by a bank seen in relation to its obligations. The deposits that banks keep with the Reserve Bank are defined as their reserves (or part of their reserves). So if a bank has R10 million on deposit at the Reserve Bank, and if customers have a total of R100 million in their check accounts, then the (actual) reserve ratio would be R10 million/R100 million = 1/10 or 0,10. We may distinguish such an actual reserve ratio from a ratio prescribed by law. For example, the monetary authorities may insist that banks maintain a reserve ratio of at least five per cent or 0,05. Under such conditions a bank with demand deposits of R150 million would have to maintain a deposit of at least R7,5 million at the Reserve Bank.**

**Explain the following quote from Sayers:**

***Banks are institutions whose debts – usually referred to as “bank deposits” –   
are commonly accepted in final settlement of other people’s debt.***

**If you owed somebody a fairly large amount of money – say R17 000 – it is unlikely that you would pay him or her by means of currency (coins and banknotes). More likely, you would instruct your bank to transfer the R17 000 out of your account into the bank account of the person (Mrs Smith) to whom you owe the money. If Mrs Smith’s bank account is at the same bank as yours, the transfer is a simple intrabank transfer. If Mrs Smith banks at another bank the (interbank) transfer is a bit more complicated. You instruct your bank to pay the other bank and that other bank transfers the funds into Mrs Smith’s account. You are paying Mrs Smith with the aid of your cheque account, also called a demand deposit or current account. In other words, you are paying with the aid of a demand deposit. In the above quotation from Sayers, the bank deposits being referred to are the demand deposits (cheque account or current account) that we are talking about. So a bank is something that transfers funds from one account to another (under instruction). The bank deposits of a bank are its obligations, so banks are institutions whose debts (demand deposits) are commonly accepted in final settlement of other people’s debts.**

**Explain how banks can create money.**

**Under the term “money” we include both currency (coins and banknotes) and demand deposits (cheque or current accounts). It is illegal for the private sector (and that includes banks) to create coins or banknotes. Only the monetary authorities can do that (via the mint), but since money also consists of demand deposits, the banking system as a whole can create money to the extent that banks can create demand deposits. If an individual bank holds excess reserves, it can extend loans to old and new customers. It does so by creating overdrafts. So if I as an individual customer go to my bank and ask for a loan of R10 000, the bank can extend that loan to me by granting me permission to write out cheques (or make Internet or electronic transfers) up to an amount of R10 000. When I then write out cheques for a total of R10 000, the money supply will go up by R10 000 because demand deposits are one of the components of the money supply (M1).**

**List and explain the factors that play a role in determining the size of demand deposits.**

**The answer to question 3 has illustrated that the banking system as a whole can create money by extending loans – in other words by creating demand deposits (current accounts). The extent to which it can do so in the simplified model under discussion is dictated by the reserve ratio in force. A central bank will usually require banks to keep reserves (deposits) at the central bank, the amount of which is dictated by the reserve ratio. So if a bank has R100 million of demand deposits, and if the reserve ratio is 10%, then that bank has to keep R10 million on reserve at the central bank. If it has reserves in excess of that R10 million, it is in a position to create more demand deposits.**

**The extent to which banks can create demand deposits is also governed by the extent to which individuals like to make payments by means of currency (coins and banknotes). If banks extend loans to individuals, some of the payments subsequently made by individuals will be by means of coins and banknotes.**

**Explain the following roles of banks:**

1. **As intermediaries**
2. **As payment service providers**
3. **As facilitators of investment activity by raising funds**

**a) As intermediaries**

**The traditional role of the bank as the intermediary revolves around its role as deposit taker and lender. The cumulative deposits of customers allow the bank to extend loans through the creation of overdrafts for borrowing customers. Hence the bank acts as an intermediary, collecting deposits from those who are able to save or who have funds and extending loans to those who need credit for purchases and enterprise. This means there is no need for someone who needs credit to find someone with excess funds. The bank does this as a matter of course.**

**b) As payment service providers**

**Quite apart from acting as intermediaries for funds, a bank can also assist clients by providing them with payment services. If a person or firm (the payer) wants to pay a certain amount of money (say R1500) to somebody (the payee) who banks at the same bank, the transaction can take place by the payer instructing his or her bank to transfer funds to the payee. The payment process can take place by means of a number of different payment instruments, including currency, cheque, debit card, credit card, or electronic instruction via the Internet or mobile phone. If we leave aside payment via currency, a bank will be facilitating the payment through technology, accepting and authorising the instruction and ultimately effecting the transfer. The same principle applies when the payer and the payee bank at different banks – here we also have one bank paying another bank, and once again the banks are acting as intermediaries. They are facilitating the transaction.**

**c) As facilitators of investment activity by raising funds**

**A bank can assist its clients by raising funds for a project. If a firm wants to build a factory, then a bank can assist it by raising funds from a third party. Here the bank is not itself lending the firm funds. Nevertheless the bank has access to information that other parties may be willing to provide the funds required. The bank links willing lenders to willing borrowers.**

**Clearly distinguish between the following:**

1. **Intrabank and interbank payments**
2. **The net settlement and the gross settlement method**
3. **Commercial and investment banking**

**a) Intrabank and interbank payments**

**Suppose there are two banks in an economic system, bank A and bank B. Individuals who bank at bank A can make payments to other individuals who also bank at bank A, and if the transactions take place via current accounts, we say that an intrabank transaction is taking place. If, however, individuals who bank at bank A pay individuals who bank at bank B and it the transactions take place through the medium of demand deposits, then we say that interbank payments have taken place.**

**b) The net settlement and the gross settlement method**

**Suppose at the end of a trading day bank A owes bank B R40 million, and bank B owes bank A R65 million. The banks can sort this out with bank A paying bank B R40 million and by bank B paying bank A R65 million. This would represent a gross settlement method. However, it is also possible that all that happens is that bank B pays bank A the excess amount involved, namely R25 million. We then say that the disparity has been reconciled by a net settlement method. When hundreds and thousands of transactions take place, there is apparently a lot more work involved in the gross settlement method, but by the same token it might be easier to keep track of all the processes by treating each transaction as a payment in itself and not just making one (netting out) payment at the end of the trading day. In South Africa, we employ the gross settlement method for large-value payments – that is, those exceeding R5 million per transaction.**

**c) Commercial and investment banking**

**It is easier to understand the distinction between commercial and investment banking if we bear in mind that in the old days (the previous century) commercial banks were banks that issued deposits that could be withdrawn (or transferred) by cheque. Commercial banks today are involved in collecting deposits, extending loans and offering payment services. Then, too, in the old days there were banks that arranged finance (via third parties) without necessarily raising the funds themselves. Such banks were known as merchant banks. So, different forms of banking were done by different types of banks. These days, merchant banks are known as investment banks and their activities including raising funds and offering investment and analytical advice. Distinctions between different banks have largely disappeared and we find one bank that can both extend demand deposits and raise finance for individual firms via third parties. We do find, however, that banks continue to employ such terms internally. Annual reports of large banks tend to report on their commercial and investment banking activities.**

**Define and explain the *interest* income and the *non-interest* income of banks.**

**It is possible to conceive of a bank that derives its sole income by borrowing money from customers at, say, 5 per cent and by lending out money to customers at, say, 8 per cent. Its profit will then be dictated by the size of the interest differential. During the course of a year, that bank could make profits of, say, R117 million.**

**This same bank, however, could provide a host of other services to its clients. Such services could be related to payment services (charges for services on accounts such as transfers and debit orders as well as account fees), investment advice and the provision of foreign exchange (for example). Suppose that during the same financial year it earns income of R118 million from these non-interest activities.**

**This example illustrates that in analysing the income earned by banks, we can distinguish the interest income of banks from the income generated by the provision of non-interest-related services. Together they make up the total income earned by a bank. Whether interest or non-interest income dominates in any one bank depends on their business model.**

**In South Africa, the non-interest income has grown over the years so that it is roughly half of the total income earned by banks.**

**Explain what is meant when we say there is a mismatch between the assets and the liabilities of banks.**

**On any particular day an individual bank may face a drain on its reserves if a substantial number of customers need to run down their demand deposits. So banks have to keep things in reserve, which are their reserve assets. In a simplified model, the assets of a bank are the reserves it keeps at the Reserve Bank. (That is why it is called a *reserve* bank.) The adequacy of such reserves has to be seen in relation to bank’s demand deposits (liabilities). If we say that there is a mismatch between the assets (reserves) and the liabilities (demand deposits) of a bank, we are implying that the reserves are too small in light of the demands that might be made against that bank (the potential withdrawal of deposits).**

**Of course, such reserves held at the Reserve Bank are not the only form of reserves. Banks hold all sorts of other assets as well and before running down its reserves at the Reserve Bank, an individual bank may first consider liquidating other assets. So in considering the relationship between the assets of a bank and its commitments, we have to take the whole range of assets – together with the liquidity structure involved ‒ into consideration. A bank may have a lot of assets in the form of property, and such assets cannot be liquidated instantaneously if a bank requires cash in a hurry.**

**When there is more than one kind of reserve asset and when there is more than one kind of obligation we have to take into account the liquidity structure of the assets and that of the liabilities. If the relationship between assets and obligations appears unwise in the sense that the bank would be unable to honour its commitments under certain conditions, then we could refer to this as a mismatch between its assets and liabilities.**

**Because the total assets of a bank must always (via accounting principles) equal its total liabilities, there can in one sense never be a mismatch between the assets and liabilities of a bank. So when we refer a mismatch, we are implicitly identifying certain areas of the assets and certain areas of the liabilities. Much the same principle is involved when we refer to imbalances in the balance of payments of a country. In a strict sense such imbalances cannot occur because the balance of payments must always balance (in an accounting sense). So when we talk of problems in the balance of payments, we are implicitly identifying certain classes of transactions – such as exports and imports.**

**Explain how the Banks Act 94 of 1990 regulates banks with regard to the following:**

1. **Minimum capital requirements**
2. **Minimum capital-adequacy ratio**
3. **Liquid asset requirements**

**a) Minimum capital requirements**

**Regulations to ensure financial soundness embrace a number of aspects. In the first instance, a firm must meet minimum capital requirements (such as shareholder or Tier 1 capital). In South Africa, the Banks Act sets the minimum capital requirement at R250 million.**

**b) Minimum capital-adequacy ratio**

**Under the guidelines from the BIS, banks are required to maintain a certain level of capital against risk-weighted assets (which are mostly loans). This ratio is referred to as the capital-adequacy ratio, which historically has been set by the BIS at 8 per cent. In South Africa, a minimum capital-adequacy ratio – higher than the BIS minimum recommended ratio of 9,5 per cent – has been applied.**

**c) Liquid asset requirements**

**Banks have to invest a certain portion of their deposit liabilities in certain prescribed assets such as government bonds, Treasury bills and other safe securities. The daily liquid asset requirement is set at 5 per cent of total liabilities as adjusted.**