
UNIT 9 FINANCIAL INTERMEDIARIES

Structure

- 9.0 Objectives
- 9.1 Introduction
- 9.2 The Nature and Role of Financial Intermediaries
- 9.3 Illiquid Assets and the Creation of Liquidity
- 9.4 The Role of Deposit Insurance
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9.0 OBJECTIVES

After going through the Unit, you should be able to:

- define financial intermediation;
- describe the nature and role of financial intermediaries;
- explain the role of deposit insurance;
- discuss how financial intermediation helps in the creation of liquidity; and
- describe the influence of financial intermediation on monetary policy.

9.1 INTRODUCTION

You have learnt about assets and their pricing in the first two Blocks. This Block, as you know, is about financial institutions. The present Unit, the first, in this Block, discusses financial intermediaries. The term financial intermediary may refer to an institution or firm that performs intermediation between two parties in a financial context. The first party is typically the provider of some service or asset, and the second the customer. There are two types of financial intermediaries: banking and non-banking. In this unit we shall study both these types.

We begin by discussing in the next section the nature and role of financial intermediaries. We shall see how they essentially intermediate between possessors of surplus funds (the savers) and those who need funds. Financial intermediaries help to lessen the transaction costs that would arise if the savers and the entities that needed funds were to interact directly and engage in direct finance. In the subsequent section we look at how financial intermediation reduces illiquidity of assets in the economy and enhances liquidity. In the following section, we discuss a method of dealing with a method of protecting the deposits of depositors in financial intermediaries, namely, deposit insurance. In the final section, we look at the way the working of financial intermediaries affects economic activities and variables, and how this is taken into consideration by the central bank while formulating monetary policy. Thus the final section deals with the impact of monetary policies on financial

intermediation and the influence of financial intermediaries in the formulation of monetary policy.

9.2 THE NATURE AND ROLE OF FINANCIAL INTERMEDIARIES

In this section we shall explore the nature of financial intermediaries and the role that they play in the economy. Financial intermediaries intermediate between savers and investors. They mobilise savings as well as lend money. Their liabilities are the deposits and funds that investors have placed with them, that is, their liabilities are towards the ultimate savers. Their assets are from loans and the investment in securities that they make. Financial intermediaries obtain funds by issuing financial claims against themselves to market participants, and then investing those funds. The investments that financial intermediaries make can be in the form of loans or securities. These are known as direct investments. You will study this kind of behaviour by banks in the next section. Here, we may give an example of an investment company. An investment company pools the funds of investors and uses those funds to buy a portfolio of securities like stocks and bonds. Investors providing funds to the investment company receive a claim that entitles them to a pro rata share of the outcome of the portfolio. Here the funds provided by the investors to the investment company are called indirect investment. The funds collected by the investment company and used to acquire a portfolio of financial assets constitute direct investment.

The saving-investment process of modern economies is centred on financial intermediation. Financial intermediaries are firms that borrow from consumer/savers and lend to companies that need resources for investment. In contrast, in capital markets investors contract directly with firms, creating marketable securities. The prices of these securities are observable, while financial intermediaries are not visible. One reason why financial intermediaries are important is that the overwhelming proportion of every rupee financed externally comes from banks. Bank loans are the predominant source of external funding in most countries. In almost no country are capital markets a significant source of financing as compared to banks. Equity markets have low significance. As the main source of external funding, banks play important roles in corporate governance, especially during periods of firm distress and bankruptcy. The idea that banks “monitor” firms is one of the central explanations for the role of bank loans in corporate finance. Bank loan covenants can act as monitoring devices, signaling to the bank that it can and should intervene into the affairs of the firm. Unlike bonds, bank loans tend not to be dispersed across many investors. This facilitates intervention and renegotiation of capital structures. Bankers are often on company boards of directors. Banks are also important in producing liquidity. Because bank loans are the main source of external financing for firms, if the banking system is weakened, there appear to be significant real effects.

We will study about banks in the next Unit. In the present one, we discuss financial intermediaries in general.

The main role of financial intermediaries is in reducing transactions costs and asymmetric information in financial markets. Two other functions that financial intermediaries perform are that they facilitate in transfer of risk, and they help in providing service in terms of making participation in capital markets easy by simplifying the dealing with a complex maze of assets and instruments, which, in the absence of financial intermediaries, participants would find very difficult. Intermediation theory has suggested that it is frictions such as transaction costs and asymmetric information

that are important in understanding intermediation. Gurley and Shaw and many subsequent authors have stressed the role of transaction costs. For example, fixed costs of asset evaluation mean that intermediaries have an advantage over individuals because they allow such costs to be shared. In the same way, trading costs mean that intermediaries can more easily be diversified than individuals. Investors do not usually have complete information about financial markets and their information sets are thus not complete. This leads to the creation of considerable transaction costs and friction. Some experts have suggested that since intermediaries have greater information than investors, an intermediary can signal its informed status to the investors by itself investing its wealth in assets about which it has special knowledge. Diamond has suggested that intermediaries overcome asymmetric information problems by acting as “delegated monitors.”

In recent years the financial systems in many countries have undergone a dramatic transformation. Financial markets such as the stock and bond markets have grown in size and volumes traded. Simultaneously, there has been extensive financial innovation, which has accelerated in recent decades. This includes the introduction of new financial products, such as securitised assets, as well as derivative instruments such as swaps and complex options. These have all grown tremendously in volume. At the same time, new exchanges for financial futures, options and other derivative securities have appeared and become major markets. The importance of different types of intermediary over this same time period has also undergone a significant change. Mutual funds and pension funds have grown tremendously in scope while the growth of insurance companies has not been to the same extent. New types of intermediary such as non-bank financial firms like GE Capital have emerged which raise money entirely by issuing securities and not at all by taking deposits. In short, traditional intermediaries have declined in importance even as the sector itself has been expanding. Perhaps the most important change in intermediaries’ activities that has occurred in the last thirty years is the growth in the importance of risk management activities undertaken by financial intermediaries. The change in the breadth of the markets that are available for hedging risk has not led very many individual or corporate customers to manage their own risk. Rather, it has meant that risk management has now become a central activity of many intermediaries.

The interesting thing is that this increase in the breadth and depth of financial markets has been the result of increased use of these instruments by financial intermediaries and firms. They have not been used by households to any significant extent. In fact, the increased size of the financial market has coincided with a dramatic shift away from direct participation by individuals in financial markets towards participation through various kinds of intermediaries. This is another important role the intermediaries play, that of expanding the financial markets by themselves participating.

Check Your Progress 1

- 1) Distinguish between banking and non-bank financial intermediaries.

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- 2) What important role do financial intermediaries play in the economy?

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- 3) What changes are taking place in financial markets in recent years? What role is being played by financial intermediaries in this change?

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9.3 ILLIQUID ASSETS AND THE CREATION OF LIQUIDITY

Financial intermediaries provide the link between the financial and the real sector. Financial intermediaries perform the roles of resource mobilisation and allocation, risk diversification and liquidity management to foster development of the real sector.

In a complete information deterministic world also, financial intermediaries can have the important role of a temporary resource provider when there is a time lag between the firms' factor payments and receipts from sale proceeds. This role becomes more significant when the firms do not have enough resources of its own to cover its factor payments and the financial intermediaries come in and provide working capital finance.

In this section, we shall be dealing with the working of financial intermediaries and the quantum of liquidity in the system. The existence of a secondary market for a financial asset increases the asset's liquidity. Do financial intermediaries change the distribution of assets such that illiquid assets are reduced in number and the liquidity goes up? Or does the presence of financial intermediaries lead to displacement from the total stock of money in the economy? To answer these we must look at the relationship among credit financial assets and saving

In the various types of assets that constitute the wealth of a person or a nation, some assets like physical assets are not relevant to the pace of spending on goods and services. Others are relevant to a varying degree. Money is the most relevant asset in this regard. The greater such relevance, the closer is that asset to money and the more liquid it is. The basic characteristic common to all financial intermediaries—banking and non-banking—is that while by their operations they do not add to the stock of total wealth, they add to the liquidity of the economy by putting into the hands of potential spenders assets (liabilities of the financial intermediaries) that are more liquid than the assets (which include promises to repay) that these financial intermediaries take in exchange. The occurrence of this process leads people to say that financial intermediaries create credit. It is also why it is said that financial

intermediaries perform the useful function of mobilising saving for development, making these savings available for the financing of investment in physical capital in the economy.

The financial intermediaries accept various claims on other people (when these financial intermediaries lend) and offer their own claims: claims against themselves (when people keep their deposits with them). Customers deal with them because the liabilities of the financial intermediaries are more attractive than the liabilities of the customers themselves. The operations of financial intermediaries are exchanges of claims. The essential nature of 'credit creation' is the increase in market effectiveness because people have a high degree of confidence in financial intermediaries. This creation of credit is in the exchange of more marketable claim for a less exchangeable claim. In this respect, financial intermediaries have some influence on general economic processes. The activities of financial intermediaries are, as we have seen, related to saving and investment processes. Thus credit creation gets linked to the saving and investment processes. This is how financial intermediaries substitute, by exchanging claims, less liquid assets by more liquid ones and increase the liquidity in the economy.

9.4 THE ROLE OF DEPOSIT INSURANCE

Deposit insurance is a measure taken by banks in many countries to protect their clients' savings, either fully or in part, against any possible situation that would prevent the bank from returning said savings. Deposit insurance institutions are for the most part government run or established, and may or may not be a part of a country's central bank. The USA was the first country to establish an official deposit insurance scheme, during a banking crisis in 1934 during the Great Depression

Deposit insurance, as we know it today, was introduced in India in 1962. India was the second country in the world to introduce such a scheme – the first being the United States in 1933. Banking crises and bank failures in the 19th as well as the early 20th Century (1913-14) had, from time to time, underscored the need for depositor protection in India. After the setting up of the Reserve Bank of India, the issue came to the fore in 1938 when the Travancore National and Quilon Bank, the largest bank in the Travancore region, failed. As a result, interim measures relating to banking legislation and reform were instituted in the early 1940s. The banking crisis in Bengal between 1946 and 1948, once again revived the issue of deposit insurance. It was, however, felt that the measures be held in abeyance till the Banking Companies Act, 1949 came into force and comprehensive arrangements were made for the supervision and inspection of banks by the Reserve Bank.

It was in 1960 that the failure of Laxmi Bank and the subsequent failure of the Palai Central Bank catalyzed the introduction of deposit insurance in India. The Deposit Insurance Corporation (DIC) Bill was introduced in the Parliament on August 21, 1961 and received the assent of the President on December 7, 1961. The Deposit Insurance Corporation commenced functioning on January 1, 1962.

The Deposit Insurance Scheme was initially extended to functioning commercial banks. Deposit insurance was seen as a measure of protection to depositors, particularly small depositors, from the risk of loss of their savings arising from bank failures. The purpose was to avoid panic and to promote greater stability and growth of the banking system – what in today's argot are termed financial stability concerns. In the 1960s, it was also felt that an additional the purpose of the scheme was to increase the confidence of the depositors in the banking system and facilitate the mobilisation of deposits to catalyst growth and development.

When the DIC commenced operations in the early 1960s, 287 banks registered with it as insured banks. By the end of 1967, this number was reduced to 100, largely as a result of the Reserve Bank of India's policy of the reconstruction and amalgamation of small and financially weak banks so as to make the banking sector more viable. In 1968, the Deposit Insurance Corporation Act was amended to extend deposit insurance to 'eligible co-operative banks'. The process of extension to cooperative banks, however took a while it was necessary for state governments to amend their cooperative laws. The amended laws would enable the Reserve Bank to order the Registrar of Co-operative Societies of a State to wind up a co-operative bank or to supersede its Committee of Management and to require the Registrar not to take any action for winding up, amalgamation or reconstruction of a co-operative bank without prior sanction in writing from the Reserve Bank of India. Enfoldng the cooperative banks had implications for the DIC - in 1968 there were over 1000 cooperative banks as against the 83 commercial banks that were in its fold. As a result, the DIC had to expand its operations very considerably.

The 1960s and 1970s were a period of institution building. 1971 witnessed the establishment of another institution, the Credit Guarantee Corporation of India Ltd. (CGCI). While Deposit Insurance had been introduced in India out of concerns to protect depositors, ensure financial stability, instill confidence in the banking system and help mobilise deposits, the establishment of the Credit Guarantee Corporation was essentially in the realm of affirmative action to ensure that the credit needs of the hitherto neglected sectors and weaker sections were met. The essential concern was to persuade banks to make available credit to not so creditworthy clients.

In 1978, the DIC and the CGCI were merged to form the Deposit Insurance and Credit Guarantee Corporation (DICGC). Consequently, the title of Deposit Insurance Act, 1961 was changed to the Deposit Insurance and Credit Guarantee Corporation Act, 1961. The merger was with a view to integrating the functions of deposit insurance and credit guarantee prompted in no small measure by the financial needs of the erstwhile CGCI.

After the merger, the focus of the DICGC had shifted onto credit guarantees. This owed in part to the fact that most large banks were nationalised. With the financial sector reforms undertaken in the 1990s, credit guarantees have been gradually phased out and the focus of the Corporation is veering back to its core function of Deposit Insurance with the objective of averting panics, reducing systemic risk, and ensuring financial stability.

To start reviewing the problem of why deposit insurance exists, one should first elucidate the functions (services) of the modern banking firms. Since the work of Gurley and Shaw in 1960, economists have viewed banks and other financial institutions as intermediaries that perform special functions while channelling credit from economic agents with excessive funds to economic agents with fund shortages.

Check Your Progress 2

- 1) Do financial intermediaries help in the creation of liquidity? Give reasons for your answer.

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2) Explain the concept of deposit insurance.

3) Briefly describe the evolution of deposit insurance in India.

9.5 FINANCIAL INTERMEDIATION AND MONETARY POLICY

To conduct monetary and fiscal policies successfully, policy makers must have an accurate assessment of the timing and effects of their policies on the economy. This includes an understanding of the monetary transmission mechanisms through which monetary policy affects the decisions of firms, households, financial intermediaries and investors that influence the level of economic activity and prices. Monetary policy primarily looks at influencing the stock of money supply in the economy, and includes policies with regard to credit and interest rates.

Current theories of the economic role of financial intermediaries build on the economics of imperfect information that began to emerge during the 1970s. There is a view that financial intermediaries can be ignored because they have no real effects. They constitute a veil. They do not affect asset prices or the allocation of resources. Others feel that the savings-investment process, the workings of capital markets, corporate finance decisions, and consumer portfolio choices cannot be understood without studying financial intermediaries.

We have seen that financial intermediaries deal in financial claims. A financial claim becomes attractive to holders because of a combination of security, exchangeability and interest rates. Some claims are attractive for some factor, some for other factors. A change in the rate of interest changes the relative attractiveness of one financial claim as compared to others. People can adjust their portfolio of assets in response to such a balance of attractiveness. If interest rates rise, they will make such adjustment leave the structure of financial claims less skewed in favour of the exchangeability factor. The opposite is the case if interest rates have fallen. These changes are independent of the changes in nominal national income. A rise in interest rates will lead to the fall in the stock of money stock (for example bank deposit) relative to national income, that is, a rise in the income velocity of circulation. This interdependence of

the structure of financial claims, the level of interest rates and the flow of money income, leads to a link between financial intermediation on the one hand and monetary and interest rate policy on the other. Additionally, financial intermediaries can create credit, and, as you will read in the next unit, banks can add to the stock of money and thus add to the money supply, and therefore, monetary policy seeks to influence the amount of bank lending, and does this by controlling the proportion of reserves that banks are required to keep as cash, as well as by influencing the interest rates in the economy.

Check Your Progress 3

- 1) In what way can we see that financial intermediaries create credit?
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- 2) Explain the channel through which financial intermediation can be influenced by monetary policy.
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9.6 LET US SUM UP

In this Unit we discussed the very important activity of intermediation in the financial world. We discussed a class of special institutions called financial intermediaries. These mediate between entities with surplus funds and those who need these funds. The Unit discussed the economic processes behind the working of financial intermediaries. We saw that there are two types of financial intermediaries, banking and non-banking.

Financial intermediaries as a whole perform the basic function of transforming financial assets acquired through the market and constituting them into a different, more preferable type of assets, which becomes their liabilities. We then went on to look at how financial intermediaries help in the creation of liquidity and help to transform illiquid assets into liquid ones. After this, the concept of deposit insurance was discussed, and the development of deposit insurance scheme in India was taken up. Finally, the very important topic of monetary policy was taken up. It was observed that banking financial intermediaries create money through the process of lending. Because of this, and also because of general functions of the financial intermediaries, it was observed that there is a close two-way link between financial intermediaries and the monetary policy by the Central bank. This link was explored and discussed.

9.7 KEY WORDS

Depository Institutions	: These are institutions which accept funds from individuals and use these to participate in the debt market.
Disintermediation	: Phenomenon of depositors withdrawing funds from financial intermediaries in favour of direct finance.
Financial Intermediaries	: These are institutions through which savers can indirectly provide funds to borrowers.
Illiquidity of a Bank	: A bank is illiquid if it lacks enough liquid assets to meet the immediate demands of its creditors and debtors.
Indirect Finance	: Indirect finance involves the presence of an intermediary between borrower and lender.
Symmetric Information	: Applied to debt markets, it means a situation when borrowers and banks have the same information about whether a loan will be repaid.

9.8 SOME USEFUL BOOKS

Benton, E.G., (1976) *Financial Intermediaries, An Introduction*, Houghton, Boston

Bhole, L.M., (2004) *Financial Institutions and Markets*, 4th edition, Tata-McGraw-Hill, New Delhi.

Johnson, H.J., (1993) *Financial Institutions and Markets*, McGraw-Hill, New York.

Neave, Edwin, (1998) *Financial Systems: Principles and Organisation*, Routledge, London.

9.9 ANSWERS/HINTS TO CHECK YOUR PROGRESS EXERCISES

Check Your Progress 1

- 1) See Section 9.2 and answer.
- 2) See Section 9.2 and answer.
- 3) See Section 9.2 and answer.

Check Your Progress 2

- 1) See Section 9.3 and answer.
- 2) See Section 9.4 and answer.
- 3) See Section 9.4 and answer.

Check Your Progress 3

- 1) See Section 9.5 and answer.
- 2) See Section 9.5 and answer.

UNIT 10 COMMERCIAL BANKING

Structure

- 10.0 Objectives
- 10.1 Introduction
- 10.2 Principles of Banking
- 10.3 Coexistence of Deposits and Lending
- 10.4 Trends in Commercial Banking in India
- 10.5 Let Us Sum Up
- 10.6 Key Words
- 10.7 Some Useful Books
- 10.8 Answers/Hints to Check Your Progress Exercises

10.0 OBJECTIVES

After going through this unit, you will be able to:

- discuss the principles of banking;
- describe the main functioning of banks as financial intermediaries;
- explain the coexistence of deposits and lending; and
- analyse the basic features of, and trends in, commercial banking in India.

10.1 INTRODUCTION

The banking sector is a vital cog in the machinery of any modern economy. It is one of the major financial pillars of the financial system. Banks are one of the oldest of financial intermediaries in the financial system. They play a crucial role in the mobilisation of deposits and disbursal of credit in of credit to various sectors of the economy. A well-functioning banking system efficiently deploys mobilised savings in productive sectors and a solvent banking system ensures that the bank is capable of meeting its obligations to the depositors. In India, the banking sector is the dominant form of financial institution and accounts for more than half the assets of the financial sector.

This Unit is devoted to the study of the commercial banking system, both from a theoretical perspective and from the perspective of commercial banking in India. The next section deals with the principles of banking where the functioning of banks is explained. The role of banks is analysed and the theoretical foundations of the banking process is provided. The subsequent section attempts to discuss the simultaneous existence of deposits as well as lending is explored, and the working of the banking process under conditions of uncertainty is discussed. The final section in the main body of the Unit deals with commercial banking in India: its evolution, its achievements, and the changes it has been undergoing in recent years.

10.2 PRINCIPLES OF BANKING

Usually commercial banks are simple business or commercial concerns, which like other concerns are engaged in providing services in exchange for a price. The services

that banks provide are financial services. Banks are a type of depository institutions. Depository institutions, as the name suggests, are financial intermediaries that accept deposits. These deposits represent the liabilities (debt) of the deposit-accepting institutions. With the funds raised through deposits and other funding sources, depository institutions make direct loans to various entities and make investments in securities. The income of depository institutions comes from two sources: the income generated from the loans they make and the securities they buy.

A depository institution aims to earn a positive spread between the assets it invests in (lending and securities) and the costs of its funds (deposits and sources). This spread is known as spread or margin. Depository institutions face several types of risks like credit risks, default risks and so on. You will read more about these risks in Block 4. The basic difference between banks and other depository institutions is that banks can, lending process, create credit and increase the money supply in the economy. The fundamental difference that banks have with other financial or depository institutions are as follows: (a) the banks provide transactions services (you can and do make payments by cheques; you can't pay using your membership in thrift and credit societies) and thus banks participate in the economy's payment mechanism; (b) their deposit liabilities constitute a major part of the nation's money supply (you will read more about this in Unit 13 in Block 4); and (c) as has been mentioned above, and this is the fundamental difference that banks have with other financial institutions in terms of processes and outcomes, banks can, as a whole, create deposits or credit, and thus *increase* the money supply. We shall elaborate on this a bit presently; you will get the details in Unit 13.

To come back to the point we made in the first paragraph, banks provide financial services to consumers in exchange for in return for payment of some kind, such as interest, discount, fees, commissions, and so on. Like other firms, their objective is to make profits. However, there is one difference (this is a difference of degree rather than of kind) between banks and other profit-seeking business firms, banks have to pay much more attention to balancing profitability with liquidity. While all business firms have to deal with liquidity constraints, banks have to pay particular attention in this regard because of the nature of their liabilities. The basic fact is that banks deal with other people's money, of which a substantial portion is repayable on demand. That is why for banks liquidity management is as important as profitability management.

Commercial banks are required to hold 'voluntarily' a part of their deposits in the form of ready cash. This is called cash reserves. The ratio of cash reserves to deposits is called the reserve ratio, or cash reserve ratio. Usually the Central Bank of the country prescribes the reserve ratio that all banks must maintain. Otherwise, left to themselves, banks would be tempted to not hold the necessary ratio and indulge in excess lending. The Central Bank of a nation is also the lender of the last resort: in times of genuine difficulties, the Central Bank supplies reserves to banks. The legal reserve requirement that the Central Bank prescribes for the commercial banking system has two objectives: first, it is aimed at making deposits safe and liquid and secondly, through it the Central Bank aims to control the amount of chequeing deposits or bank money which the commercial banks are able to create. This system of modern banking in which banks are required to maintain a fraction of their deposit liabilities as reserves is known as fractional reserve banking.

We mentioned above that the feature that distinguishes banks from other financial institutions is that while other financial institutions can only transfer funds, banks can not only transfer funds but also actually *create* credit. Thus banks are not *merely* financial intermediaries. Banks are said to create deposits along with credit, or we may put it by saying that every loan given by a bank creates a deposit. This has led to the important concept of credit multiplier. The consequence of credit creation by banks is that credit creation increases the money supply and since the changes in the supply of money influences the aggregate price level, nominal national income, and other macroeconomic variables, credit activities by banks influences the level of economic activity. Since banks can create credit they can encourage investment for some time without a prior increase in saving.

We now briefly discuss the way banks can create money through the process of lending. You will get the details in Unit 13. There are several definitions of money, but however narrow or broad, all definitions agree that other than currency, demand deposits are part of the money stock. Now, loan giving by banks create chequable deposits they add to the supply of money. To put it in a nutshell, the money-creating power of banks arises from the fractional reserve system of modern banking, and that certain liabilities (demand deposits) are accepted by the public as money.

Check Your Progress 1

- 1. What is the basic difference between banks and non-bank financial intermediaries?
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- 2. In what way are banks as firms different from other business firms?
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- 3. Briefly explain banks create money by giving loans.
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10.3 COEXISTENCE OF DEPOSITS AND LENDING

In the previous section we mentioned that banks provide various types of services. They permit depositors to keep deposits with them, and they lend out to lenders. So they are providing two types of services to distinct group of people. What is

interesting about the simultaneous existence of these two types of services is that lending is to a large extent dependent on deposits. Thus banks largely use other people's money to lend to third parties. The deposits that the first group makes are the bank's liabilities. The same liabilities the banks are able to turn into assets when they lend to the borrowers.

A potential problem can arise in this scheme of things. If all depositors were to ask for their money back at the same time, and the banks find that they are unable to return those deposits, there would be a crisis. Sometimes, when there is news of one bank failing to return its depositors' deposits, that is there panic, and depositors in other banks wish to withdraw their deposits as well. Let us look at this a little closely because we have said that (a) banks have deposits and lending at the same time and (b) deposits are an input into 'producing' loans, if we look at banks as firms and loans as the 'output' of banks. To maximise profits, a bank must convert the reserves generated by deposits into loans. In doing so the bank converts liquid assets (deposits) into less liquid assets (loans). Since in converting deposits into loans lowers the level of liquidity, there is the possibility that the bank will not have enough liquid assets to meet its depositors' demands. Banks have to solve this problem and avoid panics. Let us see how banks achieve this.

Banks can lend out from deposits of depositors because all depositors do not withdraw all their deposits at the same time. Of course, there is always the uncertainty as to whether it will actually happen or not. Banks deal with this uncertainty with the help of the Law of Large Numbers. Applied to banking, this law suggests that if individual withdrawal decisions are independent and there is a large number of depositors, the bank can estimate accurately, how much it can afford to lend out and still cover the withdrawal of its many depositors. This stems from considering the probability of an event as the relative frequency if there are a very large number of repeated trials. For example, we know the probability of getting heads with one toss of a coin is $\frac{1}{2}$. If you were to toss the coin eight times, it is possible that you get six heads. But if were to toss it 80, 000 times (!), you would probably get close to 40, 000 heads. Similarly, if the number of depositors went up, the bank can accurately predict how many depositors will make what amount of withdrawals in a given time period. With a single depositor the amount to be withdrawn is uncertain. But averaging over a very large number of depositors, the bank can arrive at the expected value of withdrawal.

We have been talking about the total withdrawals and average withdrawals. However there is wide variation in individual propensity to withdraw. Some depositors are more likely to withdraw than others. Some depositors bring their balance close to zero, while others have large balances. If banks have greater knowledge about the likelihood of withdrawals, they would be in a better position to lend. To obtain information about how often depositors will withdraw funds, banks sort depositors. By offering different options, rates and schemes to depositors, banks help depositors to self-select into different categories in terms of choosing different types of accounts in banks.

The application of the law of large numbers, we assumed that withdrawals were independent of each other. However, there can be situations due to changing economic environment when many depositors withdraw deposits at the same time. For example, when there is a recession, many depositors may deplete their saving accounts. When recession is severe and turns into a depression, a bank may be drained of its reserves, and in some instances, be left illiquid. A bank is illiquid when it lacks sufficient assets to meet the immediate demands of its creditors or depositors. A bank can respond to low reserves in three ways. First it can liquidate some of its assets. But since this is not always feasible and is a limited option, banks have to constantly monitor their reserves. Secondly, banks can borrow from each other to obtain funds on a short-term basis. Finally, they can seek the assistance of the central bank in its role as the lender of the last resort.

Sometimes it happens, and has happened in a few episodes in history, that a failure of one bank to honour its deposits leads the general public to fear that their own banks may not be able to honour their deposits. If this feeling gains ground, depositors will try to withdraw their deposits. This situation is called a general bank panic.

Certain features of commercial banking make even otherwise healthy banks vulnerable to bank panics. First, banks operate on a fractional reserve system. Each bank maintains only a small fraction of its deposits in reserves. Thus banks actually do not have cash at any moment to meet the request for withdrawal by customers. Second, a very large portion of bank liabilities is in the form of deposits *payable on demand*. But if a large number of depositors want to withdraw their deposits, banks will not be able to honour their withdrawals. Banks may try to get out of this situation by selling off their assets but if too many banks try to do this at the same time, it may drive down the prices of securities. There might be a scramble for funds as many banks try to sell off their assets. This decline in the prices of securities may cause even healthy banks to fail. This accentuates the banking panic as depositors worry about the financial viability of their banks as the value of the banks' assets plummets.

One bank may face insolvency if its total liabilities exceed the value of its assets. But the danger is that often failure of one insolvent bank spreads to other banks in the banking system, and the rush for funds by banks may set off failures that might otherwise not occur. Therefore, bank panics are a problem because of their effect on otherwise healthy banks.

Check Your Progress 2

1. Explain how banks can keep a small amount as reserves and lend out the whole of the rest of the deposits.

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2. In what way can banks respond to low reserves?

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3. What is a bank panic? How does it occur? How can it affect even otherwise healthy banks?

10.4 TRENDS IN COMMERCIAL BANKING IN INDIA

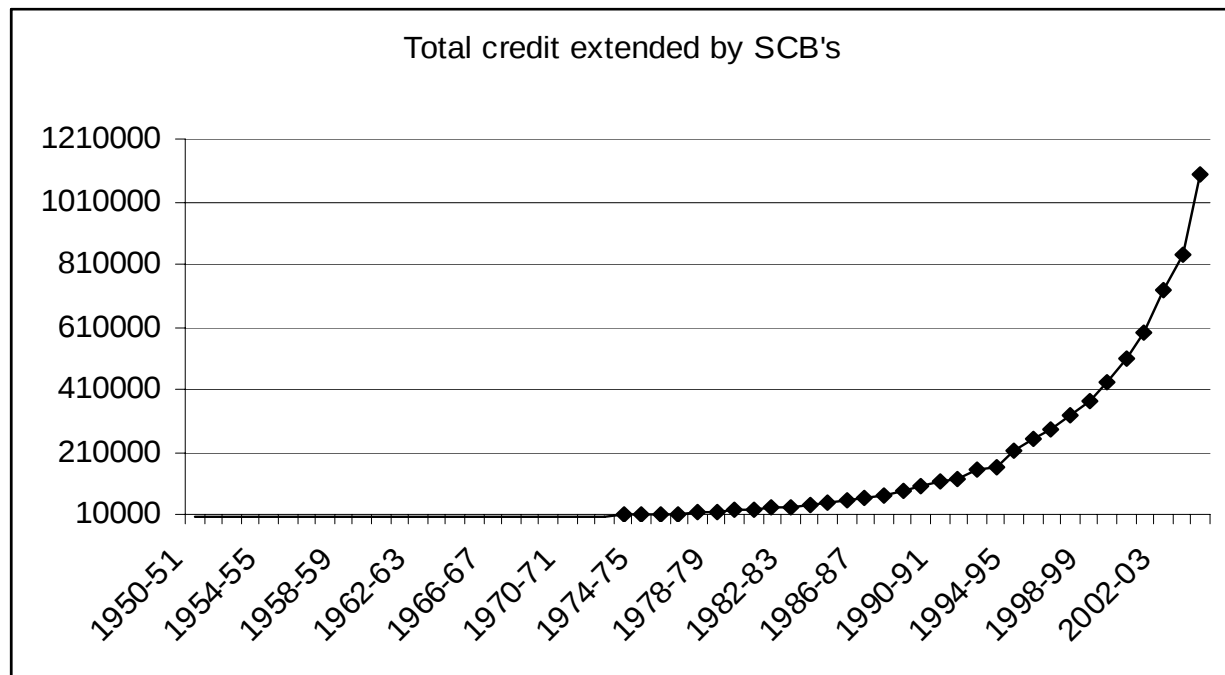
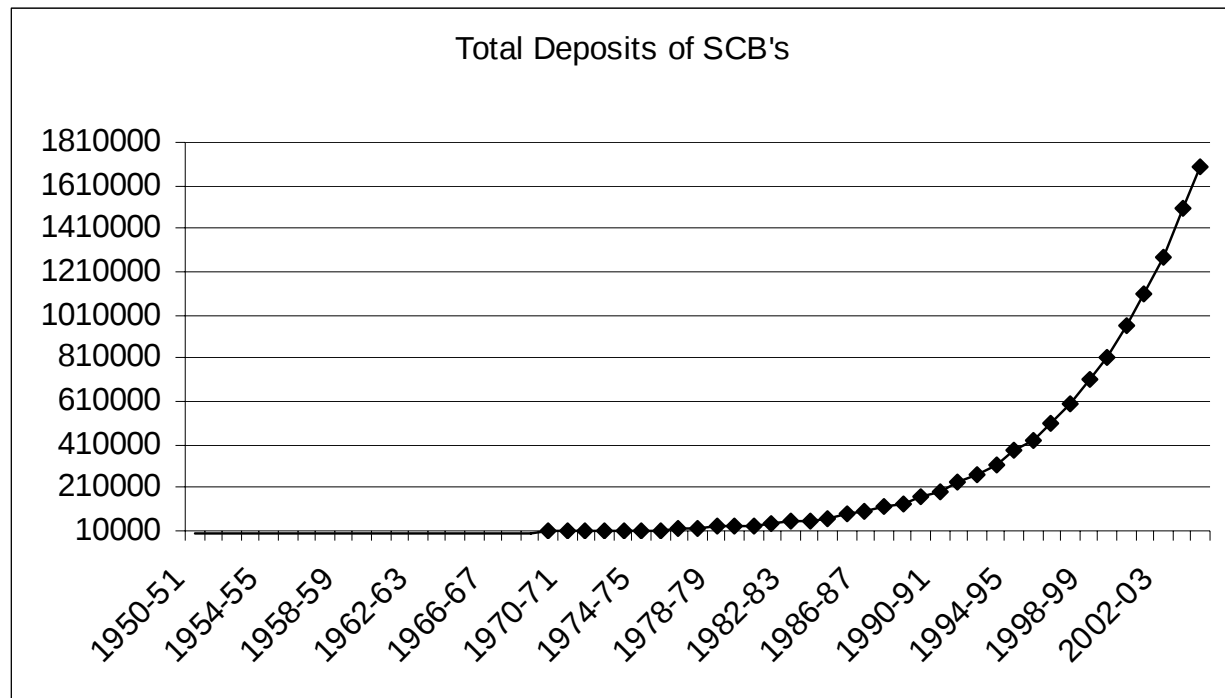
Financial systems evolve over a period of time and are influenced by the politico – economic environment. Commercial banking in India has evolved by responding to the changing needs of business and economy. The boundaries for this evolution were set by Reserve Bank of India and the Government of India. The last major development in India has been the financial sector reforms which started in the early 1990's. We now have a globalised financial system. Interest rates are mostly determined by market forces and there are very few restrictions on the operations of commercial banks. Thus commercial banks are now in a competitive business environment.

Commercial Banking in India- A Historical Perspective

Independent India inherited a rather under-developed financial system. The securities and capital market were not well organized and intermediaries and institutional infrastructure were noticeably absent. Consequently commercial bank lending was restricted to security and collateral based loans. This changed when banks had to respond to the requirements of the Five Year Plans.

Up to the late eighties, the government pursued the goals of accelerated economic growth with social justice through the "Five Year Plans" and adopted the "mixed economy "model. These plans envisaged huge investments for accelerated development. However, bank credit was a scarce commodity. Deposits were the key to a bank's success and assets were excess in supply. Further, the plans entailed substantial government spending. Thus there was a need for alignment of the financial system with the priorities of government's economic policy. Consequently, RBI exercised increasing control over distribution of credit and finance. Interest rates on deposits and loans were dictated by RBI. And the flow of credit from commercial banks was artificially channelled to the desired sectors. In 1969, 14 major banks were nationalised.

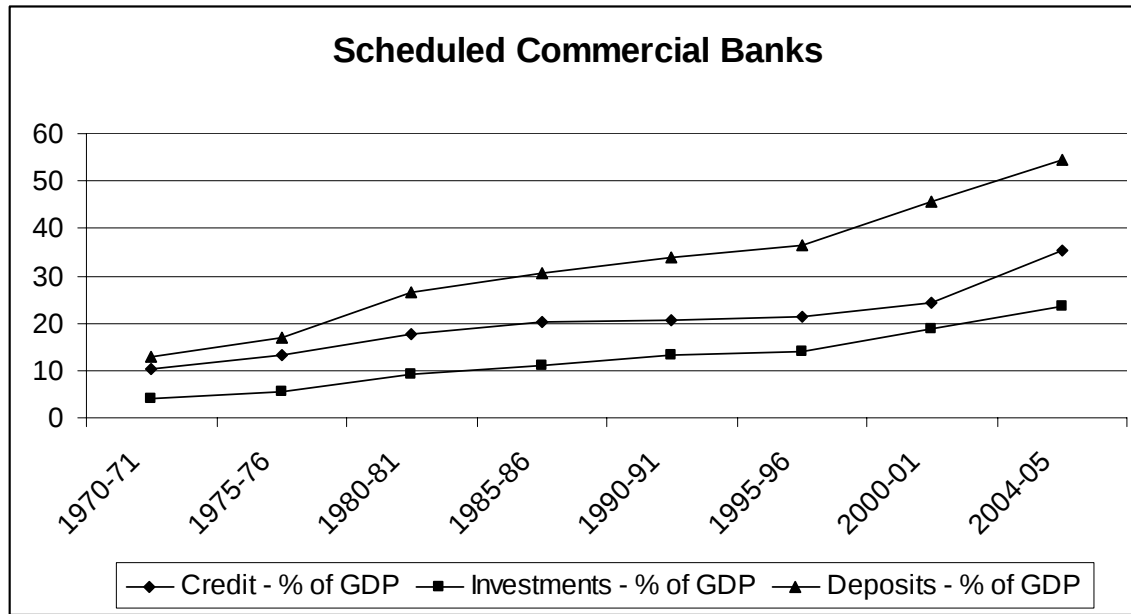
COMMERCIAL BANKS AT A GLANCE							
	1969	1998	1999	2000	2001	2002	2003
Number of Commercial Banks	89	300	301	298	300	297	292
(a) Scheduled Commercial Banks	73	299	301	297	296	293	288
(b) Non-Scheduled Commercial Banks	16	1	—	2	5	4	4
Number of Bank Offices in India	8262	66408	67157	67868	67937	68195	68500
(a) Rural	1833	32864	32859	32852	32585	32503	32283
(b) Semi-Urban	3342	14266	14462	14841	14843	14962	15135
(c) Urban	1584	10593	10841	10994	11193	11328	11566
(d) Metropolitan	1503	8685	8995	9181	9316	9402	9516
Aggregate deposits of SCB's (Rs crore)	4646	605410	722203	851593	989141	1131188	1311761
(a) Demand deposits	2104	102513	117423	145283	159407	169103	187837
(b) Time deposits	2542	502897	604780	706310	829734	962085	1123924
Scheduled Commercial Banks							
Total Credit (Rs Crore)	3599	324079	368837	454069	529271	609053	746432
Investments in India (Rs. crore)	1361	218705	254594	311697	367184	437482	541750
Per capita Deposit (Rs.)	88	6270	7359	8542	9770	11008	12253
Per capita Credit (Rs.)	68	3356	3759	4555	5228	5927	7275
Deposits as % of GNP (current prices)	15.5	49.4	50.3	53.5	56	54.4	58.8
Share of Priority Sector in Total Advances (%)	14	34.6	35.3	35.4	31	34.8	35.1
Credit-Deposit Ratio (per cent)	77.5	53.5	51.1	53.3	53.5	53.8	56.9
Investment-Deposit Ratio (per cent)	29.3	36.1	35.3	36.6	37.1	38.7	41.3



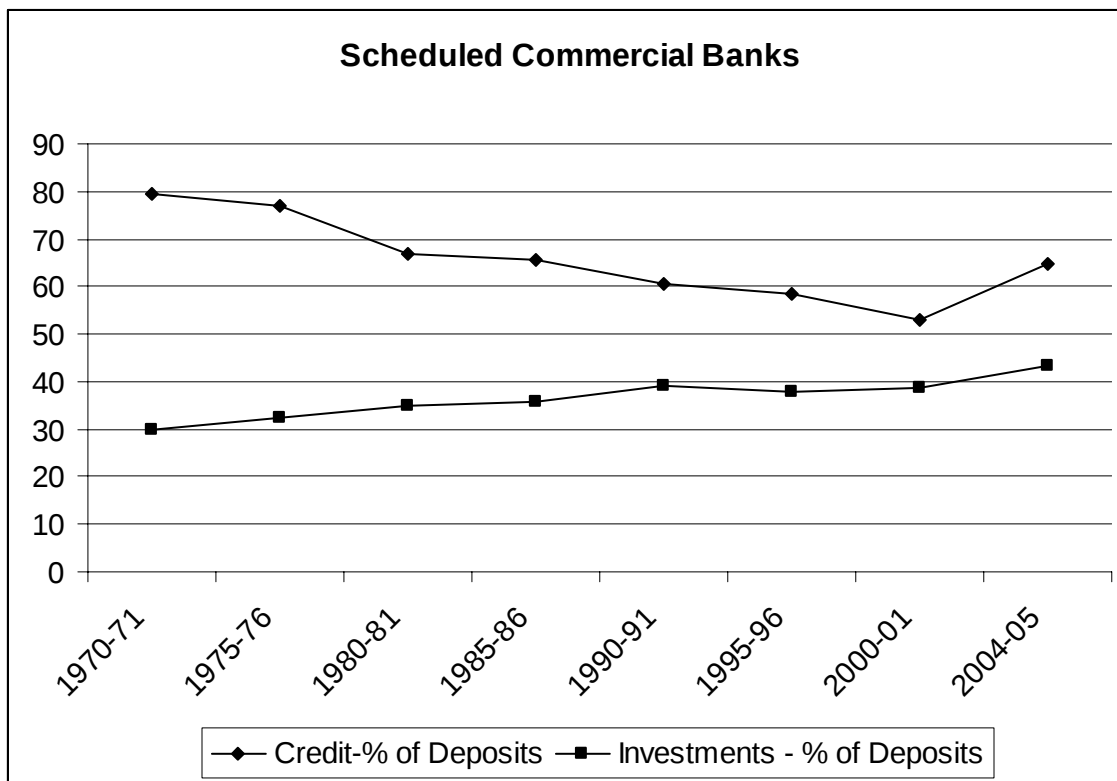
Effects of Nationalisation:

Nationalisation of banks changed the whole scenario completely. The Government of India and RBI started playing an even more dominant role; profit motive was replaced by emphasis on "development". While this resulted in certain desirable developments it also created many problems. Some of the desirable effects were :

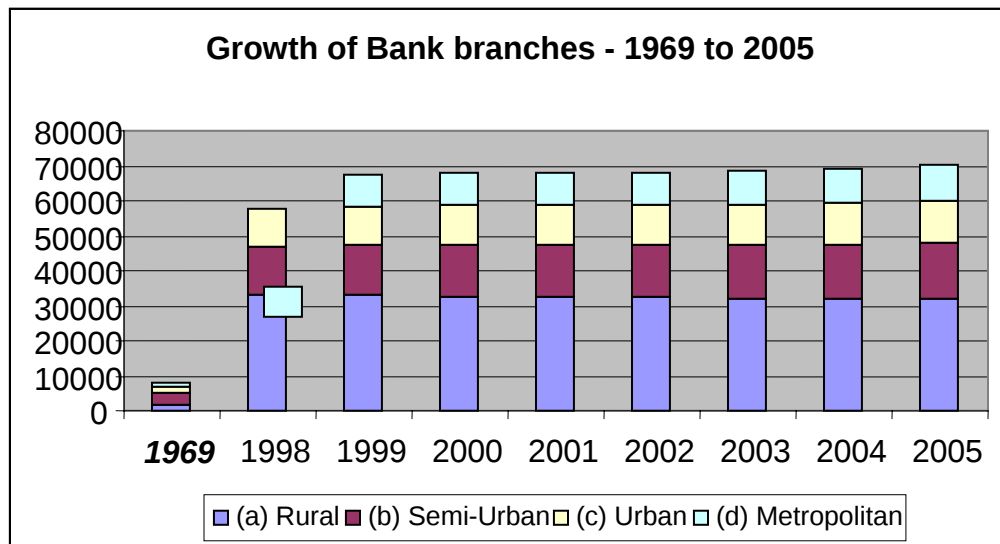
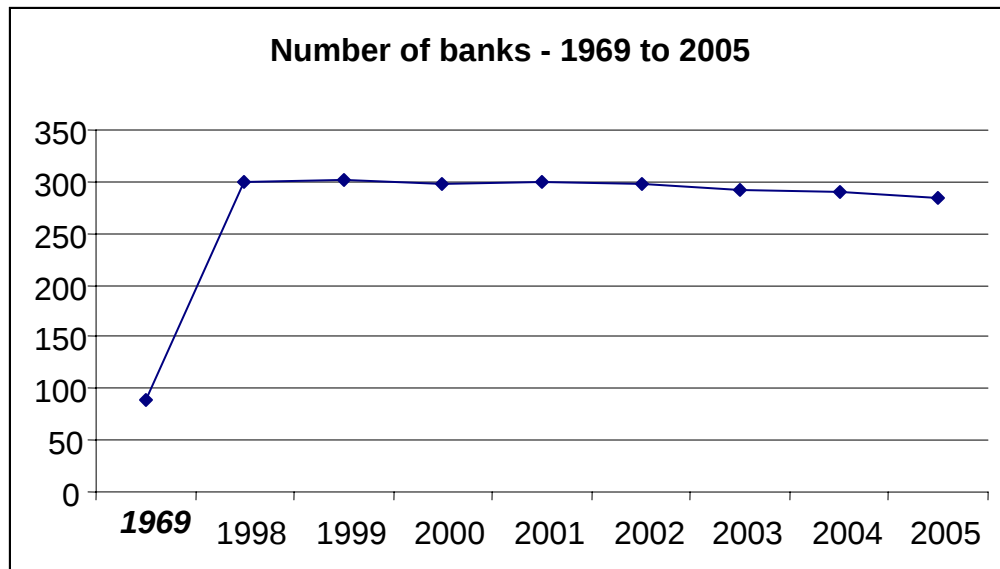
- **Growth of Banking habit:** Since 1969 there has been an explosive growth in banking.



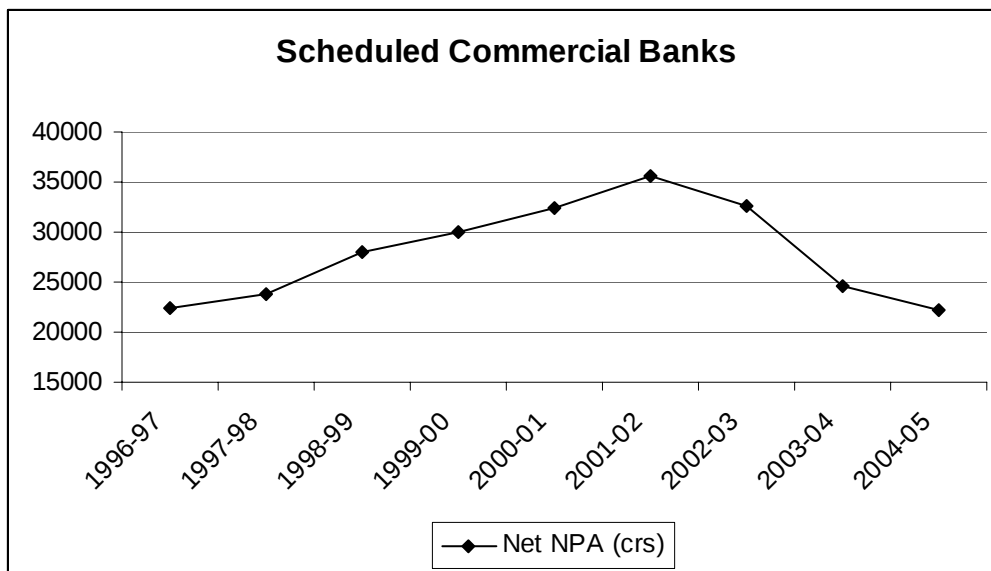
Deposit to GDP ratio increased from about 12% in 1970-71 to about 55 % in 2004-05. And the Credit to GDP ratio increased from about 5 % in 1970-71 to about 25% in 2004-05.



- **Spatial spread of banking :** As shown below, there has been an explosive growth in the number of banks and branches of banks.



- Build up of Non-Performing Assets:** Bureaucratization of decision making led to deterioration of quality of assets. The net NPA's of Public Sector banks reached Rs 20,285 crore out of Rs 22,340 crore for the SCB's as a whole. While NPA's in SCB's formed 8.1% of the advances, they were 9.2 % of advances in the Public Sector Banks.



- **Lack of Competition:** Bureaucratization of decision making also led to a mind-set and orientation which did not lay emphasis on efficiency and profits. Thus in the scenario lack of competition, over-staffing and low capitalization became order of the day.

Recent Developments

The Balance-of-Payments crisis of early 1990s precipitated matters. The country had to carry out extensive structural reforms to put back the economy on rails. Along with structural changes of the economy, financial sector reforms were also taken up. The following are the more important developments in the recent past which have had a significant role in shaping of the commercial banking sector.

Deregulation of Interest rates:

Till recently, banks were told by RBI what rates of interest to pay on deposits and what rate to charge on loans. Such a system bred complacency among bankers as pricing of products is a crucial factor in any business. When all suppliers are made to charge the same price, competition is almost non-existent. Moreover, in a directed regime, there is no scope for product innovation. With deregulation, banks find themselves in a competitive environment.

End of Directed lending:

Directions on sectoral allocations of loans, restrictions & controls over lending have been done away with. Now banks can acquire assets as per their requirements and business plans. Priority sector lending, however, remains. Thus banks are required to lend 40% of their total loan portfolio to certain specified priority sectors.

Entry of Private Sector Banks:

Till the 1990's no new banks were allowed to be set up. But as part of the reforms, new banks were allowed in the early 1990s. These banks have

invested heavily in technology, thereby increasing efficiency. This gave a great impetus to the development of technology suited to banking in India. These efficient banks have quickly grabbed a significant market share bringing in much required competition.

Introduction of Prudential Norms

Prudential norms in the form of Income recognition, Assets classification and provisioning for losses, have been introduced. Commercial banks in India cleaned up their balance sheets with adoption of these norms. Consequently, the balance sheets of banks have become of international standards.

Basel Norms:

Based on the recommendations of the Basel Committee (1988), banks are required to maintain a specified minimum amount of capital relative to their assets. This is known as capital adequacy ratio (CAR). Presently banks are required to maintain a CAR equal to or more than 9% of their risk weighted assets, though under the new CAR norms known as Basle II, the amount of capital that banks will need to keep will go up.

Higher capital is expected to give strength to banks in times of stress. In India, we had very low capitalizations of banks. Since the Indian economy has become increasingly globalised, banks have been made to conform to international standards. As of now all banks have been able to successfully attain this standard. RBI has in fact gone ahead and increased the ratio to 9%.

Entry of Foreign Banks:

From a very minor share of business, foreign banks now have a sizeable presence. RBI has been fairly liberal in allowing establishment of branches of Foreign Banks. Moreover Foreign banks have been allowed to open wholly owned subsidiaries in India. With the expected implementation of WTO initiatives, the presence of foreign banks is only going to increase.

Globalization of the Indian economy.

Banking follows business. A globalized economy results in cross-border flow of capital and trade payments. As Indian companies spread their wings, Indian banks have to gear up to meet their requirements. India, therefore, requires a globalized banking system.

Enhanced liquidity in the banking system:

Liberalization, allowing FDI and FII, and India becoming a hot favourite emerging market destination have resulted in huge amounts of foreign exchange flows into the country. Under normal circumstances, when the currency is floating freely, the exchange rate adjusts itself to make necessary corrections. However, RBI, perhaps with the desire to restrict volatility of the rupee and maintain a weak rupee, has been absorbing these excessive forex flows. However, when RBI buys US dollars it pays rupees. Consequently,

except for brief periods, huge liquidity overhangs have been seen in the banking system.

There has been a more than healthy growth of deposits. Moreover, till 2005-06, credit off-take had been very slow. All these developments have resulted in funds not being a constraint for banks.

Almost 80% of the business is still controlled by Public Sector Banks (PSBs). PSBs are still dominating the commercial banking system. Shares of the leading PSBs are already listed on the stock exchanges.

The RBI has given licences to new private sector banks as part of the liberalisation process. The RBI has also been granting licences to industrial houses. Many banks are successfully running in the retail and consumer segments but are yet to deliver services to industrial finance, retail trade, small business and agricultural finance.

The PSBs will play an important role in the industry due to its number of branches and foreign banks facing the constraint of limited number of branches. Hence, in order to achieve an efficient banking system, the onus is on the Government to encourage the PSBs to be run on professional lines.

Prudential norms were introduced for income recognition, asset classification, provisioning for delinquent loans and for capital adequacy. In order to reach the stipulated capital adequacy norms, substantial capital was provided by the Government to PSBs.

Government pre-emption of banks' resources through statutory liquidity ratio (SLR) and cash reserve ratio (CRR) brought down in steps. Interest rates on the deposits and lending sides almost entirely were deregulated.

New private sector banks were allowed to promote and encourage competition. PSBs were encouraged to approach the public for raising resources. Recovery of debts due to banks and the Financial Institutions Act, 1993 was passed, and special recovery tribunals set up to facilitate quicker recovery of loan arrears.

Bank lending norms liberalised and a loan system to ensure better control over credit introduced. Banks asked to set up asset liability management (ALM) systems. RBI guidelines issued for risk management systems in banks encompassing credit, market and operational risks.

Consequences of the Recent Developments

Changing business environment:

Bankers who have grown up in a protected business environment suddenly find themselves in a totally different situation. They now have to take decisions like any other business; a difficult proposition for the top management who have grown in an environment of dictated pricing and directed lending. They now have to get into actually marketing their products

and services; product development and pricing. They have to develop business plans and ensure maximization of shareholders wealth.

Competition

Competition is a necessary consequence of a free market. The new players have swiftly carved out a huge market share. They have been able to do this mainly by competitive and by aggressively exploring the personal segment; housing loans, vehicle loans and personal loans. As funds are no longer scarce, the competition is mainly in asset acquisition. Asset quality and proper pricing seem to be the key now.

Technology up gradation

Manual systems have become unable to handle the volume of business and the complications of modern-day banking, its data requirement etc. So for efficient and cost-effective delivery of banking products, it have become essential for banks to invest in high-end technology. All banks have started this process but it is not an easy task and will take a lot of time.

Human resources management

While human resources management is crucial in any business venture, it has become critical in the Indian banking system. Most of the senior people, who take crucial decisions, have to be reoriented to the new requirements. This is not an easy task in the public sector. Further, reorienting the staff to the high-tech systems will definitely be a big challenge. It is also evident that technology introduction will leave banks with a large number of surplus staff.

Capital requirements

Globally there is a move to adopt Basel II norms. These norms are a shift from the older version wherein the central banks specified the risk weights for all classes of assets; uniform for all banks. The move is to integrate all risks faced by banks, and keep aside suitable capital. Moreover, to give credence to the fact not all assets in a class carry the same risk and encourage banks to manage their risk better, the new norms lay stress on internal ratings or risk management. Banks are required to put in place systems that will result in proper assessment of risk carried by each asset. And, based on these internal assessments, they will have to maintain the required capital to risk-weighted ratio. While this is, in principle a good development, it is a big challenge to Indian banks both in terms of investment and development of necessary skills.

Risk management

Apart from the regulatory requirement of setting up a risk rating system risk management has become a necessary response to the competitive business environment. As margins have been squeezed out by competition, risk based pricing has become inevitable. In this, the inherent delinquency is taken into account so that except in exceptional circumstances, bank normal margins will take care of normal losses. In addition to this, and more important, with better estimation of risk, a bank

can be very aggressive in pricing of loans. More dependable the estimation of the risk less would be the need to keep high-risk margins.

Check Your Progress 3

1. Give a brief historical perspective of banking in India since Independence.

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2. List four consequences of bank nationalisation in 1969 and 1980.

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3. State some recent developments in Indian banking policy since the early 1990s and list their consequences.

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10.5 LET US SUM UP

This Unit discussed commercial banking. It dealt with the topic both theoretically as well as from an Indian perspective. The Unit began by discussing the principles of banking. We saw that banks are financial intermediaries and yet different from other financial intermediaries because they can create money through lending. Moreover, banks are business firms but they are different from other firms in that they have to keep a greater check on their liquidity position as they deal with other people’s money.

We next went on to understand the simultaneous coexistence of deposits and lending. We understood how the modern banking system is a fractional reserve system. We looked at the process of credit creation and understood how banks can lend even though they keep a small part of deposits as reserves. We understood the law of large numbers and saw that its application is the reason why all depositors do not withdraw their deposits at the same time. We also grasped the meaning of bank failures, of bank panics and saw why they are such potential problems.

The Unit finally looked at trends in Indian banking. We saw how commercial banking has evolved and grown over time, and looked at the trends in banking. We understood the

effects of nationalisation and saw the recent reforms and changes in the banking system, and their impact.

10.6 KEY WORDS

Bank Panic: A period during which banks throughout the banking system face an increase desire for currency by depositors, which leads to a widespread withdrawal of deposits from the banking system.

Commercial Bank: a depository institution which is relatively unrestricted in its ability to make loans, and which is legally allowed to accept deposits.

Direct Finance: finance that occurs when savers lend funds directly to borrowers.

Disintermediation: phenomenon of depositors withdrawing funds from financial intermediaries in favour of direct finance.

Fractional Reserve Banking: a banking system in which bank reserves equal only a fraction of outstanding demand deposits.

Law of Large Numbers: this law implies that if individual withdrawal decisions are independent of each other, as the number of depositors gets larger the average fraction of deposits withdrawn by all depositors gets closer and closer to the probability that one depositor withdraws his or her deposits.

10.7 SOME USEFUL BOOKS

Benton, E.G, (1976) *Financial Intermediaries, An Introduction*, Houghton, Boston

Bhole, L.M. (2004), *Financial Institutions and markets*, 4th edition, Tata-McGraw-Hill, New Delhi.

Johnson, H J, (1993) *Financial Institutions and Markets*, McGraw-Hill, New York.

10.8 ANSWERS/ HINTS TO CHECK YOUR PROGRESS EXERCISES

Check Your Progress 1

1. See Section 10.2 and answer.
2. See Section 10.2 and answer.
3. See Section 10.2 and answer.

Check Your Progress 2

1. See Section 10.3 and answer.
2. See Section 10.3 and answer.

3. See Section 10.3 and answer.

Check Your Progress 3

1. See Section 10.4 and answer.

2. See Section 10.4 and answer.

3. See Section 10.4 and answer.

UNIT 11 INVESTMENT BANKING

Structure

- 11.0 Objectives
- 11.1 Introduction
- 11.2 Investment Banking and the Capital Acquisition Process
- 11.3 Initial Public Offering
- 11.4 The Costs of Public Offering
- 11.5 Over-subscription and Under-pricing of IPOs
- 11.6 Let Us Sum Up
- 11.7 Key Words
- 11.8 Some Useful Books
- 11.9 Answers/Hints to Check Your Progress Exercises

11.0 OBJECTIVES

After studying the Unit, you should be able to:

- define investment banking;
- explain how the investment banking process helps in the capital acquisition process;
- describe the process of, and steps in, an Initial Public Offering; and
- discuss the issues of possible over-subscription and under-pricing of IPOs.

11.1 INTRODUCTION

In Unit 9, you studied the function of financial intermediation. In that Unit, you were acquainted with the working of financial intermediaries. Sometimes a distinction is made between financial intermediation on the one hand, and direct financing through financial markets. In this suggested dichotomy, the exchange of funds between savers and investors is accomplished either by a direct exchange of credit between borrowers and lenders or by an indirect exchange through a financial institution. This dichotomy can be misleading because those organisations and firms issuing securities (raising capital) almost invariably make use of the services of financial intermediaries like investment banks, merchant banks, and brokers. We study precisely this function of investment banking in this Unit: how they help in the capital acquisition process for those who need these, and how they perform underwriting operations, how optimal underwriting contracts are arrived at.

In this Unit we look at the nature of investment banking and the role they play in capital markets. Investment banking firms (for these banks are firms) perform a critical role in the primary as well as secondary markets for securities. Investment banking firms perform two important functions. First investment banks helps companies that need funds to raise these funds. Secondly, for investors who need to invest funds, investment banks act as brokers or dealers in the buying or selling of securities.

Our objective in this Unit is to see how investment banks act as financial intermediaries. We will see in the next section how investment banking aids in the capital accumulation process. In the following two sections, the Unit discusses public offerings – mainly in the primary market, and costs that are associated with these offerings. The final section of the main body of the unit discusses the consequences of the over-subscription and/or the under-pricing of IPOs.

11.2 INVESTMENT BANKING AND THE CAPITAL ACQUISITION PROCESS

What are the principal functions of an investment bank? Why is it called an ‘investment’ bank? How does it help in the capital acquisition process of firms? These are questions we explore in this Section. Investment banks perform two main functions for their clients. These are: raising funds for their clients, and helping clients in the sale or purchase of securities. In this Section we discuss the basic functions of investment firms and the basics of underwriting processes. But first we take a look at the main broad functions of investment banks. Some have suggested that invested banking can be defined in terms of the types of function they perform. Hence four types of definitions of investment banks have been suggested.

According to the broadest definition investment banking includes all functions related to the securities markets as well as other financial services like real estate and insurance. The next broadest definition considers all types of activities related to capital markets, from underwriting and corporate finance, to mergers and acquisitions to venture capital. In this definition certain other financial functions are excluded that are included as per the first definition. This second definition would exclude activities like real estate, insurance, and mortgage banking. The third definition is narrower than the first two. In this definition, only some activities of capital markets are included. The stress is on underwriting, and on their role in mergers and acquisitions. Venture capital, primary commodities trade etc are excluded. The final definition is the narrowest of the four and is closest to the traditional historical definition of investment banking. This fourth definition restricts the functions to those of underwriting and acquisition of capital in the primary markets, and brokering and helping in the deals in the secondary market. In this Unit, we primarily restrict ourselves to this final definition.

We will deal with securities markets in the next Unit. Here we discuss the process of underwriting of securities by investment banks, as that is their main function. An underwriter firm (investment bank) is a firm that buys an issue from a company and resells it to investors in the primary security market; it is thus a primary market activity. Underwriters buy the securities to be issued at a reduced (discounted) price. This discount is usually measured as a percent of the price of the issue. A firm that wants to raise capital can do so primarily through debt instruments (borrowings) or by issuing equity shares in the primary market. Most primary issues of securities are sold by the firm to the public through investment bankers. Investment banking firms are broker-dealer firms that provide a number of services, depending on the type of offering. Investment banks offer services both to the issuing firm and to the investing public. In a usual offering to the public in the primary markets, investment banking firms provide three services: (1) the advisory or managing function (2) the underwriting, or risk-bearing function and (3) the selling, or distribution, function.

In an underwriting process that is of the negotiated variety, the managing underwriter is involved with the public offering right from the beginning, that is, from the time that

the issuing firm decides to raise new capital. The managing and advisory underwriting investment bank advises the firm that is engaged in the process of capital acquisition as to the types of securities that the primary market would be most receptive to, when to actually carry out the issuing of the securities, and most importantly, how to price the security, that is, the price at which the security ought to be offered. The investment bank also tries to ensure that all legal requirements connected to the issue are met.

The other main function of the managing underwriter investment bank is the formation of an underwriting syndicate. The members of this syndicate buy the securities from the issuing firm on the day of the offering in the market. Thus the issuing firm is assured of receiving the proceeds of the issue regardless of whether investing public will eventually buy the securities. This is how investment banks help in the capital acquisition process by firms by giving an assurance that their primary offer will be bought (by them). After buying the securities from the firm, the investment bank (the underwriter) is the owner of the securities till the time it sells the securities to the public. Thus the investment bank becomes the bearer of the risk that the securities are correctly priced. Usually the investment bank engages in pre-selling activities in the form of talking and communicating with the public to get an idea of whether the public will accept the securities and at what price. They thus have a very good idea of the correct price of the securities. When the securities are finally sold to the public these are sold by the underwriting syndicate, or there might be involved members of selling groups. These members of selling groups are broker-dealer firms that buy the securities from the underwriters and in turn resell the securities to their customers. Investment banks provide a solution to the information asymmetry about the issue of a firm by analyzing the issue and the firm in detail. By pricing the issue fairly, they gain “reputation” capital, which is important for their future deals and for their prestige.

If we extend the functions and thus the definition and ambit of investment banking we could include their activities in mergers and acquisitions (M&A) of one firm by another. Leveraged buyouts are also included in mergers and acquisitions. Also included in M&A are restructuring of recapitalisation of companies, and reorganisation of bankrupt firms. Investment banks may participate in M&A activities in one of several ways. They can identify and find companies that could be acquired or merged with. Secondly, investment banks could advice the acquiring or the target company on the various terms of the acquisition or merger, including the price. Finally, investment banks help the acquiring firm to find funds for the purchase of the target company. The investment banks receives many kinds of fees for activities performed like an advisory fee or a percentage share of the selling price.

Sometimes an investment bank commits its own funds by either taking an interest in equity or acting as a creditor in companies. In these situations the investment bank is known as a merchant bank.

Check Your Progress 1

- 1) What are two main functions that investment banks perform?

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- 2) Give the broadest definition of investment banks in terms of function.

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- 3) What is a merchant bank?

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11.3 INITIAL PUBLIC OFFERING

Initial Public Offerings (IPOs) are the first time a company sells its stock to the public. Information regarding a public offering is available in the *prospectus*. The prospectus is a document that by law has to be furnished to each investor. When a company decides to issue a new security, it can sell it as a public issue or private issue. There are two types of public issues: the general cash offer, where equity issue is sold to all interested investors; and the rights offer which is an offer that gives a current shareholder the opportunity to maintain a proportionate interest in the company before the shares are offered to the public. All IPOs are cash offers because if the firm's existing shareholders wanted to buy the shares, the firm would not need to sell them publicly. The securities involved in a public offering can be classified into two groups, known as the seasoned and unseasoned securities. The seasoned securities are those that are more of a type already in the market. For example suppose Infosys has shares already in the market. It later makes a public offering in the primary market of many shares because it has a need for capital. These additional shares offered would be seasoned securities. In contrast to seasoned shares, unseasoned securities are those that are being offered to the public for the first time. These are the initial public offerings. There is no established price for them. The offer price is negotiated between the issuing firm and investment bank.

Sometimes IPOs are associated with huge first-day gains; at other times, when the market is not receptive, they fail. It is often difficult for an individual investor to realise the huge gains, since in most cases only institutional investors have access to the stock at the offering price. By the time the general public can buy and sell the stock, most of its first-day gains have already been made. However, an informed investor should still watch the IPO market, because this is the first opportunity to buy these stocks.

When a privately held corporation needs to raise additional capital, it can either take on debt or sell partial ownership. If the corporation chooses to sell ownership to the public, it engages in an IPO. Corporations choose to "go public" instead of issuing debt securities for several reasons. The most common reason is that capital raised through an IPO does not have to be repaid, whereas debt securities such as bonds must be repaid with interest.

The aftermarket performance of an IPO is how the stock price behaves after the

day of its offering on the secondary market (such as the NSE or the BSE). Investors can use this information to judge the likelihood that an IPO in a specific industry or from a specific lead underwriter will perform well in the days (or months) following its offering. The first-day gains of some IPOs have made investors all too aware of the money to be had in IPO investing. Unfortunately, for the small individual investor, realising those much-publicized gains is nearly impossible. The basic problem is that individual investors are just too small to get in on the IPO market before the jump. Those large first-day returns are made over the offering price of the stock, at which only large, institutional investors can buy in. The system is one of reciprocal assistance, in which the underwriters offer the shares first to the clients who have brought them the most business recently. By the time the average investor gets an attractive IPO, it's on the secondary market, and the stock's price has already gone up.

Sometimes firms cannot raise funds in the primary equity markets with the aid of investment banks. They need to find other ways of raising capital. A company short on capital might explore the possibility of bank or other financial institution financing, a possible joint venture with another company or a sale of some of the assets of the company as other methods of finding ready capital. Another important alternative is a private placement of securities, either to angel investors or, in appropriate circumstances, venture capitalists. Venture capital generally refers to the outside capital invested to finance a new and growing business. Since most firms are not big enough, successful enough and old enough to raise capital in public equity markets, they need to raise capital in the private equity market. Venture capital is part of the private equity market. Venture capital is generally invested in enterprises that are too risky for public capital markets or bank loans. The biggest advantage of the private placement over the IPO is cost – the cost of completing the IPO and the cost associated with periodic disclosure and reporting obligations following the IPO. At just a fraction of the cost of an IPO, but typically at much lower multiples, a private placement may be possible. It is also easier for the management of a company to control a small group of qualified and well-informed private investors than to deal with the public every time a critical decision involving the company needs to be made.

Check Your Progress 2

- 1) Distinguish between seasoned and unseasoned securities.

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- 2) When firms find it difficult to raise capital through IPOs, what are other alternative ways of raising capital?

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- 3) What is the possible advantage that private placement has over IPO?

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11.4 THE COSTS OF PUBLIC OFFERING

We have discussed the process of going in for IPOs. While IPOs are important ways for firms to raise capital, there are not always features of IPOs. There are some drawbacks to an IPO, too. A large drawback of going public is that the current owners of the corporation hitherto privately held lose a part of their ownership. Corporations weigh the costs and benefits of an IPO carefully before deciding on an IPO. The most obvious cost of having an IPO is the *expense*. It costs money to raise capital. The legal fees, printing costs, and accounting fees associated with registering an IPO can run into a huge amount of money. On top of those costs, the rules for making a company into a public one are so complex that most companies have to hire experts to handle all the paperwork. As far as shareholders are concerned, they themselves constitute another drawback for the issuing firm of going public. The original primary owners are no longer in a private company that can make independent decisions. The investors who purchased stocks at the IPO own a certain percentage of the business, and their demands cannot be ignored, even if they don't have a controlling interest (more than 50% of the shares) in the company. The company's new owners will expect a certain return on their investment, subjecting the management of the firm to tremendous performance pressures. Substantial time and effort, and thus money, must be expended in dealing with the investing community in order to ensure that investors and analysts remain satisfied with the company's performance over the short term, while at all times keeping in mind, and working towards, management's long term goals for the company. Shareholders also want to see the value of their stocks rise, so if the stock price drops or remains stagnant, the company will have to deal with unhappy owners, who are, of course, part owners. If they become unhappy enough, they may sell their stocks, which will cause the value to drop further, decreasing the overall value of the company. Another drawback for a company making public offerings is that offerings have certain legal aspects that must be followed. Public companies are also open to public scrutiny. Annual financial reports, internal transactions, and balance sheets are all open to inspection. This is more of a problem for some companies than others, particularly companies who might have made deals that are not legal or have altered or tampered with financial reports.

An IPO is not without its disadvantages. The biggest consideration for many companies is the substantial out-of-pocket expense that is involved in preparing an IPO for market. As compensation, the underwriter who agrees to take on the IPO in a firm commitment offering purchases the stock to be offered to the public at a discount from the public offering price, sometimes as much as 9% or more but more typically 6 or 7%, depending on the size of the offering and the risks the underwriter might face in bringing a company to the market. Lawyers, accountants, and financial analysts will also command significant cash outlays months before an IPO even hits the market.

Undertaking an IPO is a business decision that must be based on consideration of a number of factors that indicate whether an IPO is an effective use of the company's—and its management's—time and resources. Balancing key characteristics of a company, such as size, stability, product lines, markets, and management, determines whether an IPO is advisable and, ultimately, whether it will be successful. Investors often look for companies whose debt-to-equity, liquidity, and debt coverage ratios meet or exceed industry averages. In addition, investors generally look more favorably upon an IPO, the proceeds of which are to be used for long-term growth and expansion, rather than to pay off debt, or fund a return of investment to certain insiders.

11.5 OVER-SUBSCRIPTION AND UNDER-PRICING OF IPOs

Initial public offerings are generally underpriced. Since the underwriters want to have the offering sell out quickly, they have an incentive to underprice the new securities. At the price offered there is excess demand, that is, demand usually exceeds the supply. Issues, in other words, are oversubscribed. Instead of prices being raised to the equilibrium level, there is extensive rationing. Typically, at the offer price there is excess demand, and shares are rationed to investors. All investors, both informed and uninformed are rationed. The observed rationing of informed investors runs counter to our intuition for two reasons. First, it contradicts the optimal IPO mechanism that postulates that, amongst informed bidders, those with higher signals receive their full allocation before any shares are given to bidders with lower signals. Second, it seems to contradict profit-maximization on the part of the seller. There is little evidence about who benefits from IPO underpricing and why. Do institutions receive larger allocations than individual investors? Do institutions concentrate on the most underpriced offerings because they are better informed than individual investors or because underwriters use their superior knowledge to intentionally favour their long-term clients? If, on the other hand, allocations to institutional investors are unrelated to first day returns, is it because institutions lack superior ability or because allocations of coveted underpriced shares carry the obligation of participating in overpriced issues? There have been reports of scandals in the allocation of heavily underpriced offerings.

IPO underpricing arises as a consequence of asymmetric information and rationing. The value of the new shares offered is uncertain. A group of investors, the informed, have perfect knowledge about the realized value of the offering. All other investors, including the issuing firm and the underwriter, are uninformed; they can only form an expectation about the distribution of the issue's value. In this setting, new shares cannot be priced at their expected value. Informed investors crowd out the uninformed when the offering price is set below its true value; similarly, the informed withdraw from the market when the issue is overpriced. Uninformed investors are not allocated any underpriced issues given the rationing imposed by informed demand, but receive all the overpriced offerings. The uninformed then abstain from participating in the new issues market unless the issuing firm prices the shares at a discount.

Check Your Progress 3

- 1) What are the main drawbacks of offering IPOs?

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2) Explain why IPOs are usually underpriced.

3) Why is the observed rationing of IPOs counterintuitive?

11.6 LET US SUM UP

In this Unit, we have taken an analytical look at the nature and process of investment banks. We saw that investment banks perform extremely useful functions in the financial system and aids in the capital acquisition process. Investment banks make it easy for firms that wish to raise capital through equities to do that. We began by looking at the concept of an investment bank. The primary and narrow definition we worked with was in terms of investment banks' tasks of underwriting. We however looked at some progressively broader definition of investment banking. We went on to discuss the role of investment banks in the capital acquisition process by firms.

We elaborated the processes related to IPOs. The Unit then went to look at the costs of IPOs, which, other than the involved expenses, also stemmed from the fact that the original owners were relinquishing part ownership. We finally dealt with the important issue of there is a tendency for IPOs to be underpriced, and why there is oversubscription of equities, that is, some kind of rationing in the sense that excess demand is allowed without the price being raised.

11.7 KEY WORDS

Initial Public Offering	: The selling of securities to the public in the primary market.
Investment Bank	: A bank that administers, promotes, and distributes new securities.
Oversubscription	: A situation when the number or the total value of the security for which the investors have applied is more than the number or the total value of the security issued by the company

- Under-Pricing of a Security** : When the buyer or investor is not willing to pay the price for the security that would be warranted as per its earnings per share or price-earnings ratio.
- Underwriter** : These are firm that buys an issue from a company and resells it to investors

11.8 SOME USEFUL BOOKS

Bhole, L.M., (2004), *Financial Institutions and Markets*, 4th edition, Tata-McGraw-Hill, New Delhi.

Johnson, H.J., (1993) *Financial Institutions and Markets*, McGraw-Hill, New York.

Neave, Edwin, (1998) *Financial Systems: Principles and Organisation*, Routledge, London.

11.9 ANSWERS/HINTS TO CHECK YOUR PROGRESS EXERCISES

Check Your Progress 1

- 1) See Section 11.2 and answer.
- 2) See Section 11.2 and answer.
- 3) See Section 11.2 and answer.

Check Your Progress 2

- 1) See Section 11.3 and answer.
- 2) See Section 11.3 and answer.
- 3) See Section 11.3 and answer.

Check Your Progress 3

- 1) See Section 11.4 and answer.
- 2) See Section 11.5 and answer.
- 3) See Section 11.5 and answer.

UNIT 12 TRADING AND EXCHANGES

Structure

- 12.0 Objectives
- 12.1 Introduction
- 12.2 Stock Exchanges
- 12.3 Market Liquidity and its Determinants
- 12.4 Futures Exchanges
- 12.5 Some Other Trading Mechanisms
- 12.6 Let Us Sum Up
- 12.7 Key Words
- 12.8 Some Useful Books
- 12.9 Answers/Hints to Check Your Progress Exercises

12.0 OBJECTIVES

After studying the Unit, you should be able to:

- discuss the concept of market liquidity and identify its determinants;
- describe the nature of stock markets;
- explain the working of primary and secondary securities markets;
- analyse how trade takes place in futures markets; and
- explain how trading occurs in primary commodity markets, as well as some new trading methods practices in securities markets.

12.1 INTRODUCTION

We have in the three previous units of this block, looked at some basic and pervasive financial institutions. We considered financial intermediaries, then we looked at the role and functions of commercial banks, and finally we focused on the working of investment banks. In this final unit of the block, we are going to see how trading takes place in various exchanges and other financial markets.

One of the ways to classify financial markets is on the basis of organisational structure. In this classification scheme, markets can be of the organised trading type or over-the-counter type. We will in this unit primarily look at organised exchanges and instruments traded on these exchanges. We begin in the next Section by discussing organised stock exchanges. We briefly describe the processes in the primary market, and then go on to a detailed description of the secondary markets. After discussing the working of the stock exchange, we discuss the concept of market liquidity and see how it is measured and what its indicators are. We lead to a discussion about futures by mentioning at the end of the Section on market liquidity that futures and forward trading help to enhance market liquidity. In the next section we discuss the futures markets. We discuss the features in detail and mention the main difference

with forward trading. We discuss the main type of market participants in futures markets. In the final section we discuss trading in commodity futures along with some new practices in securities trading, as well as new financial instruments.

12.2 STOCK EXCHANGES

We begin this unit with a discussion of stock exchanges. First, let us clarify whether there is a difference between the words 'stocks' and 'shares', and if there is, what is that difference. Shares are equities in companies, paying a variable dividend. What are called shares in Britain, are called 'stocks' in the USA. In America, companies issue stocks, the investors are stockholders, and these are traded in stock exchanges. In Britain, sometimes the word 'stock' is used to mean either shares or bonds. We use the word 'stocks' interchangeably with 'shares'.

The stock exchange is a part of the capital market. The capital market is the market for long-term funds. Securities get traded here. The securities market is the market for equity debt and derivatives. Except the derivative market, the other two markets have two components: the primary market and secondary market. New securities are traded in the primary markets and outstanding securities are traded in the secondary markets. In this section, we deal only with equity markets, as debt markets have been dealt with elsewhere.

New equities are issued in the primary markets by firms that want to raise capital. We have studied about new issues in the primary market and the underwriting process in the unit on investment banking. There are: public issue, rights issue, private placement and preferential allotment. Public issue is the most important mode of issuing securities. This mode involves sale of securities to the public at large. There is an elaborate process through which a company making a public issue has to go through. Many a time, there is an over-subscription of the new issue. Many investors lose interest in the money locked up with the firm, while the issuing company gets to enjoy the benefits of float money. To prevent this, in the Indian case, the Indian regulatory body for securities dealing, Securities and Exchange Board of India (SEBI) has come out with the stockinvest scheme, which serve as additional facility. These are used to making further investments. Sometimes, an issuing company does not set a predetermined price, but allows the price to be within a certain band. It consults with its investment or merchant bank at different prices. Then the investment bank invites bids from prospective investors. Those who bid lower than the final determined price get their money back.

A rights issue involves selling securities in the primary markets by assigning rights to the existing shareholders. When a company issues new shares, existing shareholders are the first to be offered these on pro rata basis. Private placement and preferential allotment both involve the sale of securities to limited number of investors, particularly financial institutions like mutual funds, banks and so on. The basic difference between the two is that private placements usually involve equities of an unlisted company while preferential allotment involves shares of listed companies.

Now we come to the discussion of the secondary market and its operation. Secondary markets are markets where equities that have already been issued are sold again to new buyers by the original buyers of the shares. The secondary market is called the stock market and consists of recognised stock exchanges operating under rules, regulations and by-laws duly approved by the government. Each stock exchange has certain listed securities and permitted securities that are traded on it. Only members

of the exchange are entitled to the trading privileges. Investors who wish to buy or sell securities have to place their orders with the members of the exchange. These members are brokers of the exchange.

Trading activity in stock exchanges is organised in two ways: open outcry system, and screen-based system. In the open outcry system, traders shout and use signals on the floor of the exchange, which has several 'notional' trading posts for different securities. Buyers make their bids and sellers their offers and deals are struck at mutually agreed prices.

In the screen-based system, the computer screen replaces the trading ring, and participants who are very distant from each other can trade and network through the computer screen. A large number of geographically separated participants can directly trade with each other. The screen-based system increases the informational efficiency of the market as trading speeds are enhanced. It also creates transparent audit trails. Participants get a full view of the market. In India, screen-based system started only in 1994, with the establishment of the National Stock Exchange (NSE). Now it has been extended to all stock exchanges in the country.

12.3 MARKET LIQUIDITY AND ITS DETERMINANTS

Liquidity is a term used to indicate how quickly, cheaply and easily an asset can be converted into a medium of exchange. The existence of a secondary market for a financial asset increases the asset's liquidity. The measure of liquidity in stock market and exchanges is a very important indicator that helps us to know the state of stock market efficiency. The liquidity of the market also influences the pricing of shares in the market. A market is said to be liquid if large volumes of trades can take place without a significant changes in price of shares. When an investor is able to transact at a price close to the current market price in the stock market, the market is said to be liquid. When liquidity in the market is low, corporate firms are unable to raise money from the market for investment. Moreover, low market liquidity discourages foreign institutional investors from investing, and consequently, lowers the inflow of foreign institutional investors. You can go back to Block 2 for a discussion of market liquidity.

There are two main indicators of market liquidity: turnover ratio, and value-traded ratio. Turnover ratio equals the total volume of domestic shares traded divided by market capitalisation. Market capitalisation is the aggregate value of all listed shares on the exchange. The market capitalisation ratio is an indicator of the size of the stock market and is equal to market capitalisation divided by the gross domestic product (GDP). The turnover ratio is an indicator of the trading of domestic equities on domestic exchanges relative to the size of the market. If turnover is high, it shows that transactions costs are low. The turnover ratio complements the measure of the size of the stock market. It is possible that markets are large but inactive. Here the turnover ratio is useful as an indicator. A market that is large but inactive will be characterised by a large capitalisation ratio but small turnover ratio.

The value traded ratio equals the total value of domestic shares traded on the major stock exchanges divided by the gross domestic product (GDP). It is a macro-indicator of liquidity at the economy-wide level. It measures the organised trading of firm equity as a share of national output. The turnover ratio shows trading relative to the size of the market while the value traded ratio shows trading relative to the size of

the economy. Hence a market that is very small in size but liquid will have a low value traded ratio but high turnover ratio.

There is the liquidity of an asset and the liquidity of the market, as we saw. A financial asset that is liquid is marketable. If a significant amount of the security can be sold relatively quickly without large price concessions, the security is liquid. Other things remaining the same, the more marketable a security is, the lower the rate of interest it earns. The marketability of an asset depends both on the features of the asset itself and on the nature of market where the asset is traded. In general, assets that are homogeneous, that can easily be transferred without cost or delay, and which are preferred by a large number of investors are marketable and liquid.

What are the main determinants of market liquidity? We can say roughly any factor that affects the indicators of market liquidity. The basic determinants are value and prices of the securities traded, the volumes of securities traded, the value of GDP of the country and market capitalisation.

We shall see presently that derivatives, of which futures are a type, enhance the liquidity of financial markets. What role futures play, and benefits they provide, is discussed in the next section.

Check Your Progress 1

- 1) What is the role of stock markets in the economy?

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- 2) Briefly discuss the working of the secondary share markets.

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- 3) What do you understand by market liquidity?

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12.4 FUTURES EXCHANGES

Futures markets play a big role in the financial world. Many types of futures instruments have been developed. For investors, particularly institutional investors, futures are very important. Futures contracts like options are important derivative instruments and are an important tool in the area of risk management. What exactly is a futures contract? A futures contract is a type of derivative instrument. You have studied about derivatives in Unit 7 of Block 2. We shall not discuss derivatives in all its detail here but merely focus on futures. However, let us briefly recall the basic features of derivatives. A derivative is a contract whose value is derived from the value of another asset, known as the underlying asset. This underlying asset could be a share, a stock market index, a currency, an interest rate or a commodity. Derivatives, in their function, are very similar to insurance. Insurance protects against specific risks, while derivatives aim to protect against market risks, such as volatility in interest rates, share prices, and so on. Derivatives help in the redistribution of risks. There are certain benefits that derivatives confer. First, derivatives reduce risk. Secondly, derivatives enhance the liquidity of the underlying asset market by increasing trading volumes since derivatives enable participation by a large number of players. Thirdly, derivatives lower transactions costs. The costs of trading in derivatives are lower than the costs of trading in the underlying assets. Fourthly, derivatives enhance the price setting process by helping to arrive at correct prices. Information about future cash market prices is revealed through the future market. The prices in futures markets reflects the expectation of investors about future prices, and leads the prices of the underlying asset towards the expected future level. The prices of the derivatives converge to the prices of the underlying at the expiry of the derivative contract. Fifthly, derivatives help the investors to adjust the risk and return characteristics of their stock portfolio. Derivatives also provide a wide choice of hedging structures each with a unique risk-return profile. Finally, derivatives provide information on the direction and magnitude in which various market indices are expected to move.

A futures contract is a standardised forward contract. Standardisation means that the quantity, date and delivery conditions of the contract are standardised. To understand a futures contract and a forward contract, we have to understand a forward contract. A forward contract is an agreement between a buyer and a seller to exchange an asset for cash at a predetermined future for a price that is specified at the present moment. Thus even in forward trading, there is an element of trading at a future time involved. There is forward trading in commodities like pulses and cotton. We say there is a short position when the seller is committed to deliver an item at the contracted price on maturity, and a long position when the buyer is committed to purchase an item at the contracted price on maturity. Thus the short position is the analogue of selling, and the long position the analogue of buying. Of course, these are not mutually exclusive. What do buyers and sellers gain from forward trading? When the spot price in the future is higher than the contracted forward price, the buyer gains and the gain is: $\text{spot price} - \text{contract price}$. When the spot price in the future is lower than the contracted forward price, the seller gains and the gain is: $\text{contract price} - \text{spot price}$. In a forward contract, the gain of the buyer is a loss of the seller, and vice versa.

Let us now look at the difference between forward trading and futures. The basic difference is that in forward trading, the terms are ad hoc and customised by the parties to the contract, that is, the buyer and seller, whereas in futures trading, the

contracts are standardised, although forward contracts and futures contracts are similar. The other important difference between the two are that first, there are no organised exchanges (exchange as a specified place, agency etc. like a stock exchange) for forward contracts, that is, there is no secondary market for forward contracts; the futures contracts are traded on organised exchanges, or we can say that forward trading is over-the-counter; or an arms-length transaction; secondly, forward contracts usually end with deliveries while futures are settled with the differences; thirdly, no collateral is usually needed for a forward contract, while in a futures contract, a margin is required; and finally, forward contracts are settled on maturity date, while the profits and losses on futures contracts are settled daily.

We now discuss the key characteristics of futures contracts. First, futures contracts are standardised in terms of asset quality, asset quantity, and maturity date. This standardisation promotes liquidity and permits the parties to the contract to close the deal properly. Secondly, trading in futures is mediated by the futures exchange. This means that the futures exchange buys from the seller and sells to the buyer. The exchange acts as an intermediary and a guarantor. This minimises credit risk. Thirdly, futures exchanges usually impose limits or bands on the price movements of futures contracts. These price limits are imposed to prevent overreaction to information and to prevent the pernicious effects of rumours that can trigger panic selling or buying. Finally, futures are characterised by what is called 'marking to market'. This is the practice of periodically adjusting a margin account by adding or subtracting funds based on changes in market value to reflect the investors' gains or losses. This means that profits and losses on futures contracts are settled on a periodic basis. This is to ensure that there is no default.

To recapitulate, let us now go over once more the basic idea of futures. They are transferable specific delivery forward contracts. They are contracts that lock the price today of an exchange that will take place between the buyer and seller at some fixed future date. Futures are a type of derivatives with an underlying asset. Depending on the kind of underlying assets, there are financial futures and commodity futures. Futures are transferable legal agreements. Strictly speaking, futures are not securities. Although futures contracts provide for the delivery of the contracted assets or commodities, in reality, only a small proportion of contracts that are not offset by an opposite contracts are actually delivered. The basic motivation of futures trading is not actual delivery but hedging and speculation.

The trading of futures takes place in auction markets organised by futures exchanges that are wholesale markets and have their own clearinghouse. Instead of trading with each other, the buyers and sellers trade via the exchange. The clearinghouses of the futures guarantee the adherence of each party to the contract. The settlement of the outstanding contracts on the expiration dates takes place as per the prescribed rules of the futures exchange. The futures exchanges are very similar to stock exchanges: all dealings are centralised in them; trading takes place by open outcry; there are limited trading hours; prices are publicly recorded; trading on the floor is limited to members of the exchange; and finally, the clearinghouses are owned and operated by the exchanges themselves.

Well functioning, well organised futures markets provide the same kind of services and benefits that derivatives do in general: they provide hedging facilities; they introduce an element of stability in market prices; they indicate expected future prices, and they facilitate arbitrage over space and time and achieve an integrated price structure in underlying assets.

Who are the main participants in futures trading? There are three types of traders in futures markets: hedgers, speculators and arbitrageurs. A hedger is someone who hedges, that is, takes a position to offset the risk associated with some other position. A hedger uses derivatives to reduce the risk associated with the price movement of an asset. A speculator enters into futures trading for profit and not for reducing risks, unlike a hedger. Speculators willingly take on increased risks. They intend to take a position in the market by betting on the future price movements of an asset. They provide some function to futures markets by facilitating hedging (by others!) by increasing liquidity, by ensuring accurate pricing, and by providing price stability. Since they take risks that others are not willing to take, some experts contend that it is speculators who help the markets to operate smoothly. Finally, arbitrageurs are those who engage in arbitrage, which means buying cheap and selling dear. An arbitrageur is a person who simultaneously enters into transactions in two or more markets to take advantage of the price differentials in the two markets. Hence arbitrage involves making profits from relative differential pricing. Arbitrageurs also help in making markets liquid, ensure accurate pricing, and inject price stability.

In India forward trading has existed for a long time. Trading in financial futures is of recent origin. In India over-the counter trading in futures is not allowed. Derivatives trading formally started in India in June 2000 on the two major stock exchanges, BSE and NSE, futures trading based on the SENSEX started at the BSE on 9th June 2000, while futures trading on S&P Nifty began at the NSE on June 12, 2000. Trading in index options started in June 2001 and trading in options on individual securities began in July 2001, while trading in stock futures started in January 2002.

Check Your Progress 2

- 1) In what way is a futures security as asset different from shares?
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- 2) Explain the nature of futures as an important derivative and how it helps in risk management.
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- 3) What are the differences between futures and forward contract?
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12.5 SOME OTHER TRADING MECHANISMS

In this section, we will look at some new trading mechanisms and the market for some other securities and primary commodities. First of all, we will look at commodity futures. We will look at futures on storable commodities as well as futures contracts on perishable commodities.

Let us look at commodity derivative, in which the underlying is a commodity. It can be commodities like wheat, corn, oats, rice, cotton, spices like pepper, turmeric, or natural resources like oil or natural gas. In the US, in addition to the equity and bond markets, there were also the exchanges in Chicago which was set up since 1848, and where commodity futures were traded starting in the mid- nineteenth century (1860s). In India, trading in commodity futures dates back to 1875. In the 1960s and 1970s futures trading was banned in many commodities. Forward trading was banned in the 1960s. In 1969, all forward trading in securities was banned. However, the Reserve Bank allows forward contracts in rupee-dollar exchange rates. To get back to commodity futures, commodity futures trading is allowed in the case of 41 commodities. There are 18 commodity exchanges in India. For the trading of commodity futures, the Forwards Market Commission, under the Ministry of Food and Consumer Affairs, acts as the regulator. Futures exist for storable as well as perishable commodities. For a storable commodity buying in the spot market and storing it until expiration is equivalent to buying a futures contract and taking delivery on the maturity date. For perishable commodities advantage on the basis of arbitrage cannot be reaped. The futures price of a perishable commodity is influenced mainly by two factors, namely, the expected spot price of the underlying commodity, and the risk premium associated with the futures position.

Let us look at some innovations in India regarding the stock exchanges. These actually are some new methods of trading. We had mentioned earlier that in stock exchanges in India, the open outcry system has been replaced by on-line screen-based trading system. With this, trading has largely shifted from the trading floor to the office of the broker where trades are executed through computer terminals. In the screen-based system, a member can feed into the computer the number of shares he would like to transact and the prices at which he would like to do so. The transaction is executed as soon as it finds a matching order from a counter party. In India there are two types of trading system, based on the way the offers are made. These are order driven system and the quote-driven system. In the former, orders from all over the country are fed into a computer system and matched directly and continuously. In the quote driven system, there are market makers who continually offer two-way quotes of buying and selling and are willing to buy and sell any quantity. The NSE provides only the order driven system, while the BSE has both these systems. Another innovation that has taken place in recent years is that Internet trading of shares started in April 2000. Through this means of trading, investors can buy and sell securities on-line through the Internet. To understand how trading is conducted through the Internet we have to know about dematerialisation of securities. An electronic book entry form of holding and transferring securities has been introduced to eliminate various problems associated with theft, forgery, and delays of share certificates while exchanging. The electronic system is called dematerialised form of securities (DEMAT). Investors have the option of holding securities in either physical form or dematerialised form. SEBI has made compulsory the settlement of trade in DEMAT form for certain select scrips. Securities issued through IPOs can be settled only in DEMAT form. To come back to Internet trading process, to trade through the Internet, an investor has to register himself or herself with a broker. He/she also has

to open a bank account as well as a DEMAT account with the broker. The broker is responsible for the risk management of his client.

Check Your Progress 3

- 1) What do you understand by a commodity futures market?

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- 2) Explain the concept of DEMAT of securities.

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- 3) Distinguish between the order-driven system and quote-driven system of trading of shares.

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12.6 LET US SUM UP

In this Unit we gave a descriptive account of how some financial markets work, and the trading mechanisms that operate. We looked at the meaning of liquidity in the financial markets and the determinants of this liquidity. We then went on to look in detail at the working of the stock markets, particularly the secondary market. We focused on the main players in the market and how trading is carried out. We then proceeded to consider in detail, both theoretically as well as descriptively, how the futures markets work. How futures contracts differ from forward contracts and how the basic dealings in futures markets is done. Both for the stock market and the futures markets we looked at the theoretical picture as well as the Indian scenario.

In the final part of the unit, we looked at the growth of on-line trading as DEMAT securities. We paid attention to the changes underway with regard to the trading of shares. We also looked at trading mechanisms for trade in securities, particularly on-line trading, computerisation and some other changes. We also looked at trading in organised exchanges of primary commodities.

12.7 KEY WORDS

Bull Market : Market in which prices are going up and investor sentiments are optimistic

Bear Market : Market dominated by operators who have a pessimistic view of future prices. When the

market is bearish, indicators of the stock market decline.

- Derivative Security** : An asset whose price depends on the price of an underlying asset.
- Exchanges** : These are well designed formal organisations which facilitate and conduct trading in financial securities and which are usually regulated by an authority body.
- Futures** : A type of asset under a futures contract, which is an agreement to exchange a predetermined quantity of an asset at a specific date in the future at a predetermined price.
- Hedgers** : These are people who try to minimise risk or who try to protect themselves by holding different types of shares so that they can sell them so that they can offset their losses with gains. Hedging is undertaken with the intention of minimising risks, not maximising profits.
- Stock** : A claim to partial ownership of a firm.

12.8 SOME USEFUL BOOKS

Alexander, G.J., Sharpe, W.F. and Bailey, V.J., (1993), *Fundamentals of Investment*, Second Edition, Prentice-Hall, Englewood Cliffs, New Jersey.

Elton, E.J., and Gruber, M.J. (1997) [(2001) Asian Reprint] *Modern Portfolio Theory and Investment Analysis*, Fifth Edition, John Wiley and Sons, Singapore

Haugen, R.A. (1993) *Modern Investment Theory*, 3rd edition, Prentice-Hall, Englewood Cliffs, New Jersey.

12.9 ANSWERS/HINTS TO CHECK YOUR PROGRESS EXERCISES

Check Your Progress 1

- 1) See Section 12.2 and answer.
- 2) See Section 12.2 and answer
- 3) See Section 12.3 and answer

Check Your Progress 2

- 1) See Section 12.4 and answer
- 2) See Section 12.4 and answer
- 3) See Section 12.4 and answer

Check Your Progress 3

- 1) See Section 12.5 and answer
- 2) See Section 12.5 and answer
- 3) See Section 12.5 and answer