UNIT 12 TRADING AND EXCHANGES

Structure

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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, derivates 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: spot price – contract price. When the spot price in the future is lower than the contracted forward price, the seller gains and the gain is: contract price – 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 ton 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 riks, 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