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INTRODUCTION TO THE INDIAN FINANCIAL SYSTEM AND MARKETS

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LEARNING OBJECTIVE

After studying this chapter, you would be able to:

- Describe financial systems and markets
- Describe various financial instruments
- Understand the role of financial markets
- Describe the structure and functioning of money markets
- Describe the structure and functioning of capital markets including stock & debt markets
- Understand stock market indices
- Understand ways of raising capital in international markets
- Describe Global and American Depository Receipts
- Understand external commercial borrowings
- Understand foreign exchange market
- Describe exchange rate and exchange risk
- Explain instruments for hedging foreign exchange
- Learn exchange rate system

 KEY TERMS		
This chapter features these terms which you should strive to do more research about:		
Financial System	Financial Intermediaries	Call/Notes Money
Treasury Bills	Certificate of Deposits	Commercial Paper
Hybrid Instruments	Common Stock	Preferred Stock
Derivative Securities	Bankers Acceptance	Repurchase Agreements
Federal Funds	Government Security	Limited Liability
Voting Rights	Brokers	Treasury Notes

INTRODUCTION TO INDIAN FINANCIAL SYSTEM

Financial System of any country consists of Financial Markets, Financial Intermediation and Financial Instruments (Products) and various services provided. This part of the unit discusses the meaning of finance and Indian Financial System and focus on the financial markets, financial intermediaries and financial instruments and various services. The brief review on various money market instruments are also covered in this study.

The term “Finance” in our simple understanding it is perceived as equivalent to ‘Money’. Finance exactly is not money; it is the source of providing funds for a particular activity. Thus public finance does not mean the money with the Government, but it refers to sources of raising revenue for the activities and functions of a Government.

Financial System

The economic development of a nation is reflected by the progress of the various economic units, broadly classified into corporate sector, government and household sector. While performing their activities these units will be placed in a surplus / deficit / balanced budgetary situations.

There are areas or people with surplus funds and there are those with a deficit. A financial system or financial sector functions as an intermediary and facilitates the flow of funds from the areas of surplus to the areas of deficit.

A Financial System is a composition of various institutions, markets, regulations and laws, practices, money manager, analysts, transactions and claims and liabilities.



Exhibit 2.1: Financial System

The word “system”, in the term “financial system”, implies a set of complex and closely connected or interlined institutions, agents, practices, markets, transactions, claims, and liabilities in the economy. The financial system is concerned about money, credit and finance-the three terms are intimately related yet are somewhat different from each other. Indian financial system consists of financial market, financial instruments and financial intermediation and services provided by them.

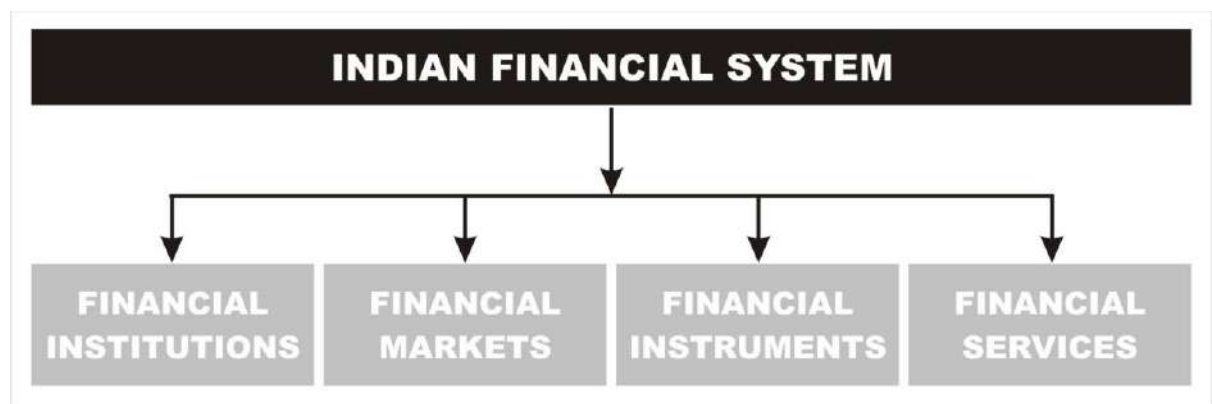


Exhibit 2.2: Indian Financial System

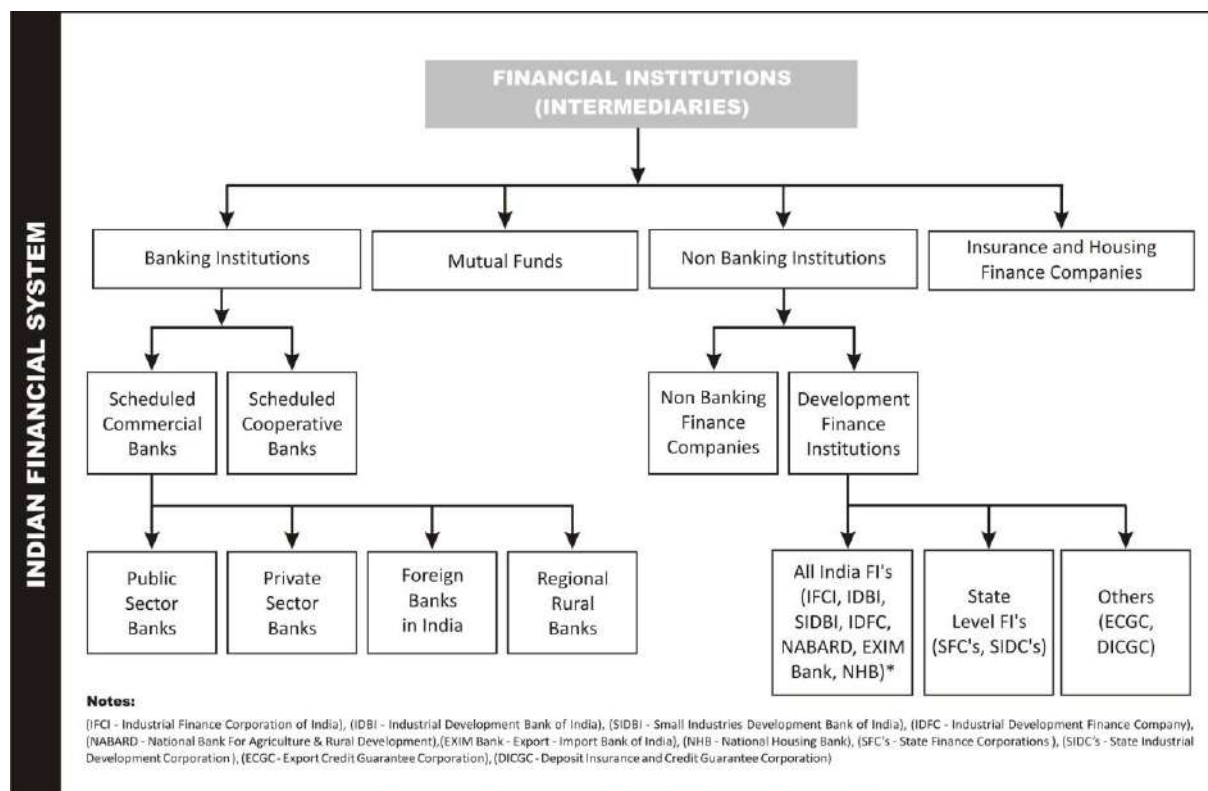


Exhibit 2.3: Classification of Financial Institutions

Financial Institutions / Intermediaries

When the borrower of funds approaches the financial market to raise funds, mere issue of securities will not suffice. Adequate information of the issue, issuer and the security should be passed on to take place. There should be a proper channel within the financial system to ensure such transfer. Financial intermediation in the organized sector is conducted by a wide range of institutions functioning under the overall surveillance of the reserve bank of India. In the initial stages, the role of the intermediary was mostly related to ensure transfer of funds from the lender to the Borrower. Banks, Financial Institution, brokers, and dealers offered this service. Some of the important intermediaries operating in the financial markets include; investment bankers, underwriters, stock exchanges, registrars, depositories, custodians, portfolio managers, mutual funds, financial advertisers financial consultants, primary dealers, satellite dealers, self-regulatory organizations, etc. Though the markets are different, there may be a few intermediaries offering their services in more than one market e.g. Underwriter. However, the services offered by them vary from one market to another.

Banking Institutions

Scheduled Commercial Banks: A commercial bank is a type of financial institution that provides services such as accepting deposits, making business loans, and offering basic investment products. Commercial bank can also refer to a bank, or a division of a large bank, which more specifically deals with deposit and loan services provided to corporations or large/middle-sized business – as opposed to individual members of the public/small business – retail banking, or merchant banks. Scheduled Banks in India refer to those banks which have been included in the Second Schedule of Reserve Bank of India Act, 1934. RBI in turn includes only those banks in this Schedule which satisfy the criteria laid down in section 42(6)(a) of the said Act. A Scheduled commercial bank can be:

- 1. Public Sector Banks:** public sector banks (PSB'S) are banks where a majority stake (i.e. more than 50%) is held by a government. The shares of these banks are listed on stock exchanges. There are a total of 21 PSB's in India. These include State bank of India and its associates and other nationalized banks. Please note that State bank of India and its associates have been together merged as STATE BANK OF INDIA.

- 2. Private Sector Banks:** The private-sector banks in India represent part of the Indian banking sector that is made up of both private and public sector banks. The “private-sector banks” are banks where greater parts of state or equity are held by the private shareholders and not by government.

The private sector banks are split into two groups by financial regulators in India, old and new. The old private sector banks existed prior to the liberalization in 1969 and kept their independence because they were either too small or specialist to be included in liberalization. The new private sector banks are those that have gained their banking license since the liberalization in the 1990s.

- 3. Foreign Banks in India:** Foreign bank is a type of bank that is obligated to follow the regulations of both the home and host countries. Because the foreign branch banks’ loan limits are based on the parent bank’s capital, foreign banks can provide more loans than subsidiary banks. Today there are many foreign Banks functioning In India.

- 4. Regional Rural Banks:** Regional Rural Banks are local level banking organizations operating in different States of India. They have been created with a view to serve primarily the rural areas of India with basic banking and financial services. However, RRBs may have branches set up for urban operations and their area of operation may include urban areas too.

The area of operation of RRBs is limited to the area as notified by Government of India covering one or more districts in the State. RRBs also perform a variety of different functions. RRBs perform various functions in following heads

- Providing banking facilities to rural and semi-urban areas.
- Carrying out government operations like disbursement of wages of MGNREGA workers, distribution of pensions etc.
- Providing Para-Banking facilities like locker facilities, debit and credit cards.

- 5. Scheduled Cooperative Banks:** Co-operative Institutions are engaged in all kinds of activities namely production, processing and marketing, distribution, servicing, and banking in India and have vast and powerful superstructure. Co-operative Banks are important cogs in this structure. Are organized and managed on the principal of co-operation, self-help, and mutual help. They function with the rule of “one member, one vote”. Function on “no profit, no loss” basis. Co-operative banks, as a principle, do not pursue the goal of profit maximization. Co-operative bank performs all the main banking functions of deposit mobilization, supply of credit and provision of remittance facilities. Co-operative Banks provide limited banking products and are functionally specialists in agriculture related products. However, co-operative banks now provide housing loans also. These can be state as well as urban Cooperative Banks.

Non-Banking Institutions

Non-Banking Finance Companies (NBFC’S): A non-banking finance company is a company registered under the companies act, 1956, of India, engaged in the business of loans and advances, acquisition of shares, stocks, bonds, hire purchase, insurance business or chit business but does not include any institution whose principal business includes agriculture, industrial activity or the sale, purchase or construction of immovable property.

The working and operations of NBFC’s are regulated by the Reserve Bank of India within the framework of the Reserve bank of India, act 1934 and the directions issued by it.

Development Finance Institutions

1. All India level institutions like IFCI, IDBI, SIDBI, IDFC, NABARD, Axis Bank, NHB
2. State level Financial Institutions like SFC’s, SIDC’s.
3. Others ECGC, DICGC, Etc.

Mutual Funds

Mutual fund is a professionally managed investment fund that pools money from many investors to purchase securities. Hedge funds are not mutual funds; they cannot be sold to the general public

and are subject to different government regulations. They are generally the most common investment vehicle for retirement plans, such as the 401(k) in the United States.

Mutual funds have both advantages and disadvantages compared to direct investing in individual securities. The main advantage of mutual funds is they provide stock diversification and professional investors managing the account. The main disadvantage is the fees/expenses charged. There are three structures of mutual funds: open-end funds, unit investment trusts, and closed-end funds. Exchange-traded funds (ETFs) are open-end funds or unit investment trusts that trade on an exchange such as the New York Stock Exchange. Open-end funds that cannot be sold on an exchange can instead be sold back to the fund manager at the close of each business day.

Mutual funds are generally classified by their principal investment strategy: money market funds, bond or fixed income funds, stock or equity funds, and hybrid funds. Funds may also be categorized as index funds, which are passively managed funds that match the performance of an index or actively managed funds that try to beat other indexes but charge higher fees.

Investors in a mutual fund must pay mutual fund fees and expenses, which reduce the fund's returns and performance and are usually expressed in the form of an expense ratio. Passively managed funds, such as index funds generally have a lower expense ratio than actively managed funds.

Mutual funds may invest in many kinds of securities. The types of securities that a particular fund may invest in are set forth in the fund's prospectus, a legal document which describes the fund's investment objective, investment approach and permitted investments. The investment objective describes the type of income that the fund seeks. For example, a capital appreciation fund generally looks to earn most of its returns from increases in the prices of the securities it holds, rather than from dividend or interest income. The investment approach describes the criteria that the fund manager uses to select investments for the fund.

A mutual fund's investment portfolio is continually monitored by the fund's portfolio manager or managers.

Housing Finance Companies

The objectives of these include

1. Providing long term finance for construction of houses for residential purposes or finance or undertake housing and urban development programmes in the country;
2. Finance or undertake, wholly or partly, the setting up of the new or satellite towns;
3. Subscribe to the debentures and bonds to be issued by the state housing (and/or urban development) boards, improvement trusts, development authorities etc. Specifically for the purpose of financing housing and urban development programmes;
4. Finance or undertake the setting up of industrial enterprises of building material;
5. Administer the moneys received, from time to time, from the government of India and other sources as grants or otherwise for the purposes of financing or undertaking housing and urban development programmes in the country, and
6. Promote, establish, assist, collaborate and provide consultancy services for the projects of designing and planning of works relating to housing and urban development programmes in India and abroad.

Financial Intermediaries

Intermediary	Market	Role
Stock Exchange	Capital Market	Secondary Market to securities
Investment Bankers	Capital Market, Credit Market	Corporate advisory services, Issue of securities
Underwriters	Capital Market, Money Market	Subscribe to unsubscribed portion of securities

Registrars, Depositories, Custodians	Capital Market	Issue securities to the investors on behalf of the company and handle share transfer activity
Primary Dealers Satellite Dealers	Money Market	Market making in government securities
Forex Dealers	Forex Market	Ensure exchange of currencies

Services Provided By Financial Intermediaries:

1. **Monitoring Costs:** Aggregation of funds in a Financial Intermediary provides greater incentive to collect a firm's information and monitor actions. The relatively large size of the Financial Intermediary allows this collection of information to be accomplished at a lower average cost.
2. **Liquidity and Price Risk:** Financial Intermediaries provide financial claims to household savers with superior liquidity attributes and with lower price risk.
3. **Transaction Cost Services:** Similar to economies of scale in information production costs, a Financial Intermediary size can result in economies of scale in transaction costs.
4. **Maturity Intermediation:** Financial Intermediary can better bear the risk of mismatching the maturities of their assets and liabilities.
5. **Denomination Intermediation:** Financial Intermediary such as mutual funds allows small investors to overcome constraints to buying assets imposed by large minimum denomination size.
6. **Money Supply Transmission:** Depository institutions are the conduit through which monetary policy actions impact the financial system and the economy in general.
7. **Credit Allocation:** Financial Intermediary is often viewed as the major source of financing for a particular sector of the economy, such as farming and residential real estate.
8. **Intergenerational Wealth Transfers:** Financial Intermediary, especially life insurance companies and pension funds, provide savers with the ability to transfer wealth from one generation to the next.
9. **Payment Services:** Efficiency with which depository institutions provide payment services directly benefits the economy.

Various financial services provided by various financial intermediaries:

1. Depositories
2. Custodial
3. Credit rating
4. Factoring
5. Forfeiting
6. Merchant banking
7. Leasing
8. Hire purchase
9. Portfolio management
10. Underwriting

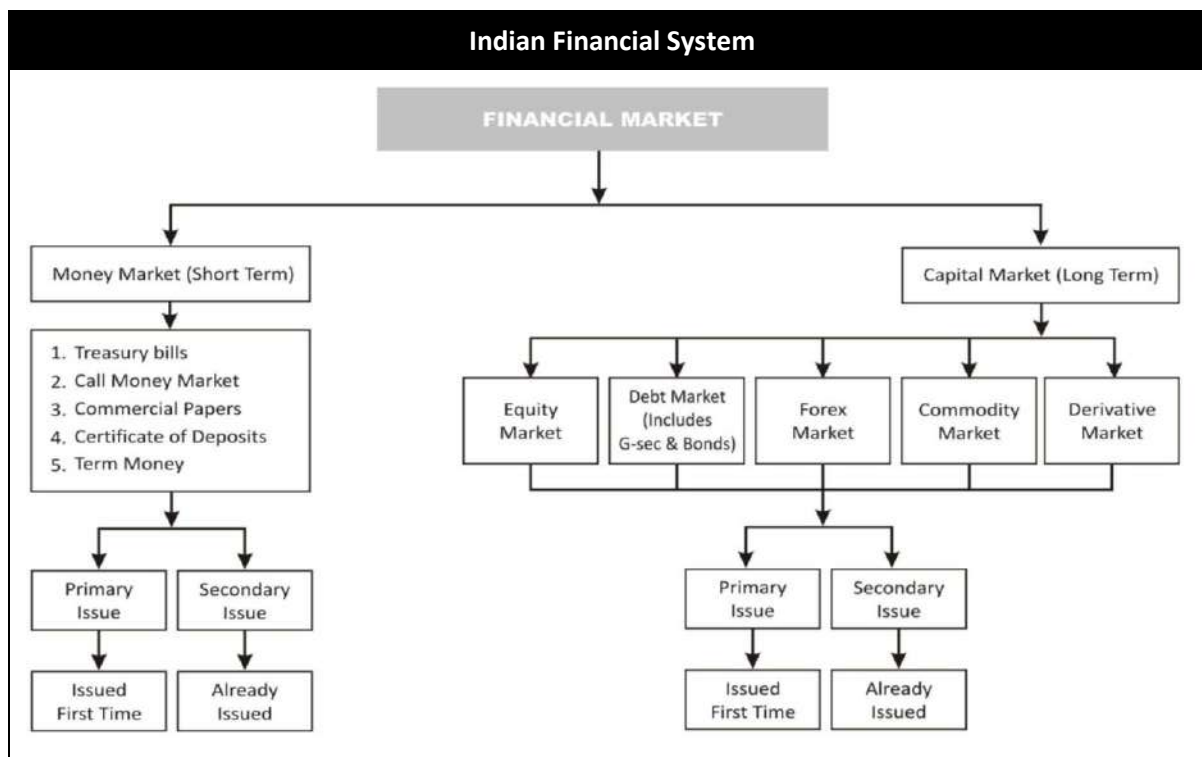


Exhibit 2.4: Indian Financial Market

Financial Markets

A Financial Market can be defined as the market in which financial assets are created or transferred. As against a real transaction that involves exchange of money for real goods or services, a financial transaction involves creation or transfer of a financial asset. Financial Assets or Financial Instruments represents a claim to the payment of a sum of money sometime in the future and /or periodic payment in the form of interest or dividend.

Types of Financial Markets:

- 1. Money Market:** The money market is a wholesale debt market for low-risk, highly liquid, short-term instrument. Funds are available in this market for periods ranging from a single day up to a year. This market is dominated mostly by government, banks and financial institutions. The short-term nature of these instruments means that fluctuations in their prices in the secondary markets in which they trade are usually quite small. Most of the money markets are said to be over-the-counter (OTC) markets.

A variety of money market securities are issued by corporations and government units to obtain short-term funds. These securities include Treasury bills, federal funds, repurchase agreements, commercial paper, negotiable certificates of deposit, and banker's acceptances.

- 2. Capital Market:** The capital market is designed to finance the long-term investments. The transactions taking place in this market will be for periods over a year. The major suppliers of capital market securities (or users of funds) are corporations and governments. Due to their longer maturity, these instruments experience wider price fluctuations in the secondary markets.

Corporate stocks or equities represent the largest capital market instrument, followed by securitized mortgages and corporate bonds.



Exhibit 2.5: Term to Maturity

The Role of Financial Markets

Financial assets are exchanged in Financial Markets. Financial markets perform three economic functions.

First, the interactions of buyers and sellers in a financial market determine the price of the traded asset. The inducement for firms to acquire funds depends on the required return that investors demand, and this feature of financial markets tells how the funds in the economy should be allocated among financial assets. It is called the price discovery process.

Second, financial markets provide a mechanism for an investor to sell a financial asset. This feature offers liquidity in financial markets, an attractive characteristic when circumstances either force or motivate an investor to sell. In the absence of liquidity, the owner must hold a debt instrument until it matures and an equity instrument until the company either voluntarily or involuntarily liquidates.

The third economic function of a financial market reduces the search and information costs of transacting. Search costs represent explicit costs, such as the money spent to advertise the desire to sell or purchase a financial asset, and implicit costs, such as the value of time spent in locating a counter party. Information costs are incurred in assessing the investment merits of a financial asset, that is, the amount and the likelihood of the cash flow expected to be generated.

Classification of Financial Markets in a summarized way:

1. **By the type of financial claim:** The claims traded in a financial market may be either for a fixed amount or a residual amount. The former financial assets are referred to as debt instruments, and the financial market in which such instruments are traded is referred to as the debt market. The latter financial assets are called equity instruments and the financial market where such instruments are traded is referred to as the equity market or stock market.

Preferred stock represents an equity claim that entitles the investor to receive a fixed amount. Consequently, preferred stock shares characteristics of instruments classified as part of the debt market and the equity market. Generally, debt instruments and preferred stock are classified as part of the fixed income market. The sector of the stock market that does not include preferred stock is called the common stock market.

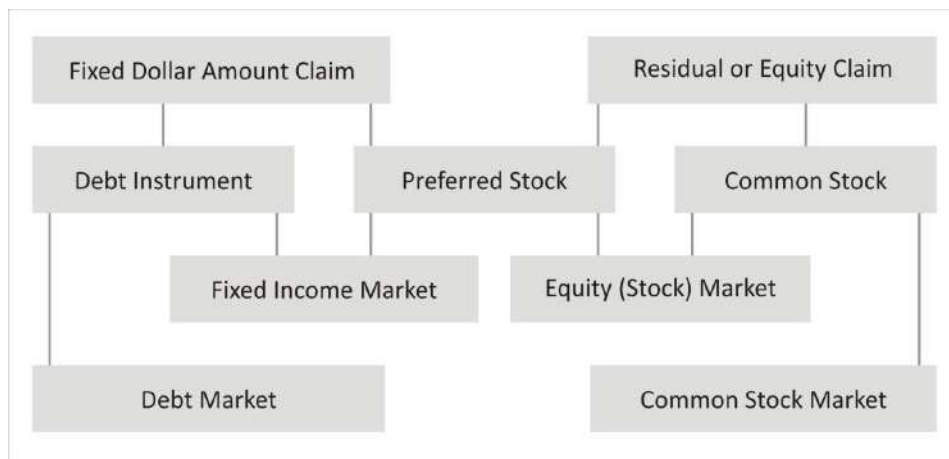


Exhibit 2.6: Classification of Financial Markets by Type of Claim

2. **By the maturity of the claims:** A financial market for short-term financial assets is called the money market. And the one for longer maturity financial assets is called the capital market. The traditional cutoff between short term and long term is one year. I.e., financial asset with maturity of one year or less is considered short term and therefore part of the money market. A financial asset with a maturity of more than one year is part of the capital market. Thus, the debt market can be divided into: debt instruments that are part of the money market, and those that are part of the capital market, depending on the number of years to maturity.

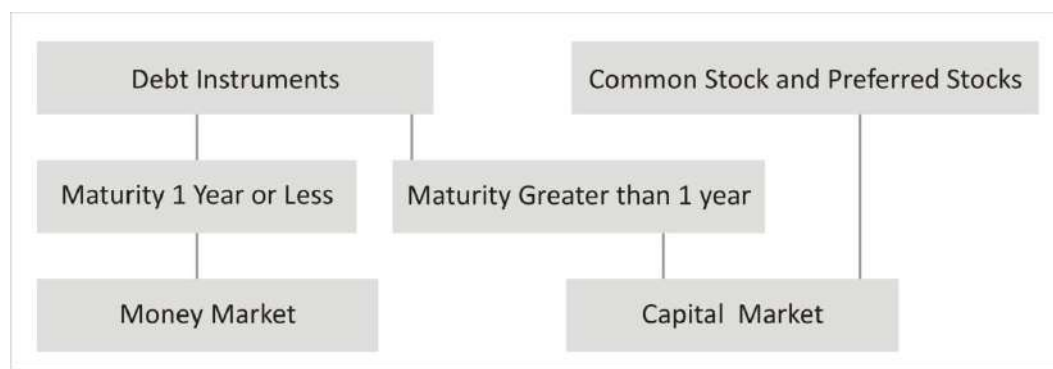


Exhibit 2.7: Classification of Financial Markets by Maturity of Claim

3. **By whether the financial claims are newly issued:** When an issuer sells a new financial asset to the public, it is said to “issue” the financial asset. The market for newly issued financial assets is called the primary market. After a certain period of time, the financial asset is bought and sold (i.e. exchanged or traded) among investors. The market where this activity takes place is referred to as the secondary market.
4. **By its organizational structure:** These organizational structures can be classified as auction markets, over-the-counter markets, and intermediate markets.

Primary Markets versus Secondary Markets

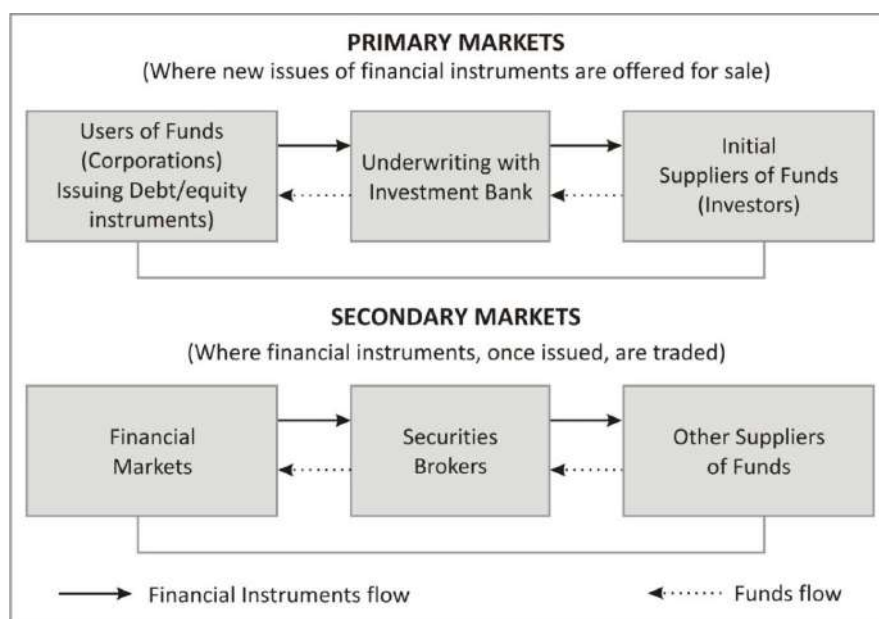


Exhibit 2.8: Primary and Secondary Market Transfer of Funds Time Line

Primary markets are markets in which users of funds (e.g. corporations) raise funds through new issues of financial instruments, such as stocks and bonds. The fund users have new projects or expanded production needs, but do not have sufficient internally generated funds (such as retained earnings) to support these needs. Thus, the fund users issue securities in the external primary markets to raise additional funds. New issues of financial instruments are sold to the initial suppliers of funds (e.g. households) in exchange for funds (money) that the issuer or user of fund’s needs.

Primary market financial instruments include issues of equity by firms initially going public (e.g. allowing their equity—shares—to be publicly traded on stock markets for the first time). These first-time issues are usually referred to as initial public offerings (IPOs).

Primary Market securities also include the issue of additional equity or debt instruments of an already publicly traded firm.

Following are the methods of raising capital in the primary market:

- (i) **Public Issue:** When an issue / offer of securities is made to new investors for becoming part of shareholders' family of the issuer, it is called a public issue. Public issue can be further classified into Initial Public Offer (IPO) and Follow on Public Offer (FPO).

Initial Public Offer (IPO): When an unlisted company makes either a fresh issue of securities or offers its existing securities for sale or both for the first time to the public, it is called an IPO. This paves way for listing and trading of the issuer's securities in the Stock Exchanges.

Follow on Public Offer (FPO): When an already listed company makes either a fresh issue of securities to the public or an offer for sale to the public, it is called a Follow on Public Offer (FPO).

- (ii) **Offer for Sale:** An OFS allows promoters to reduce their holdings in listed companies transparently. The promoters can sell their shares on an exchange platform to raise funds. It is a shorter and easier way of raising capital. It is a part or full of shareholding in a particular company by the existing stakeholders. Shareholders, retail investors, companies, Foreign Institutional Investors, and Qualified International Buyers can bid on these shares.

The maximum share allocation per bidder is 25% of the offering, and there are some reservations on the total shares.

- (iii) **Private Placement:** A private placement is the sale of securities to a relatively small number of select investors as a way of raising capital. Investors involved in private placements are usually large banks, mutual funds, insurance companies and pension funds. A private placement is different from a public issue, in which securities are made available for sale on the open market to any type of investor. Private placement of shares or convertible securities by listed issuer can be of two types:

Preferential allotment: When a listed issuer issues shares or convertible securities, to a selected group of persons as per SEBI guidelines, it is called a preferential allotment. The issuer is required to comply with various provisions which inter-alia include pricing, disclosures in the notice, lock-in etc., in addition to the requirements specified in the Companies Act.

Qualified Institutions Placement (QIP): When a listed issuer issues equity shares or securities convertible in to equity shares to qualified institutions buyers only in terms of provisions as per SEBI guidelines, it is called a QIP.

- (iv) **Rights Issue:** When an issue of securities is made by an issuer to its shareholders existing as on a particular date fixed by the issuer (i.e. record date), it is called a rights issue. The rights are offered in a particular ratio to the number of securities held as on the record date.

It comes before Secondary Market



Exhibit 2.9: Primary Market Stock Transaction

Secondary Markets - Once financial instruments such as stocks are issued in primary markets, they are then traded - that is, re-bought and resold—in secondary markets. Buyers of secondary market securities are economic agents (consumers, businesses, and governments) with excess funds. Sellers of secondary market financial instruments are economic agents in need of funds.

Secondary markets provide a centralized marketplace where economic agents know they can transact quickly and efficiently. When an economic agent buys a financial instrument in a secondary market, funds are exchanged, usually with the help of a securities broker acting as an intermediary between the buyer and the seller of the instrument. The original issuer of the instrument (user of funds) is not involved in this transfer. Bombay Stock Exchange and National Stock Exchange are well-known examples of secondary markets for trading stocks.

Secondary markets offer benefits to both investors (suppliers of funds) and issuing corporations (users of funds). For investors, secondary markets provide the opportunity to trade securities at their market values as well as to purchase securities with varying risk-return characteristics. Corporate security issuers are not directly involved in the transfer of funds or instruments in the secondary market. However, the issuer does obtain information about the current market value of its financial instruments. This price information allows issuers to evaluate how well they are using the funds generated from the financial instruments they have already issued and provides information on how well any subsequent offerings of debt or equity might do in terms of raising additional money.

Secondary Markets offer buyers and sellers liquidity—the ability to turn an asset into cash quickly—as well as information about the prices or the value of their investments. Increased liquidity makes it easier for the issuing firm to sell a security initially in the primary market.

Features of Secondary Market:

- It Creates Liquidity
- It Comes After Primary Market
- It Has A Particular Place
- It Encourage New Investments

Investment in long term financial instruments is accompanied by high capital market risks. Since there are two types of capital markets- the stock market and the bond market.

So risks are present in both the market.

Financial Instruments

On the Basis of term

1. **Short-term Market Instruments:** These can be defined as a market for short-term money and financial assets that are near substitutes for money. The term short-term means generally a period up to one year and near substitutes to money is used to denote any financial asset, which can be quickly converted into money with minimum transaction cost.

Some of the important money market instruments are as follows:

1. Call/Notice Money
 2. Treasury Bills
 3. Term Money
 4. Certificate of Deposit
 5. Commercial Papers
2. **Long-term Market Instruments:** These consist of the following long-term period i.e., more than one-year period, financial instruments. In the equity segment Equity shares, preference shares, convertible preference shares, non-convertible preference shares etc. and in the debt segment debentures, zero coupon bonds, deep discount bonds etc.
 3. **Medium-term Instruments:** These vary between long term and short term.

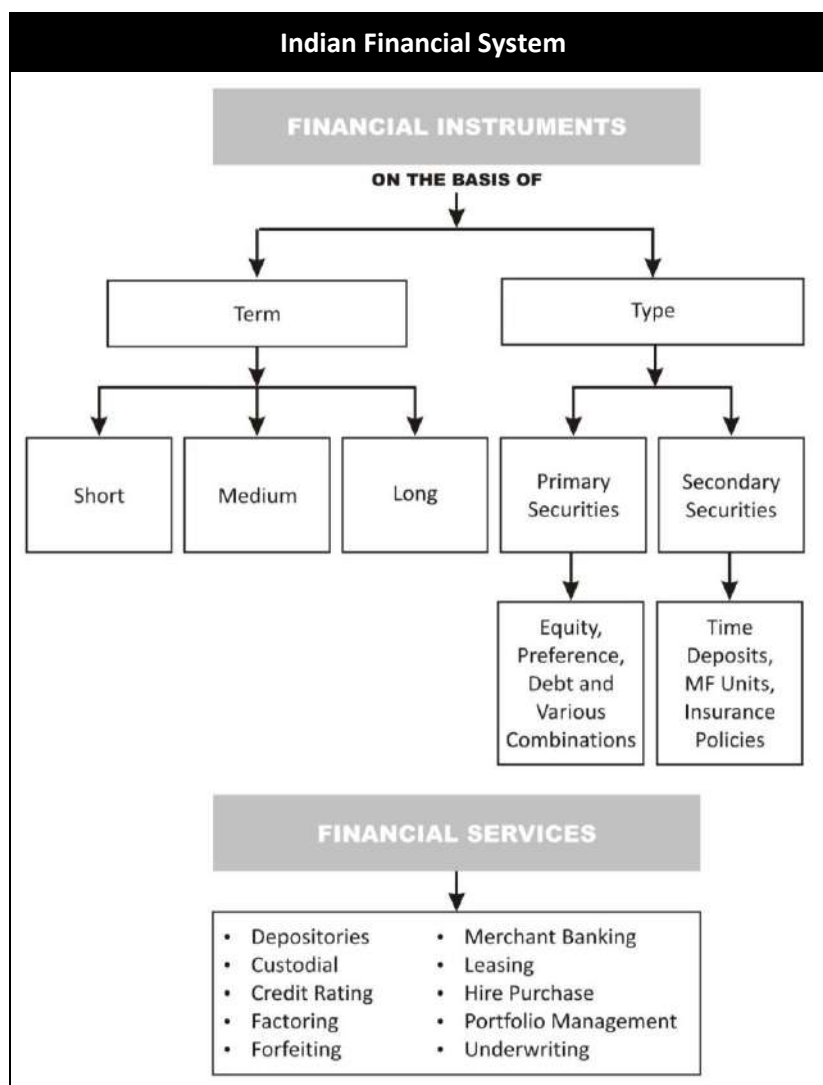


Exhibit 2.10: Types of Financial Instruments and services

On the basis of type

1. **Primary securities:** These include investment in Equity shares, Preference shares, Debt and other various combinations.
2. **Secondary Securities:** These include purchasing Time deposits, Mutual fund units and Insurance policies etc.

Globalization of Financial Markets

Globalization means the integration of financial markets through-out the world into an international financial market. Because of the globalization of financial markets, entities in any country seeking to raise funds need not be limited to their domestic financial market. Nor the investors in a country are limited to the financial assets issued in their domestic market.

The factors contributing to the integration of financial markets include:

1. Deregulation or liberalization of markets and the activities of market participants in key financial centers of the world;
2. Technological advances for monitoring world markets, executing orders, and analyzing financial opportunities; and
3. Increased institutionalization of financial markets.

Global competition forces governments to deregulate or liberalize various aspects of their financial markets so that their financial enterprises can compete effectively around the world. Technological advances increase the integration and efficiency of the global financial market. Advances in

telecommunication systems link market participants throughout the world enabling orders to be executed within seconds. Advances in computer technology, coupled with advanced telecommunication systems, allow the transmission of real-time information on security prices and other key information to many participants in many places.

The shifting of the roles of the two types of investors, retail and institutional investors, in financial markets is the third factor stimulating the integration of financial markets.

The shifting of the financial markets and other major industrialized countries from dominance by retail investors to institutional investors is referred to as the institutionalization of financial markets. Unlike retail investors, institutional investors show greater willingness to transfer funds across national borders to improve the risk/reward opportunities of a portfolio.

Classification of Global Financial Markets

From the perspective of a given country, financial markets can be classified as:

- Internal
- External

Internal Market: The internal market, also called the national market, can be decomposed into two parts: the domestic market and the foreign market.

- The domestic market is where issuers domiciled in the country issue securities and where securities are subsequently traded.
- In the foreign market, securities of issuers not domiciled in the country are sold and traded.

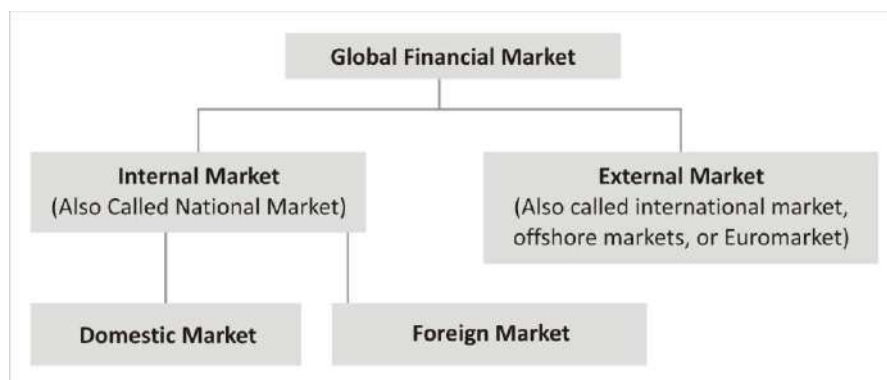


Exhibit 2.11: Classification of Global Financial Markets

The external market, also called the international market, includes securities with the following distinguishing features:

- At issuance they are offered simultaneously to investors in a number of countries;
- They are issued outside the jurisdiction of any single country.
- The external market is commonly referred to as the offshore market, or more popularly, the Euro market.

UNDERSTANDING MONEY MARKET

In finance, the money market is the global financial market for short-term borrowing and lending. It provides short-term liquid funding for the global financial system. The money market is where short-term obligations such as Treasury bills, commercial paper and bankers' acceptances are bought and sold.

The money market consists of financial institutions and dealers in money or credit who wish to either borrow or lend. Participants borrow and lend for short periods of time, typically up to thirteen months. Money market trades in short term financial instruments commonly called "paper". This contrasts with the capital market for longer-term funding, which is supplied by bonds and equity.

Money Market Participants

The core of the money market consists of banks borrowing and lending to each other, using commercial paper, repurchase agreements and similar instruments. These instruments are often benchmarked to LIBOR (London Inter-Bank Offer Rate) or a local rate of a country.

In the United States, federal, state and local governments all issue paper to meet funding needs. States and local governments issue municipal paper, while the US Treasury issues Treasury bills to fund the US public debt.

The various participants in the money market can be enumerated as follows:

1. **The Central Bank:** It's a key participant in the money market. The Central Bank holds T-bills to conduct open market transactions—purchasing T-bills to increase the money supply and selling them to decrease the money supply. It often uses the repurchase agreement to smooth the interest rates and money supply.
2. **Commercial Banks:** They participate as issuer as well as investor. Banks are major issuers of negotiable Certificate of deposits, Banker's acceptance and Repurchase Agreements.
3. **Money Market Mutual Funds:** They purchase large amount of money market securities and sell shares in these pools based on the value of their underlying securities. They allow small investors to invest in money market instruments. They provide an alternative investment opportunity to interest-bearing deposits at commercial banks.
4. **Brokers and Dealers:** their services are important for smooth functioning of money market. They act as intermediaries in the money market by linking buyers and sellers of money market securities.
5. **Corporations:** Non-financial and financial corporation's raise large amount of funds in money market, primarily in the form of commercial paper. Since their corporate cash inflows rarely equal their cash outflows, they often invest their excess cash funds in money market securities.

Common Money Market Instruments

- **Bankers' Acceptance:** A draft issued by a bank that will be accepted for payment, effectively the same as a cashier's check.
- **Certificate of Deposit:** A time deposit at a bank with a specific maturity date; large-denomination certificates of deposits can be sold before maturity.
- **Repurchase Agreements:** Short-term loans—normally for less than two weeks and frequently for one day—arranged by selling securities to an investor with an agreement to repurchase them at a fixed price on a fixed date.
- **Commercial Paper:** Commercial paper is an unsecured promissory notes with a fixed maturity of one to 270 days; usually sold at a discount from face value.
- **Treasury Bills:** Short-term debt obligations of a national government that are issued to mature in 3 to 12 months.

Call Money Market

1. **Banker's Acceptance:** A banker's acceptance, or BA, is a time draft drawn on and accepted by a bank. Before acceptance, the draft is not an obligation of the bank; it is merely an order by the drawer to the bank to pay a specified sum of money on a specified date to a named person or to the bearer of the draft. Upon acceptance, which occurs when an authorized bank accepts and signs it, the draft becomes a primary and unconditional liability of the bank. If the bank is well known and enjoys a good reputation, the accepted draft may be readily sold in an active market. A banker's acceptance is also a money market instrument – a short-term discount instrument that usually arises in the course of international trade.

A banker's acceptance starts as an order to a bank by a bank's customer to pay a sum of money at a future date, typically within six months. At this stage, it is like a postdated check. When the bank endorses the order for payment as "accepted", it assumes responsibility for ultimate payment to the holder of the acceptance. At this point, the acceptance may be traded in secondary markets much like any other claim on the bank.

Bankers' acceptances are considered very safe assets, as they allow traders to substitute the banks' credit standing for their own. They are used widely in international trade where the creditworthiness of one trader is unknown to the trading partner. Acceptances sell at a discount from face value of the payment order. Bankers' acceptances trade at a spread over T-bills. The rates at which they trade are called bankers' acceptance rates.

The bank may hold the acceptance in its portfolio or it may sell or rediscount it in the secondary market. In the former case, the bank is making a loan to the importer; in the latter case, it is in effect substituting its credit for that of the importer, enabling the importer to borrow in the money market. On or before the maturity date, the importer pays the bank the face value of the acceptance. If the bank rediscounted the acceptance in the market, the bank pays the holder of the acceptance the face value on the maturity date.

Bankers' Acceptance is created for the following purpose:

- (a) The import of goods
- (b) The export of goods
- (c) The storing and shipping of goods between two foreign countries
- (d) The storing and shipping of goods between two entities of the country

2. **Certificate of Deposit:** A certificate of deposit or CD is a time deposit, a financial product commonly offered to consumers by banks, thrift institutions, and credit unions.

Such CDs are similar to savings accounts in that they are insured and thus virtually risk-free; they are "money in the bank". They are different from savings accounts in a sense that the CD has a specific, fixed term (often three months, six months, or one to five years), and, usually, a fixed interest rate. It is intended that the CD be held until maturity, at which time the money may be withdrawn together with the accrued interest. They are similar to the fund deposits in India.

Rates: In exchange for keeping the money on deposit for the agreed-on term, institutions usually grant higher interest rates than they do on accounts from which money may be withdrawn on demand, although this may not be the case in an inverted yield curve situation. Fixed rates are common, but some institutions offer CDs with various forms of variable rates.

A few general rules of thumb for interest rates are:

- A larger principal should receive a higher interest rate.
- A longer term may or may not receive a higher interest rate, depending on the current yield curve.
- Smaller institutions tend to offer higher interest rates than larger ones.
- Personal CD accounts generally receive higher interest rates than business CD accounts.
- Banks and credit unions that are not insured by the FDIC or NCUA generally offer higher interest rates.

How CDs Work: The consumer who opens a CD may receive a passbook or paper certificate. At most institutions, the CD purchaser can arrange to have the interest periodically mailed as a check or transferred into a checking or savings account. This reduces total yield because there is no compounding.

Commonly, institutions mail a notice to the CD holder shortly before the CD matures requesting directions. Generally, a "window" is allowed after maturity where the CD holder can cash in the CD without penalty. In the absence of such directions, it is common for the institution to "roll over" the CD automatically, once again tying up the money for a period of time.

Withdrawals before maturity are usually subject to a substantial penalty: For a five-year CD, this is often the loss of six months' interest. These penalties ensure that it is generally not in a holder's best interest to withdraw the money before maturity—unless they have another investment with significantly higher return or have a serious need for the money.

Terms and Conditions:

There are many variations in the terms and conditions for CDs.

Key terms and conditions of a certificate of deposit include:

- **The CD may be “callable.”** The terms may state that the bank or credit union can close the CD before the term ends.
- **Payment of interest:** Interest may be paid out as it is accrued or it may accumulate in the CD.
- **Interest calculation:** The CD may start earning interest from the date of deposit or from the start of the next month or quarter.
- **Right to delay withdrawals:** Institutions generally have the right to delay withdrawals for a specified period to stop a bank run.
- **Withdrawal of principal:** Withdrawal of principal below a certain minimum—or any withdrawal of principal at all—may require closure of the entire CD. A US Individual Retirement Account CD may allow withdrawal of IRA Required Minimum Distributions without a withdrawal penalty.
- **Withdrawal of interest:** May be limited to the most recent interest payment or for withdrawal of accumulated total interest since the CD was opened. Interest may be calculated to date of withdrawal or through the end of the last month or last quarter.
- **Penalty for early withdrawal:** May be measured in months of interest, may be calculated to be equal to the institution’s current cost of replacing the money, or may use another formula. May or may not reduce the principal—for example, if principal is withdrawn three months after opening a CD with a six-month penalty.
- **Fees:** A fee may be specified for withdrawal or closure or for providing a certified check.
- **Automatic renewal:** The institution may or may not commit to sending a notice before automatic rollover at CD maturity. The institution may specify a grace period before automatically rolling over the CD to a new CD at maturity.

Other similar products:

- (a) **Callable CDs:** A callable CD is similar to a traditional CD, except that the bank reserves the right to “call” the investment. After the initial non-callable period, the bank can buy (call) back the CD. Callable CDs pay a premium interest rate. Banks manage their interest rate risk by selling callable CDs. On the call date, the banks determine if it is cheaper to replace the investment or leave it outstanding. This is similar to refinancing a mortgage.
- (b) **Brokered CDs:** Many brokerage firms – known as “deposit brokers” – offer CDs. These brokerage firms can sometimes negotiate a higher rate of interest for a CD by promising to bring a certain amount of deposits to the institution.

Unlike traditional bank CDs, brokered CDs are sometimes held by a group of unrelated investors. Instead of owning the entire CD, each investor owns a piece. If several investors own the CD, the deposit broker may not list each person’s name in the title but the account records should reflect that the broker is merely acting as an agent. Deposit brokers do not have to go through any licensing or certification procedures, and no state or federal agency licenses, examines, or approves them.

- CD interest rates are computed as a yield to maturity (YTM) on a 360-day basis.

$$\text{Interest Income} = \frac{\text{Term in days}}{360} \times \text{Deposit Principle} \times \text{Promised YTM}$$

- In secondary market trading, the bank discount rate (DR) is used as a measure of CD yields.

$$\text{Discount Rate} = \frac{\text{Par Value} - \text{Purchase Price}}{\text{Par Value}} \times \frac{360}{\text{Days to Maturity}}$$

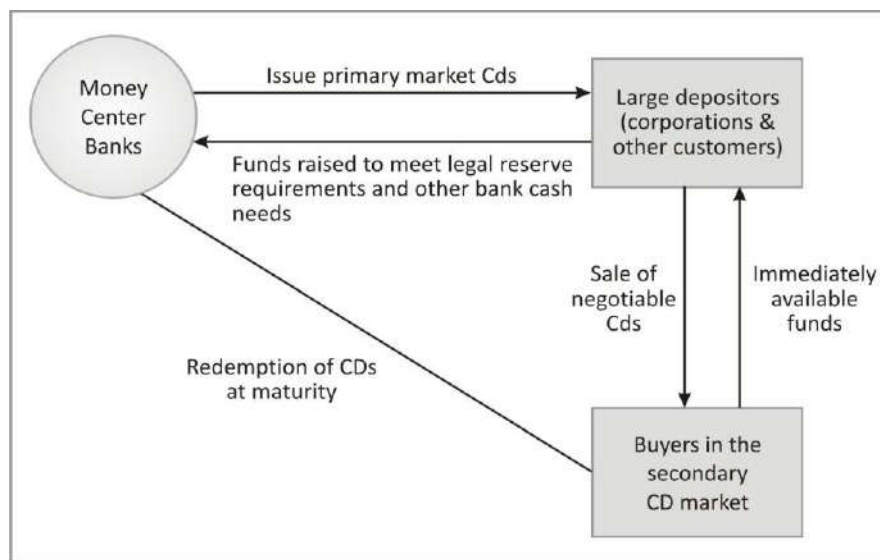


Exhibit 2.12: The Market Structure for Negotiable CDs

Bankers are becoming increasingly innovative in packaging CDs to meet the needs of customers. New types of CDs include variable-rate CDs, Rollover CDs, jumbo CDs, Yankee CDs, brokered CDs, bear and bull CDs, installment CDs, rising-rate CDs, and foreign index CDs.

3. **Repurchase Agreement:** A Repurchase Agreement (REPO) is economically similar to a secured loan, with the buyer receiving securities as collateral to protect against default. There is little that prevents any security from being employed in a repo; so, Treasury or Government bills, corporate and Treasury / Government bonds, and stocks / shares, may all be used as securities involved in a repo. However, the legal title to the securities clearly passes from the seller to the buyer, or “investor”. Coupons (installment payments that are payable to the owner of the securities) which are paid while the repo buyer owns the securities are, in fact, usually passed directly onto the repo seller. It is possible to pass on the coupon by altering the cash paid at the end of the agreement.

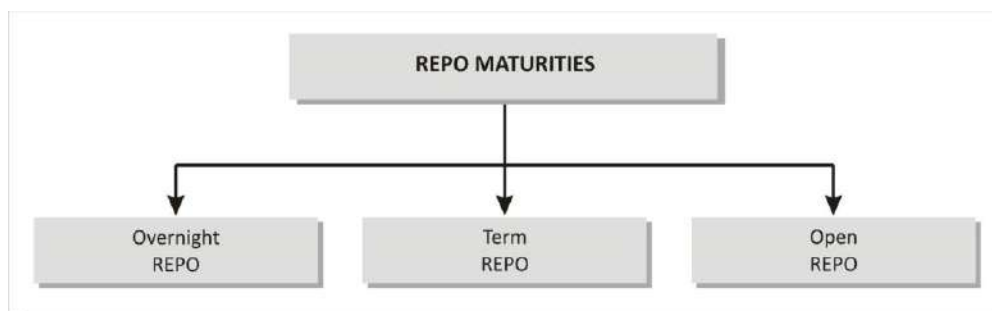


Exhibit 2.13: Term Maturity to REPO Transaction

Types of repo and related products:

There are three types of repo maturities: overnight, term, and open repo.

- Overnight refers to a one-day maturity transaction.
- Term refers to a repo with a specified end date.
- Open simply has no end date.

Let us discuss various forms of REPO in detail:

- (a) **Due Bill/Hold in-custody Repo:** In a due bill repo, the collateral pledged by the (cash) borrower is not actually delivered to the cash lender. Rather, it is placed in an internal account by the borrower, for the lender, throughout the duration of the trade. Due to the high risk to the cash lender, these are generally only transacted with large, financially stable institutions.
- (b) **Tri-party Repo:** The distinguishing feature of a tri-party repo is that a custodian bank or international clearing organization acts as an intermediary between the two parties to the repo. The tri-party agent is responsible for the administration of the transaction including

collateral allocation, marking to market, and substitution of collateral. Both the lender and borrower of cash enter into these transactions to avoid the administrative burden of bilateral repos.

- (c) **Whole Loan Repo:** A whole loan repo is a form of repo where the transaction is collateralized by a loan or other form of obligation (e.g. mortgage receivables) rather than a security.
- (d) **Equity Repo:** Equity repos are simply repos on equity securities such as common (or ordinary) shares.
- (e) **Reverse Repo:** A reverse repo is simply the repurchase agreement from the buyer's viewpoint, not the seller's. Hence, the seller executing the transaction would describe it as a 'repo', while the buyer in the same transaction would describe it a 'reverse repo'.
- (f) **Specified Delivery Repo:** It requires the delivery of a pre-specified bond at the onset, and at maturity of the contractual period.

Determinants of REPO Rate:

- (a) **Quality:** The higher the credit quality and liquidity of the collateral, the lower is the repo rate.
 - (b) **Term of the Repo:** The effect of the term of the repo on the repo rate depends on the shape of the yield curve.
 - (c) **Delivery Requirement:** If delivery of the collateral to the lender is required, the repo rate will be lower. If the collateral can be deposited with the bank of the borrower, a higher repo rate is paid.
 - (d) **Availability of Collateral:** The more difficult it is to obtain the collateral, the lower the repo rate is.
4. **Commercial Paper:** Commercial paper is a money-market security issued by large banks and corporations. It is generally not used to finance long-term investments but rather to purchase inventory or to manage working capital. It is commonly bought by money funds (the issuing amounts are often too high for individual investors), and is generally regarded as a very safe investment. As a relatively low-risk investment, commercial paper returns are not large. There are four basic kinds of commercial paper: promissory notes, drafts, checks, and certificates of deposit.

Because commercial paper maturities do not exceed 270 days and proceeds typically are used only for current transactions, the notes are exempt from registration as securities with the Stock Exchange.

Commercial paper essentially can be compared as an alternative to lines of credit with a bank. Once a business becomes large enough, and maintains a high enough credit rating, using commercial paper becomes cheaper than using a bank line of credit.

Issuing Commercial Paper: There are two methods of issuing paper. The issuer can market the securities directly to a 'buy and hold investor' such as most money funds. Alternatively, it can sell the paper to a dealer, who then sells the paper in the market. The dealer market for commercial paper involves large securities firms and subsidiaries of bank holding companies

5. **Treasury Bill:** Treasury bills (or T-bills) mature in one year or less. Like zero-coupon bonds, they do not pay interest prior to maturity; instead they are sold at a discount of the par value to create a positive yield to maturity. Many regard Treasury bills as the least risky investment available to investors.

Regular weekly T-Bills are commonly issued with maturity dates of 28 days (or 4 weeks, about a month), 91 days (or 13 weeks, about 3 months), and 182 days (or 26 weeks, about 6 months). Treasury Bills are sold by single price auctions held weekly.

Treasury bills are quoted for purchase and sale in the secondary market on an annualized percentage yield to maturity.

T-bills are held mainly by commercial banks, nonfinancial corporations, state and local governments, and the Federal Reserve banks.

Commercial banks and private corporations hold T-bills as a reserve of liquidity.

The Federal Reserve banks conduct part of their open market operations in T-bills because of the depth and volume of activity of the market.

Treasury Note: Treasury notes (or T-Notes) mature in two to ten years. They have a coupon payment every six months, and are commonly issued with maturities dates of 2, 5 or 10 years.

T-Notes and T-Bonds are quoted on the secondary market at percentage of par in thirty-seconds of a point.

Treasury Bond: Treasury bonds (T-Bonds, or the long bond) have the longest maturity, from ten years to thirty years. They have coupon payment every six months and are commonly issued with maturity of thirty years. The secondary market is highly liquid, so the yield on the most recent T-Bond offering was commonly used as a proxy for long-term interest rates in general.

Types of Dealers in Treasury Bills:

Primary Dealers: Primary dealers are dealer firms that are qualified to trade securities directly with the Central Bank (Federal Reserve Bank of New York or RBI in India).

Primary dealers agree to “meaningfully participate” in trading with the Central Bank at any time the Central Bank wishes, to make “realistic” bids, and to trade continuously in the full range of government securities.

In 1998, the U.S. Treasury abandoned its first-price sealed-bid or English auction approach, in which each successful bidder paid the price that it had bid.

It adopted the uniform-price, or Dutch auction method, in which all successful bidders receive securities at the same price – the market-clearing or stop-out price.

The bulk of the ‘dealers’ operating capital’ is obtained through borrowings from commercial banks and other institutions. The two most heavily used sources of dealer funds are

- Demand loans from the largest banks
- Repurchase agreements with banks and other lenders.

A demand loan may be called in at any time if the banks need cash urgently.

Under a repurchase agreement (RP), the dealer sells securities to a lender but makes a commitment to buy back the securities at a later date at a fixed price plus interest. RPs is simply a temporary extension of credit collateralized by marketable securities.

Interest income from RPs

$$= \text{Amount of Loan} \times \text{Current RP rate} \times \frac{\text{Number of days loan}}{360 \text{ days}}$$

- Periodically, RPs is marked to market. If the price of the pledged securities has dropped, the borrower may have to pledge additional collateral.

Sources of Dealer Income: Dealers hope to earn a profit (the positive spread between the bid and ask prices) from their market-making activities. By correctly anticipating interest rate movements, dealers may earn sizable position profits too. If interest rates fall (and security prices rise), dealers will experience capital gains on a long position (but losses on a short position).

Dealers also receive carry income, the difference between interest earned on the securities they hold and their cost of borrowing funds. In addition, dealers receive miscellaneous service fees for their advice and assistance to customers.

Dealer holdings of securities are both huge and subject to erratic fluctuations, due mainly to interest rate movements and expectations. Dealers make heavy use of interest rate hedging tools to further protect their portfolios from losses due to changes in interest rates. They are active participants in the financial futures markets and are also making increased use of forward contacts.

Government Security Brokers: Government securities dealers usually trade among themselves through brokers. Government security brokers do not take investment positions themselves, but try to match bids and offers placed with them by dealers and other investors.

Role of Banks in the Money Market can be summarized by the Chart Below:

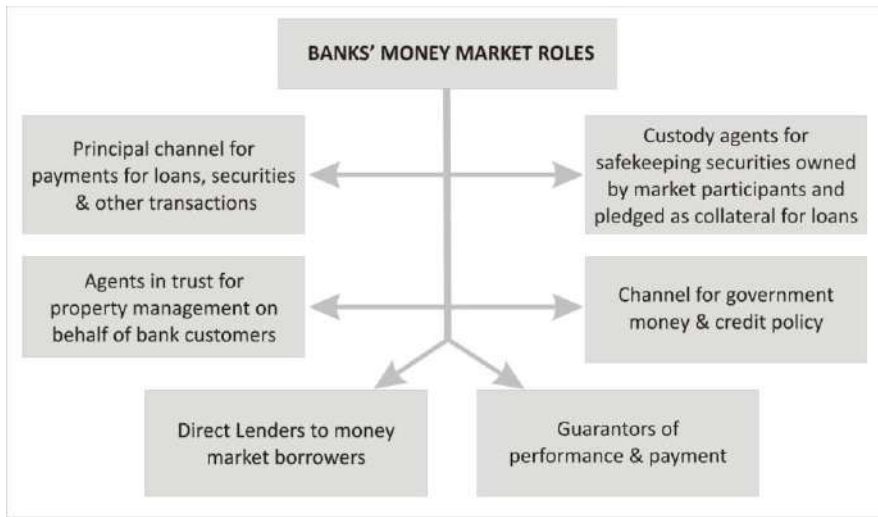


Exhibit 2.14: Role of Banks in Money Market

- 6. Call Money Market:** Call money is minimum 5% short-term finance repayable on demand, with a maturity period of one to fourteen days or overnight to fortnight. It is used for inter-bank transactions. The money that is lent for one day in this market is known as "call money" and, if it exceeds one day, is referred to as "notice money."

Commercial banks have to maintain a minimum cash balance known as the cash reserve ratio. Call money is a method by which banks lend to each other to be able to maintain the cash reserve ratio. The interest rate paid on call money is known as the call rate. It is a highly volatile rate that varies from day to day and sometimes even from hour to hour. There is an inverse relationship between call rates and other short-term money market instruments such as certificates of deposit and commercial paper. A rise in call money rates makes other sources of finance, such as commercial paper and certificates of deposit, cheaper in comparison for banks to raise funds from these sources.

In the international market, the term usually refers to the short term financing by banking institutions to brokers for maintaining the margin account. It is different from the term 'loan' as the schedule for the payment of interest and principal is not fixed. Since, the loan can be called at any time; it is riskier than other forms of loans. It helps in meeting liquidity needs at short notice.

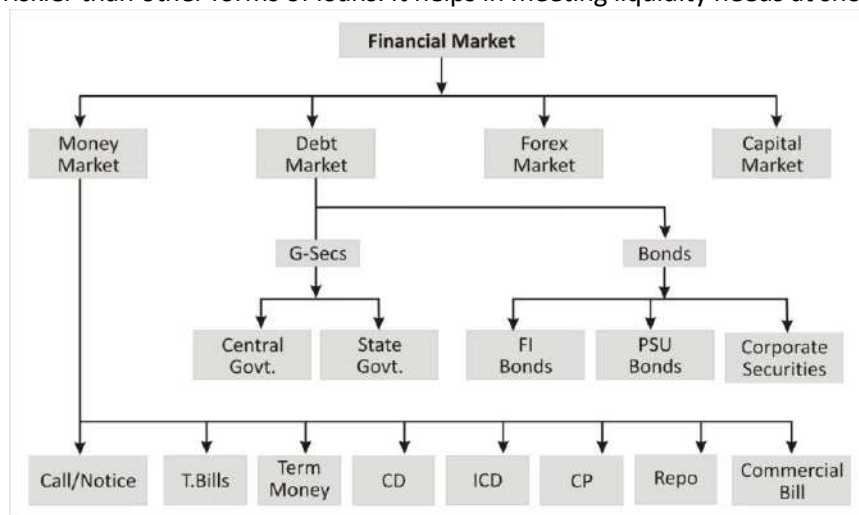


Exhibit 2.15: Debt Market Structure

UNDERSTANDING CAPITAL MARKET

The capital market is a market in which households supply their savings to firms that demand funds to buy capital goods.

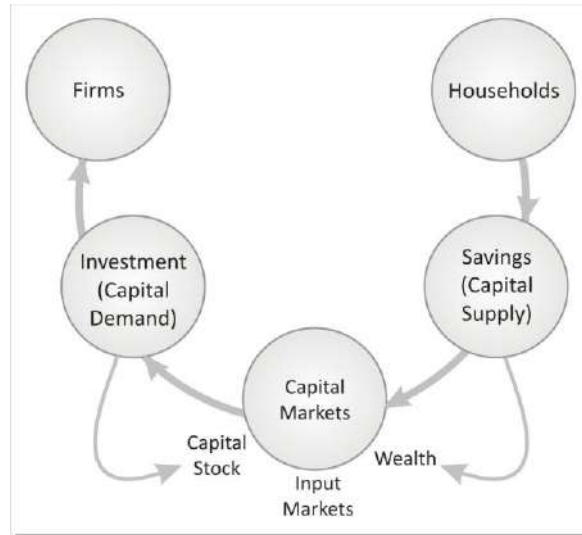


Exhibit 2.16: Role of Capital Markets in the Movement of Capital

In capital markets Rs. 1000 in savings becomes Rs. 1000 of Investment

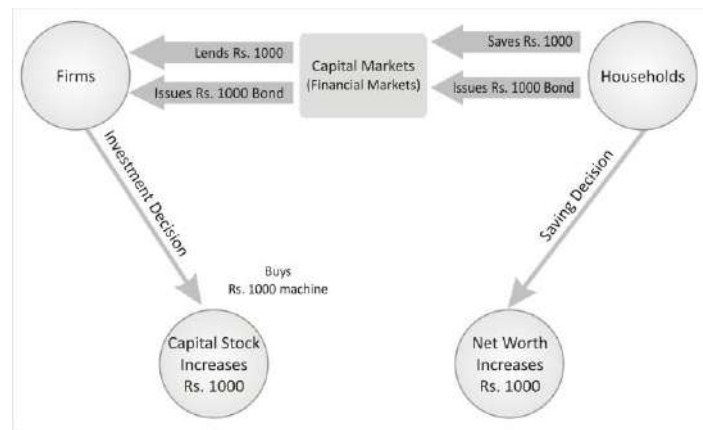


Exhibit 2.17: Decision by Firms and Households

Four mechanisms for channeling household savings into investment projects include:

1. Business Loans
2. Venture Capital
3. Retained Earnings
4. The stock Market

Capital market is actually divided into five sub categories:

- Equity Market
- Debt Market
- Foreign Exchange Market
- Commodity Market
- Derivatives Market

Features of Capital Markets

- It has two segments
- It deals in long-term securities
- It performs trade-off function
- It creates dispersion in business ownership

- It helps in capital formation
- It helps in creating liquidity

Equity Markets (Stock Markets)

It allows suppliers of funds to efficiently and cheaply get equity funds to public corporations. In exchange, the fund users give the ownership rights in the firm as well as cash flows in the form of dividend. Thus, corporate stock or equity serves as a source of financing in addition to debt-financing or retained earnings financing.

Two types of corporate stock exist: common stock and preferred stock. Mostly all public corporations issue common stock. Both types of stock offer investors a two-part rate of return. The first part is capital gains if the stock appreciates in price over time. The second part is the periodic (generally quarterly) dividend payments to the stockholder. Preferred stock dividends are generally preset at a fixed rate, while common stock dividends vary over time and are thus more uncertain.

1. **Common Stock:** Common stock is the fundamental ownership claim in a public corporation. Many characteristics of common stock differentiate it from other types of financial securities (e.g., bonds, mortgages, preferred stock). These include:
 1. Discretionary dividend payments,
 2. Residual claim status,
 3. Limited liability, and
 4. Voting rights

Dividends: Common stockholders potentially receive unlimited dividend payments if the firm is highly profitable, but they have no special or guaranteed dividend rights. Rather, the payment and size of dividends are determined by the board of directors of the issuing firm. Further, unlike interest payments on debt, a corporation does not default if it misses a dividend payment to common stockholders. Thus, common stockholders have no legal recourse if dividends are not received, even if a company is highly profitable and chooses to use these profits to reinvest in new projects and firm growth.

Another drawback with common stock dividends, from an investor's viewpoint, is that they are taxed twice—once at the firm level (at the corporate tax rate, by virtue of the fact that dividend payments are not tax deductible from the firm's profits or net earnings) and once at the personal level (at the personal income tax rate) or as in India as Dividend Distribution Tax.

Residual Claim: Common stockholders have the lowest priority claim on a corporation's assets in the event of bankruptcy—they have a residual claim. Only after all senior claims are paid (i.e., payments owed to creditors such as the firm's employees, bond holders, the government (taxes), and preferred stockholders) are common stockholders entitled to what assets of the firm are left. The residual claim feature associated with common stock makes it riskier than bonds as an investable asset.

Limited Liability: One of the most important characteristics of common stock is its limited liability feature. Legally, limited liability implies that common stockholder losses are limited to the amount of their original investment in the firm. That is, the common stockholders' personal wealth held outside their ownership claims in the firm are unaffected by bankruptcy of the corporation—even if the losses of the firm exceed its total common stock ownership claims.

Voting Rights: A fundamental privilege assigned to common stock is voting rights. While common stockholders do not exercise control over the firm's daily activities, they do exercise control over the firm's activities indirectly through the election of the board of directors. The typical voting rights arrangement is to assign one vote per share of common stock.

Shareholders exercise their voting rights, electing the board of directors by casting votes at the issuing firm's annual meeting or by mailing in a proxy vote.

Two methods of electing a board of directors are generally used:

1. Cumulative voting
2. Straight voting.

Cumulative voting is required by law in some states and is authorized in others. With cumulative voting, all directors up for election, as nominated by the shareholders and selected by a committee of the board, are voted on at the same time. The number of votes assigned to each stockholder equals the number of shares held multiplied by the number of directors to be elected. A shareholder may assign all of his or her votes to a single candidate for the board or may spread them over more than one candidate. The candidates with the highest number of total votes are then elected to the board.

Straight Voting results in a situation in which an owner of over half the voting shares can elect the entire board of directors

Proxy Votes: Most shareholders do not attend the annual meetings. Most corporations anticipate this and routinely mail proxies to their stockholders prior to the annual meeting. A completed proxy returned to the issuing firm allows stockholders to vote by absentee ballot or authorize representatives of the stockholders to vote on their behalf.

2. **Preferred Stock:** It's a hybrid security that has characteristics of both a bond and a common stock. Preferred stock is similar to common stock in that it represents an ownership interest in the issuing firm, but like a bond it pays a fixed periodic (dividend) payment. Preferred stockholders are paid only when profits have been generated and all debt holders have been paid. Like common stock, if the issuing firm does not have sufficient profits to pay the preferred stock dividends, preferred stockholders cannot force the firm into bankruptcy. Further, if the issuing firm goes bankrupt, preferred stockholders are paid their claim only after all creditors have been paid, but before common stockholders are paid.

Dividends on preferred stock are generally fixed (paid quarterly) and are expressed as a percentage of the face or par value of the preferred stock.

Types of Preferred Stock

Typically, preferred stock is nonparticipating, cumulative and participating.

- Nonparticipating preferred stock means that the preferred stock dividend is fixed regardless of any increase or decrease in the issuing firm's profits.
- Cumulative preferred stock means that any missed dividend payments go into arrears and must be made up before any common stock dividends can be paid.
- Participating preferred stock means that actual dividends paid in any year may be greater than the promised dividends.

In some cases, if the issuing firm has an exceptionally profitable year, preferred stockholders may receive some of the high profits in the form of an extra dividend payment. In others, the participating preferred stock pays and changes dividends along the same lines as common stock dividends.

Corporations find preferred stock beneficial as a source of funds because, unlike coupon interest on a bond issue, dividends on preferred stock can be missed without fear of bankruptcy proceedings. Further, funds raised through a preferred stock issue can be used by the firm to fund the purchase of assets that will produce income needed to pay debt holders before preferred stockholders can be paid.



Exhibit 2.18: Primary Market Stock Transaction

However, preferred stock also has its drawbacks for corporations.

- (a) If a preferred dividend payment is missed, new investors may be reluctant to make investments in the firm. Thus, firms are generally unable to raise any new capital until all missed dividend payments are paid on preferred stock.
- (b) Preferred stockholders must be paid a rate of return consistent with the risk associated with preferred stock (i.e., dividend payments may be delayed). Therefore, preferred stock may be a costlier source of funding for the issuing firm than bonds.
- (c) Dividends paid on preferred stock are not a tax-deductible expense—preferred dividends are paid out of after-tax earnings. This raises the cost of preferred stock relative to bonds for a firm's shareholders.

Stock Brokers and Sub-brokers

A stockbroker (also known as a registered representative, investment advisor or simply, broker) is a professional individual who executes buy and sell orders on behalf of clients for stocks and other securities in a listed market or over the counter, usually for a fee or commission. Stockbrokers are usually associated with a brokerage firm and handle transactions for retail and institutional customers alike. Brokerage firms and broker-dealers are also sometimes referred to as stockbrokers themselves. A stockbroker is an individual / organization who are specially given license to participate in the securities market on behalf of clients. The stockbroker has the role of an agent. When the Stockbroker acts as agent for the buyers and sellers of securities, a commission is charged for this service.

As an agent the stock broker is merely performing a service for the investor. This means that the broker will buy for the buyer and sell for the seller, each time making sure that the best price is obtained for the client.

An investor should regard the stockbroker as one who provides valuable service and information to assist in making the correct investment decision. They are adequately qualified to provide answers to a number of questions that the investor might need answers to and to assist in participating in the regional market.

Sub-Brokers

A 'Sub-Broker' is any person who is not a Trading Member of a Stock Exchange but who acts on behalf of a Trading Member as an agent or otherwise for assisting investors in dealing in securities through such Trading Members.

All Sub-Brokers are required to obtain a Certificate of Registration from SEBI without which they are not permitted to deal in securities. SEBI has directed that no Trading Member shall deal with a person who is acting as a Sub-Broker unless he is registered with SEBI and it shall be the responsibility of the Trading Member to ensure that his clients are not acting in the capacity of a Sub-Broker unless they are registered with SEBI as a Sub-Broker.

It is mandatory for Trading Members to enter into an agreement with all the Sub-Brokers. The agreement lays down the rights and responsibilities of Trading Members as well as Sub-Brokers.

Debt Markets

These are the markets in which bonds are issued and traded. They are used to assist in the transfer of funds from individuals, corporations and government units with excess funds to corporations and government units in need of long-term debt financing. Bonds are long-term debt obligations issued by corporations and government units.

Government units and corporations are the major bond security issuers.

1. **Treasury Notes and Bonds:** (T-notes and T-bonds) are issued by a country's government to finance the national debt and other government expenditures.

Like T-bills, T-notes and bonds are backed by the full faith and credit of the government and are, therefore, default risk free. As a result, T-notes and bonds pay relatively low rates of interest (yields to maturity) to investors. T-notes and bonds, however, are not completely risk free. Given

their longer maturity (i.e., duration), these instruments experience wider price fluctuations than do money market instruments as interest rates change. Further, many of the older issued bonds and notes—“off the run” issues—may be less liquid than newly issued bonds and notes—“on the run” issues—in which case they may bear an additional premium for illiquidity risk.

- 2. Strips:** A STRIP (Separate Trading of Registered Interest and Principal Securities) is a Treasury security in which periodic coupon interest payments can be separated from each other and from the final principal payment. A STRIP effectively creates two sets of securities—one set for each semiannual interest payment and one set for the final principal payment. Each of the components of the STRIP are often referred to as “Treasury zero bonds” or “Treasury zero-coupon bonds” because investors in the individual components only receive the single stripped payments (e.g., the semiannual coupon) in which they invest. Investors needing a lump sum payment in the distant future (e.g., life insurers) would prefer to hold the principal portion of the STRIP. Investors wanting nearer-term cash flows (e.g., commercial banks) would prefer the interest portions of the STRIP. Pension funds purchase STRIPS to match payment cash flows received on their assets (STRIPS) with those required on their liabilities.

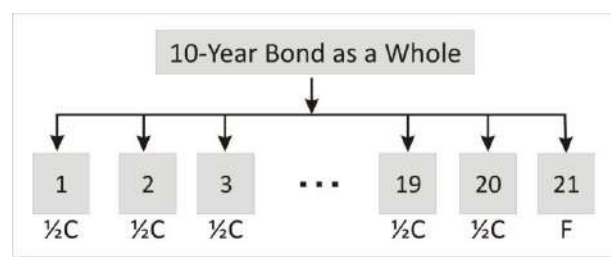


Exhibit 2.19: Creation of a Treasury Strip

STRIPS were created by the government in response to the separate trading of Treasury security principal and interest that had been developed by securities firms.

Markets for STRIPS are yet to emerge in India. The gilt market in India has the necessary size to make STRIPS a success. Government of India and the Reserve Bank of India (RBI) has repeatedly expressed their intention to develop markets for STRIPS and are preparing ground for the same. CBDT is issuing clarifications to promote issuance of STRIPS. RBI is consolidating outstanding gilts to ensure sufficient volumes and liquidity in any one issue, which would facilitate the emergence of benchmarks and development of STRIPS. The fresh gilts are issued on price basis since 1999 instead of yield basis. To avoid uncertainty about the timing and quantum of primary issues, RBI is announcing a calendar for issue of treasury bills for a whole year. RBI is also working with other market participants to set up a clearing corporation.

- 3. Municipal Bonds:** Municipal bonds are securities issued by state and local governments either to fund temporary imbalances between operating expenditures and receipts or to finance long-term capital outlays for activities such as school construction, public utility construction, or transportation systems. Tax receipts or revenues generated from a project are the source of repayment on municipal bonds.

Municipal bonds are attractive to household investors since interest payments on municipal bonds (but not capital gains) are exempt from income taxes and most state and local income taxes (in contrast, interest payments on Treasury securities are exempt only from state and local income taxes). As a result, the interest borrowing cost to the state or local government is lower, because investors are willing to accept lower interest rates on municipal bonds relative to comparable taxable bonds such as corporate bonds.

Municipal Bond Yields: To compare returns from tax-exempt municipal bonds with those on fully taxable corporate bonds, the after-tax (or equivalent tax-exempt) rate of return on a taxable bond can be calculated as follows:

$$i_a = i_b (1-t)$$

Where

i_a = After-tax (equivalent tax-exempt) rate of return on a taxable corporate bond

i_b = Before-tax rate of return on a taxable bond

t = Marginal income tax rate of the bond holder

- **General Obligation Bonds:** General obligation (GO) bonds are backed by the full faith and credit of the issuer—that is, the state or local government promises to use all of its financial resources (e.g., its taxation powers) to repay the bond. GO bonds have neither specific assets pledged as collateral backing the bond nor a specific revenue stream identified as a source of repayment of the bond's principal and interest. Because the taxing authority of the government issuer is promised to ensure repayment, the issuance of new GO bonds generally requires local taxpayer approval.
 - **Revenue Bonds:** Revenue bonds are sold to finance a specific revenue-generating project and are backed by cash flows from that project. For example, a revenue bond may be issued to finance an extension of a state highway. To help pay off the interest and principal on that bond, tolls collected from the use of the highway may be pledged as collateral. If the revenue from the project is insufficient to pay interest and retire the bonds on maturity as promised, the general tax revenues may not be used to meet these payments. Instead, the revenue bond goes into default and bond holders are not paid. Thus, Revenue bonds are generally riskier than GO bonds.
6. **Corporate Bonds:** Corporate bonds are all long-term bonds issued by corporations. The minimum denomination on publicly traded corporate is Rs. 1,000, and coupon-paying corporate bonds generally pay interest semiannually.

The bond indenture is the legal contract that specifies the rights and obligations of the bond issuer and the bond holders. The bond indenture contains a number of covenants associated with a bond issue. These bond covenants describe rules and restrictions placed on the bond issuer and bond holders. These covenants include such rights for the bond issuer as the ability to call the bond issue and restrictions as to limits on the ability of the issuer to increase dividends.

7. **Euro Bonds, Foreign Bonds, Brady Bonds and Sovereign Bonds:** International bonds can also be classified into three main groups: Eurobonds, foreign bonds, and Brady and sovereign bonds.

(a) **Eurobonds:** Eurobonds are long-term bonds issued and sold outside the country of the currency in which they are denominated. The term Euro implies the bond is issued outside the country in whose currency the bond is denominated. Thus, Euro bonds may be issued in countries outside Europe and in currencies other than the Euro. Eurobonds were first sold in 1963 as a way to avoid taxes and regulation. They pay interest annually using a 360-day year (floating-rate Eurobonds generally pay interest every six months on the basis of a spread over some stated rate usually the LIBOR rate). Eurobonds are generally bearer bonds and are traded in the over-the-counter markets, mainly in London and Luxembourg. Historically, they have been of interest smaller investors who want to shield the ownership of securities from the tax authorities. Equity-related Eurobonds are convertible bonds (bonds convertible into equity) or bonds with equity warrants attached.

Eurobonds are placed in primary markets by investment banks. Often, a syndicate of investment banks works together to place the Eurobonds. Most Eurobonds are issued via firm commitment offerings, although the spreads in this market are much larger than for domestic bonds because of the need to distribute the bonds across a wide investor base often covering many countries. Thus, the underwriters bear the risk associated with the initial sale of the bonds. The Eurobond issuer chooses the currency in which the bond issue will be denominated. The promised payments of interest and principal must then be paid in this currency. Thus, the choice of currency, and particularly the level and volatility in the interest rates of the country of the currency, affect the overall cost of the Eurobond to the bond issuer and the rate of return to the bond holder.

- (b) Foreign Bonds:** Foreign bonds are long-term bonds issued by firms and governments outside of the issuer's home country and are usually denominated in the currency of the country in which they are issued rather than in their own domestic currency.

For example, a Japanese company issuing a dollar-denominated public bond rather than a yen-denominated bond in the United States.

Foreign bonds were issued long before Eurobonds and, as a result, are called traditional international bonds. Countries sometimes name their foreign bonds to denote the country of origin.

For example, foreign bonds issued in the United States are called Yankee bonds, foreign bonds issued in Japan are called Samurai bonds, and foreign bonds issued in the United Kingdom are called Bulldog bonds.

- (c) Brady Bonds and Sovereign Bonds:** Brady bonds were created in the mid-1980s through International Monetary Fund (IMF) and central bank-sponsored programs under which U.S. and other banks exchanged their dollar loans to emerging market countries for dollar bonds issued by the relevant countries (e.g., the Philippines, Mexico, and Brazil). These bonds had a much longer maturity than that promised on the original loans and a lower promised original coupon (yield) than the interest rate on the original loan.

More recently, as the credit quality of some of these countries LDCs has improved, some Brady bonds have been converted back into sovereign bonds.

Bonds can also be classified as

- (a) Bearer versus Registered Bonds:** Corporate bonds can be bearer bonds or registered bonds. With bearer bonds, coupons are attached to the bond and the holder (bearer) at the time of the coupon payment gets the relevant coupon paid on presentation to the issuer (i.e., gets the bond coupon "clipped"). With a registered bond, the bond holders (or owner's) identification information is kept in an electronic record by the issuer and the coupon payments are mailed or wire-transferred to the bank account of the registered owner.
- (b) Term versus Serial Bonds:** Most corporate bonds are term bonds, that is, the entire issue matures on a single date. On the other hand, are serial bonds, means that the issue contains many maturity dates, with a portion of the issue being paid off on each date.
- (c) Mortgage Bonds:** Corporations issue mortgage bonds to finance specific projects that are pledged as collateral for the bond issue. Thus, mortgage bond issues are secured debt issues. Bond holders may legally take title to the collateral to obtain payment on the bonds if the issuer of a mortgage bond defaults. Because mortgage bonds are backed with a claim to specific assets of the corporate issuer, they are less risky investments than unsecured bonds. As a result, mortgage bonds have lower yields to bond holders than unsecured bonds. Equipment trust certificates are bonds collateralized with tangible (movable) non-real estate property such as rail-cars and airplanes.
- (d) Debentures and Subordinated Debentures:** Bonds backed solely by the general credit worthiness of the issuing firm, unsecured by specific assets or collateral, are called debentures. Debenture holders generally receive their promised payments only after the secured debt holders, such as mortgage bond holders, have been paid. Subordinated debentures are also unsecured, and they are junior in their rights to mortgage bonds and regular debentures. In the event of a default, subordinated debenture holders receive a cash distribution only after all non-subordinated debt has been repaid in full. As a result, subordinated bonds are the riskiest type of bond and generally have higher yields than non-subordinated bonds.
- (e) Convertible Bonds:** Convertible bonds are bonds that may be exchanged for another security of the issuing firm (e.g., common stock) at the discretion of the bond holder. If the market value of the securities the bond holder receives with conversion exceeds the market value of the bond, the bond holder can return the bonds to the issuer in exchange for the

new securities and make a profit. As a result, conversion is an attractive option or feature to bond holders. Thus, convertible bonds are hybrid securities involving elements of both debt and equity.

- (f) **Stock Warrants:** Bonds can also be issued with stock warrants attached. Similar to convertible bonds, bonds issued with stock warrants attached give the bond holder an opportunity to detach the warrants to purchase common stock at a pre-specified price up to a pre-specified date. Bond holders will exercise their warrants if the market value of the stock is greater than the price at which the stock can be purchased through the warrant. Further, the bond holder may sell the warrant rather than exercise it, while maintaining ownership of the underlying bond. Risky firms commonly attach stock warrants to their bonds to increase the bonds' marketability. Rather than paying extremely high interest rates or accepting very restrictive bond covenants, the firm attaches stock warrants to the bonds in order to get investors to buy them.
- (g) **Callable Bonds:** Many corporate bond issues include a call provision, which allows the issuer to require the bond holder to sell the bond back to the issuer at a given (call) price—usually set above the par value of the bond. The difference between the call price and the face value on the bond is the call premium. Many callable bond issues have a deferred call provision in which the right to call the bond is deferred for a period of time after the bond is issued (generally 10 years). Bonds are usually called in when interest rates drop (and bond prices rise) so that the issuer can gain by calling in the old bonds (with higher coupon rates) and issuing new bonds (with lower coupon rates).

Indian Capital Market

The Indian Capital Market is one of the oldest capital markets in Asia which evolved around 200 years ago.

Chronology of the Indian capital markets

- **1830s:** Trading of corporate shares and stocks in Bank and cotton Presses in Bombay.
- **1850s:** Sharp increase in the capital market brokers owing to the rapid development of commercial enterprise.
- **1860-61:** Outbreak of the American Civil War and 'Share Mania' in India.
- **1894:** Formation of the Hamada Shares and Stock Brokers Association.
- **1908:** Formation of the Calcutta Stock Exchange Association.

The pattern of growth in the Indian capital markets in the post- independence regime can be analyzed from the following graphs:

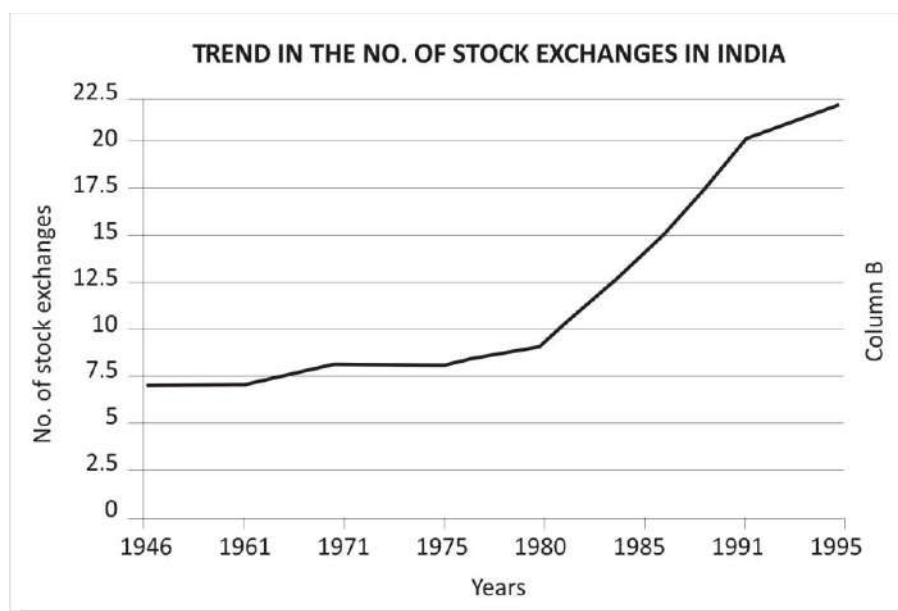


Exhibit 2.20: Increasing No. of Stock Exchanges in India

From the above graph we find that the number of stock exchanges in India increased at a crawling pace till 1980 but witnessed a sharp rise thereafter till 1995.

The following diagram shows the trend in the no. of listed companies participating in the Indian Capital Market. Here again we register a sharp rise after 1980. The number of stocks issued by the listed companies also shows a similar trend:

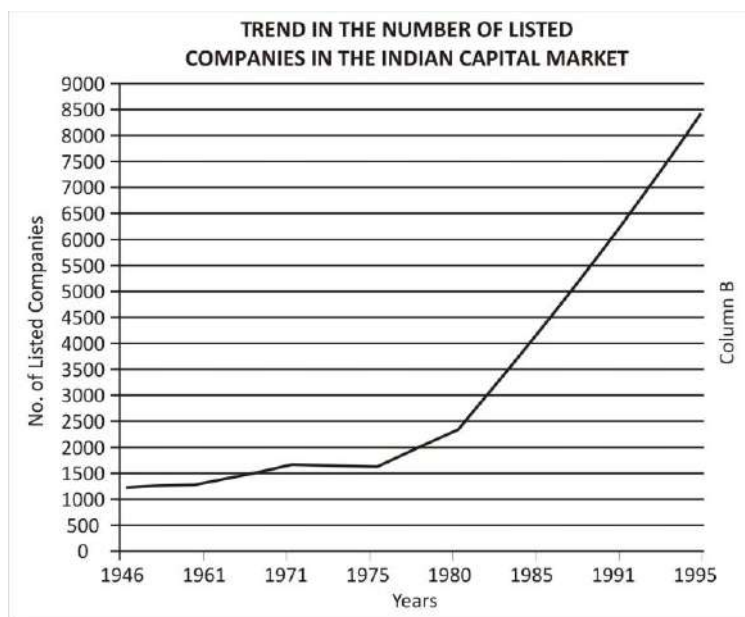


Exhibit 2.21: Listed Companies in Indian Capital Market

Capital Market Investments in the Stock Market: A stock market or equity market is a public entity (a loose network of economic transactions, not a physical facility or discrete entity) for the trading of company stock (shares) and derivatives at an agreed price; these are securities listed on a stock exchange as well as those only traded privately.

The size of the world stock market was estimated at about \$36.6 trillion at the beginning of October 2008. The total world derivatives market has been estimated at about \$791 trillion face or nominal value, 11 times the size of the entire world economy.

The stocks are listed and traded on stock exchanges which are entities of a corporation or mutual organization specialized in the business of bringing buyers and sellers of the organizations to a listing of stocks and securities together. The largest stock market in the United States, by market capitalization, is the New York Stock Exchange (NYSE). In Canada, the largest stock market is the Toronto Stock Exchange. Major European examples of stock exchanges include the Amsterdam Stock Exchange, London Stock Exchange, Paris Bourse, and the Deutsche Börse (Frankfurt Stock Exchange). In Africa, examples include Nigerian Stock Exchange, JSE Limited, etc. Asian examples include the Singapore Exchange, the Tokyo Stock Exchange, the Hong Kong Stock Exchange, the Shanghai Stock Exchange, Bombay Stock Exchange and the National Stock Exchange. In Latin America, there are such exchanges as the BM&F Bovespa and the BMV.

Market participants include individual retail investors, institutional investors such as mutual funds, banks, insurance companies and hedge funds, and also publicly traded corporations trading in their own shares. Some studies have suggested that institutional investors and corporations trading in their own shares generally receive higher risk-adjusted returns than retail investors.

The stock market is basically the trading ground capital market investment in the following:

- (i) Company's stocks
- (ii) Derivatives
- (iii) Other securities

The capital market investments in the stock market take place by:

1. Small individual stock investors
2. Large hedge fund traders

The capital market investments can occur either in:

1. The physical market by a method known as the open outcry.
2. Trading can also occur in the virtual exchange where trading is done in the computer network.

The investors in the stock market have the liberty to buy or sell the stock that they are holding at their own discretion unlike the case of government securities, bonds or real estate.

The stock exchanges basically function as the clearing house for such liquid transactions.

The capital market investments in the stock market are also done through the derivative instruments like the stock options and the stock futures.

The capital market investment in the bond market is done by:

- Institutional investors
- Governments, traders and
- Individuals.

Stock Market Indices

In economics and finance, an index is a statistical measure of changes in a representative group of individual data points. These data may be derived from any number of sources, including company performance, prices, productivity, and employment. Economic indices (index, plural) track economic health from different perspectives. Influential global financial indices such as the Global Dow, and the NASDAQ Composite track the performance of selected large and powerful companies in order to evaluate and predict economic trends. The Dow Jones Industrial Average and the S&P 500 primarily track U.S. markets.

A stock market index is a method of measuring a section of the stock market. Many indices are cited by news or financial services firms and are used as benchmarks, to measure the performance of portfolios such as mutual funds.

Alternatively, an index may also be considered as an instrument (after all it can be traded) which derives its value from other instruments or indices. The index may be weighted to reflect the market capitalization of its components, or may be a simple index which merely represents the net change in the prices of the underlying instruments.

Most publicly quoted stock market indices are weighted.

Types of Indices

Stock market indices may be classed in many ways. A 'world' or 'global' stock market index includes (typically large) companies without regard for where they are domiciled or traded. Two examples are MSCI World and S&P Global 100.

A 'national' index represents the performance of the stock market of a given nation—and by proxy, reflects investor sentiment on the state of its economy. The most regularly quoted market indices are national indices composed of the stocks of large companies listed on a nation's largest stock exchanges, such as the American S&P 500, the Japanese Nikkei 225, the Russian RTSI, the Indian SENSEX and the British FTSE 100.

The concept may be extended well beyond an exchange. The Wilshire 5000 Index, the original total market index, represents the stocks of nearly every publicly traded company in the United States, including all U.S. stocks traded on the New York Stock Exchange (but not ADRs or limited partnerships), NASDAQ and American Stock Exchange. Russell Investment Group added to the family of indices by launching the Russel Global Index.

Other indices may track companies of a certain size, a certain type of management, or even more specialized criteria — one index published by Linux Weekly News tracks stocks of companies that sell products and services based on the Linux operating environment.

Versions of the Same Index: Some indices, such as the S&P 500, have multiple versions. These versions can differ based on how the index components are weighted and on how dividends are accounted for. For example, there are three versions of the S&P 500 index: price return, which only considers the price of the components, total return, which accounts for dividend reinvestment, and net total return, which accounts for dividend reinvestment after the deduction of a withholding tax.

Weighting

An index may also be classified according to the method used to determine its price.

In a price-weighted index such as the Dow Jones Industrial Average, Amex Major Market Index, and the NYSE ARCA Tech 100 Index, the price of each component stock is the only consideration when determining the value of the index. Thus, price movement of even a single security will heavily influence the value of the index even though the dollar shift is less significant in a relatively highly valued issue, and moreover ignoring the relative size of the company as a whole.

In contrast, a market-value weighted or capitalization-weighted index such as the Hang Seng Index, Sensex and Nifty etc. factors in the size of the company. Thus, a relatively small shift in the price of a large company will heavily influence the value of the index.

In a market-share weighted index, price is weighted relative to the number of shares, rather than their total value.

Traditionally, capitalization- or share-weighted indices all had a full weighting, i.e. all outstanding shares were included. Recently, many of them have changed to a float-adjusted weighting which helps indexing.

A modified capitalization-weighted index is a hybrid between capitalization weighting and equal weighting. It is similar to a capitalization weighting with one main difference: the largest stocks are capped to a percent of the weight of the total stock index and the excess weight will be redistributed equally amongst the stocks under that cap.

In 2005, Standard & Poor's introduced the S&P Pure Growth Style Index and S&P Pure Value Style Index which was attribute-weighted. That is, a stock's weight in the index is decided by the score it gets relative to the value attributes that define the criteria of a specific index, the same measure used to select the stocks in the first place. For these two stocks, a score is calculated for every stock, be it their growth score or the value score (a stock cannot be both) and accordingly they are weighted for the index.

Criticism of Capitalization-Weighting: The use of capitalization-weighted indices is often justified by the central conclusion of modern portfolio theory that the optimal investment strategy for any investor is to hold the market portfolio, the capitalization-weighted portfolio of all assets. However, empirical tests conclude that market indices are not efficient. This can be explained by the fact that these indices do not include all assets or by the fact that the theory does not hold. The practical conclusion is that using capitalization-weighted portfolios is not necessarily the optimal method.

As a consequence, capitalization-weighting has been subject to severe criticism, pointing out that the mechanics of capitalization-weighting lead to trend-following strategies that provide an inefficient risk-return trade-off.

Also, while capitalization-weighting is the standard in equity index construction, different weighting schemes exist. First, while most indices use capitalization-weighting, additional criteria are often taken into account, such as sales/revenue and net income. Second, as an answer to the critiques of capitalization-weighting, equity indices with different weighting schemes have emerged, such as

“wealth”-weighted (Morris, 1996), “fundamental”-weighted (Arnott, Hsu and Moore 2005), “diversity”-weighted (Fernholz, Garvy, and Hannon 1998) or equal-weighted indices.

Indices and Passive Investment Management: There has been an accelerating trend in recent decades to create passively managed mutual funds that are based on market indices, known as index funds. Advocates claim that index funds routinely beat a large majority of actively managed mutual funds; one study claimed that over time, the average actively managed fund has returned 1.8% less than the S&P 500 index - a result nearly equal to the average expense ratio of mutual funds (fund expenses are a drag on the funds’ return by exactly that ratio). Since index funds attempt to replicate the holdings of an index, they obviate the need for — and thus many costs of — the research entailed in active management, and have a lower churn rate (the turnover of securities which lose fund managers’ favor and are sold, with the attendant cost of commissions and capital gains taxes).

Indices are also a common basis for a related type of investment, the exchange-traded fund or ETF. Unlike an index fund, which is priced daily, an ETF is priced continuously, is option-able, and can be sold short.

The International Capital Markets

Euro Issues: The international capital market is a huge source of capital. At a time when the Indian economy is gearing up to meet the challenges of being an open economy, it assumes of greater significance. Up to 1991, Indian companies were not allowed to raise capital from overseas capital market. For their foreign exchange requirements, they had to depend on government financial institutions, foreign banks, international development agencies etc. By the middle of 1991, the process of liberalization of Indian economy was set in motion by the government and now the Indian Corporate is allowed to issue equity or bonds in overseas capital market.

The term ‘Euro Issue’ denotes that the issue is made abroad through foreign currency denominated securities and the securities are listed on any overseas stock exchange. The Indian companies get their issues listed on LUXEMBOURG stock exchange. Subscription for such securities can come from any part of world, except India. Companies making Euro Issue can issue depository receipts, foreign currency convertible bonds or pure debt bonds.

Pure debt is not preferred by the investors for two reasons:

- (i) No Capital appreciation,
- (ii) Low credit rating of India by various international agencies.

Depository receipts and foreign currency convertible bonds are more popular among the investors.

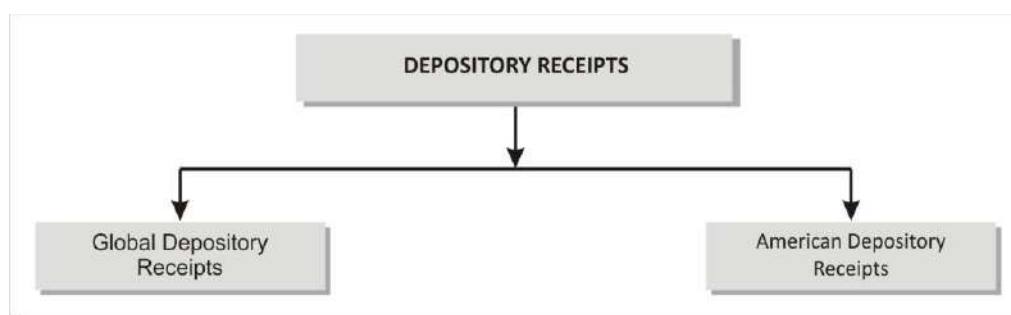


Exhibit 2.22: Depository Receipts

Depository receipts are of two types:

- (i) Global depository receipt
- (ii) American depository receipt.

Global Depository Receipt

A GDR is negotiable certificate that represents a company’s one or more publicly-traded (listed in the stock exchange) or to be publicly – traded (going to be listed on stock exchange soon) equity shares.

A GDR is denominated in foreign currency terms; in most of the case; generally the GDRs are denominated either in USD or Euro. The equity shares comprising in each GDR are denominated in local currency of issuing company. For example, a GDR issued at \$ 30 may comprise two equity shares with a par value of Rs.10 each. Issue of GDRs creates equity shares of the issuing company.

Equity shares are registered in the name of an intermediary abroad called Overseas Depository Bank (for example, Bank of England). The share certificates are delivered to another intermediary called the Domestic Custodian Bank (for example, State Bank of India) who acts as agent of “the Overseas Depository Bank” in India. The GDRs are issued by Overseas Depository Bank to non-resident investors.

GDRs are freely transferable outside India without any reference to the issuing company. The dividends in respect of the shares represented by the GDRs are paid in Indian rupees only.

If a GDR holder wants to exchange his GDR into shares, he can surrender his GDR with such request to the Overseas Depository Bank. The Overseas Depository Bank will instruct the Domestic Custodian Bank to release the shares. Depending upon the nature of the request, the Domestic Custodian Bank will either sell the shares through the stock exchange and remit the sale proceeds to him or arrange to get his name registered as a member of the company.

Thereafter, the said shares are subject to the usual conditions applicable to the company’s shares. To the extent, the GDRs are converted into shares, shares can also be converted into GDRs. For example, a company has issued 100000 GDRs, each representing 2 shares of issuing company. Holders of 1000 GDRs get their GDRs converted into 2000 shares. Now the company can convert 2000 shares (held by its shareholders) into 1000 GDRs.

Thus GDRs can be converted into shares. Shares can be converted into GDRs. This is called “two – way functionality.”

Important Features of GDRs

1. Collection in Foreign Currency: The issuer enjoys the benefit of collection of issue proceeds in foreign currency and may utilize the same for meeting the foreign exchange requirements.
2. No Exchange Risk: If the GDR holder surrenders the GDRs for conversion into shares and request for the sale of such shares, the Domestic Custodian Bank sells the shares. The Domestic Custodian Bank converts the net sales proceeds into foreign exchange at the market rate. Hence, no foreign exchange risk for issuing company.
3. Listing: Most of the GDRs of the Indian companies are listed at LUXEMBOURG.
4. Lock-in-Period: Lock-in-period is 45 days, i.e. 45days after the allotment, the GDR holder can get it converted into shares.
5. Marketing: Marketing of GDRs issue is done by the underwriters by organizing the road shows which are presentations made to potential investors.
6. No Voting Rights: The GDR does not entitle the holder to any voting rights, so there is no fear of loss of management control.

Benefits to the Investors:

- Investors gain the benefits of diversification, buying a GDR immediately turns an investor’s portfolio into a global one.
- Trade, clear and settle in accordance with requirements of the market in which they trade.
- Easily transferability as these are bearer instruments
- GDR investors are able to reap the benefits of these usually higher-return equities, without adding risks of going directly into foreign markets.

Double taxation agreements on Global depository receipts

- During the period of fiduciary ownership of shares in the hands of the Overseas Depository Bank, the provisions of Avoidance of Double Taxation Agreement entered into by the Government of India with the country of residence of the Overseas Depository Bank will be applicable in the matter of taxation of income from dividends from underlying shares.

- During the period, when the redeemed underlying shares are held by the non-resident investor on transfer from fiduciary ownership of the Overseas Depository Bank, before they are sold to resident purchasers, the Avoidance of Double Taxation Agreement entered into by the Government of India with the Country of residence of the non-resident investor will be applicable in the matter of taxation of income from the dividends from the said underlying shares, or any capital gain arising out of transfer of underlying shares.

Impact of GDR issues on Indian capital market:

- GDRs provide arbitrage opportunities.
- Indian capital market becomes more sensitive to international capital market i.e. the developments in the international capital markets affect the Indian capital markets.
- Indian retail investors have lost their place in the capital market.
- GDRs issuing companies have to follow international transparency norms. Financial reporting of these companies has improved.
- Indian companies have been able to raise large amount of funds without losing the management control.
- Indian companies have got recognition in the global markets. This has helped in increase in share prices of these companies in Indian market.

American Depository Receipt

Depository receipts issued by a company in the United States are known as ADRs. The ADRs must be listed in some US stock exchanges. Such receipts have to issue in accordance with the provisions stipulated by the Securities and Exchange Commission of USA. These provisions are very strict.

Not many Indian companies have gone for ADRs issue because:

- They are not fully geared to meet the strict requirement of Securities and Exchange Commission of USA,
- The cost of issuing ADRs is quite high the listing fee is quite hefty, and
- The US is most litigious market in the world.

Currently ADRs of 13 Indian companies are listed on two US Stock Exchanges:

- National Association of Securities Dealers Automatic Quotes (NASDAQ)
 - New York Stock Exchange (NYSE Euro Next)
- Both have their head offices at New York.

The companies listed on NASDAQ are:

- Infosys Technologies (The first Indian company to be listed on US stock Exchange),
- Satyam Infoway (Sify)
- Rediff.com.

Infosys is a constituent of NASDAQ-100, the most important index number of the NASDAQ.

The companies listed on the New York Stock Exchange are:

- Dr. Reddy
- HDFC Bank
- ICICI Bank
- MTNL
- Patni Computers
- Mahindra Satyam
- Sterlite Industries
- Tata Communications
- Tata Motors
- Wipro.

The case of Tata Motors is different from the other companies. The GDR of Tata Motors was originally listed at Luxemburg; later on it was converted as ADR on its listing on NYSE Euronext.

Besides these 13 companies, three companies – Genpact, WNS and Yatra Capital – are traded in the form of ordinary shares on New York Stock Exchange.

External Commercial Borrowings

The foreign currency borrowings raised by the Indian corporate from outside India are called “External Commercial Borrowings” (ECBs). ECBs occupy a very important position as a source of funds for Corporate. These Foreign Currency borrowings can be raised within ECB Policy guidelines of Govt. of India/ Reserve Bank of India applicable from time to time. The intention of GOI/RBI is to maintain prudent limits for total external borrowings and to provide flexibility to Corporate in external borrowings.

The main emphasis of guidelines is:

- To keep borrowing maturities long,
- To keep borrowing costs low,
- To encourage infrastructure, and to increase export sector financing.

The ECBs route is beneficial to the Indian corporate on account of following:

1. It provides the foreign currency funds which may not be available India.
2. The cost of funds at times works out to be cheaper as compared to the cost of rupee funds.
3. The availability of the funds from the International market is huge as compared to domestic market and corporate can raise large amount of funds at competitive prices depending on the risk perception of the International market.

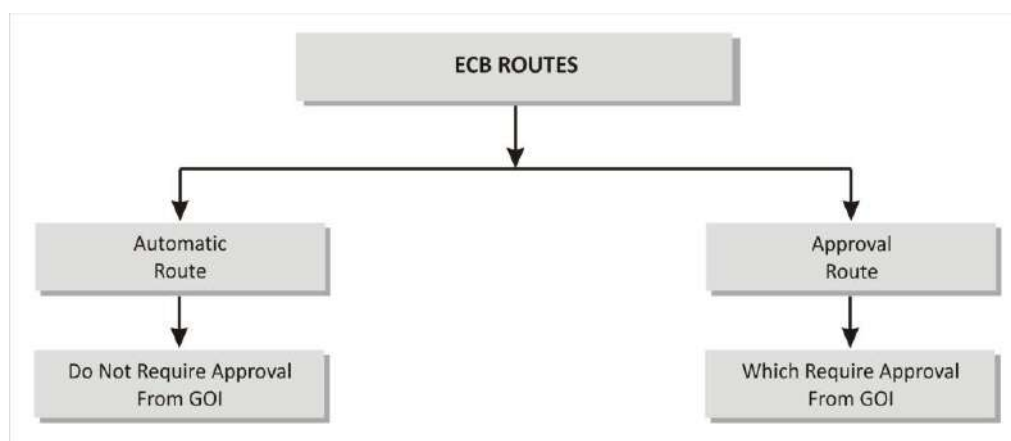


Exhibit 2.23: Routes available for ECB

ECB Guidelines: External Commercial Borrowing (ECB) refers to commercial loans [in the form of bank loans, buyers’ credit, suppliers’ credit, securitized instruments (e.g. floating rate notes and fixed rate bonds)] availed from non-resident lenders with minimum average maturity of 3 years.

The ECB Guidelines are also applicable to Foreign Currency Convertible Bonds.

All-in-Cost Ceilings: All-in-cost includes rate of interest, other fees and expenses in foreign currency except commitment fee, pre-payment fee, and fees payable in Indian Rupees.

The all-in-cost ceilings for ECB are indicated from time to time. The current ceilings are as below:

Average maturity period	All-in-cost Ceilings
Three years and up to five years	LIBOR + 300 bp
More than five years	LIBOR + 500 bp

ECB can be accessed under two routes:

- (i) Automatic Route
- (ii) Approval Route

(i) Automatic Route

ECB under Automatic Route do not require approval of Government of India/RBI

Eligible Borrowers:

- Corporate [registered under the Companies Act] except financial intermediaries (such as banks, financial institutions (FIs), housing finance companies and NBFCs)] are eligible to raise ECB.
- Non-Government Organizations (NGOs) subject to satisfaction of certain conditions laid by RBI.
- Units in Special Economic Zones (SEZ) are allowed to raise ECB for their own requirement.

Amount and Maturity:

The maximum amount of ECB which can be raised by a corporate is USD 500 million or equivalent during a financial year. The minimum maturity period is 3 years.

(ii) Approval Route: The following types of proposals for ECB are covered under the Approval Route.

Eligible Borrowers

- Financial institutions dealing exclusively with infrastructure or export finance are considered on a case by case basis.
- Banks and financial institutions which had participated in the textile or steel sector restructuring package as approved by the Government.
- ECB with minimum average maturity of 5 years by Non-Banking Financial Companies (NBFCs).
- Foreign Currency Convertible Bonds (FCCB) by housing finance companies.
- Multi-State Co-operative Societies engaged in manufacturing activity.
- Cases falling outside the purview of the automatic route limits and maturity period.

A company can raise foreign currency from one or more of the following methods of debt financing:

Debt Financing**(A) Euro Loans:** A company may raise foreign currency loans from

- International banks,
- Multilateral financial institutions (such as International Finance Bank, Asian Development Bank, Commonwealth Development Corporation etc.)
- Export credit agencies,
- Foreign collaborators and
- Foreign equity holders.

Generally such loans are available for a period up to 7 years.

(B) Euro Bond: These are issued in a foreign country, is denominated in a currency other than the currency of the country in which it is issued. An example of a Eurobond is a Eurodollar bond, which is denominated in U.S. dollars and issued in Japan by an Australian company.

Eurobonds are named after the currency they are denominated in. For example, Euro yen bonds are Japanese yen, and Eurodollar denominated in American dollars.

(C) Foreign Bonds: These are issued by borrowers in a foreign country; such bonds are denominated in the currency of that country in which the bonds are issued. Foreign bonds are nicknamed for the country of issuance – for example the foreign bonds issued in USA are referred as Yankee Bonds, issued in Japan are referred as Samurai Bonds, issued in Britain are referred as Bulldog bonds etc. The bonds issued in Japan on private placement basis are referred as Shibosai Bonds. Reliance Industries Ltd. has been the most successful Indian company to issue the Yankee bonds of 50 years maturity.**Quasi-Debt Financing**

Foreign Currency Convertible Bonds: A convertible bond is a debt instrument with gives the holder of the bond an option to convert the bond into a predetermined number of equity shares of the

company. The bonds carry a fixed rate of interest. The bonds are listed and traded in one or more stock exchanges abroad. Till conversion, the company has to pay interest on the bonds in foreign currency and if the conversion option is not exercised, the redemption also has to be done in foreign currency. The bonds are unsecured. These bonds are issued to non-residents against foreign currency.

If the issuing company so desires, the issue of such bonds may carry two options:

1. **Call Option:** Where the terms of issue of the bonds contain a provision for call option, the issuer company has the option of calling (buying) the bonds for redemption before the date of maturity of the bonds.
2. **Put Option:** A provision of put option gives the holders of the bonds a right to sell his bonds back to the issuer company at a predetermined price and date.

Major sources available to an Indian Corporate for raising foreign currency finances.

A company can raise foreign currency from one or more of the following methods of financing:

Indian Depository Receipts

The Companies (Issue of Indian Depository Receipts) Rules, 2004, has enabled foreign companies to raise funds from the Indian capital markets by issuing Indian Depository Receipts ('IDRs').

IDRs are any instrument in the form of a depository receipt created by domestic depository in India against underlying equity shares of the issuing company'. The issuing company has also to apply and obtain in-principle listing permission from one or more stock exchanges.

The main advantage of IDRs is that Indian investors get a chance to participate in the equity of the multi-national companies.

Eligibility for issue of IDRs

- Its pre-issue paid-up capital and free reserves is at least US\$ 100 million and it has had an average turnover of US\$ 500 million during the 3 financial years preceding the issue.
- It has been making profits for at least five years preceding the issue and has been declaring dividend of not less than 10% each year for the said period
- Its pre-issue debt equity ratio is not more than 2:1

Procedure for making an issue of IDRs

- An issuing company may raise funds in India by issuing IDRs, only after it has obtained the prior permission from the SEBI.
- An application seeking permission shall be made to the SEBI at least 90 days prior to the opening date of the issue, in such form furnishing such information as may be notified from time to time, with a non-refundable fee of US \$10,000:
- The issuing company shall file through a merchant banker or the domestic depository a due diligence report with the Registrar and with SEBI in the form specified.
- The issuing company shall, through a merchant Banker file a prospectus or letter of offer with the SEBI and Registrar of Companies, New Delhi, before such issue.
- The issuing company shall obtain in-principle listing permission from one or more stock exchanges having nation-wide trading terminals in India.
- The repatriation of the proceeds of issue of IDRs shall be subject to laws for the time being in force relating to export of foreign exchange.
- The IDRs should be denominated in Indian Rupees.

Standard Chartered Bank has launched first IDR issue in India in 2010.

Regulatory and Supervisory Reforms in International Capital Markets

Dynamic changes in financial institutions and capital markets are posing increasingly complex challenges for financial regulation and supervision. Wider circles of counterparties now interact with each other in a larger number of business lines; financial instruments have become more complicated; and financial intermediation relies increasingly on fast-changing financial markets. Consequently, the distinction between commercial banks, securities firms, insurance companies and

other financial institutions has become blurred, and large diversified financial conglomerates have been created that span the spectrum of financial services and global markets. Highly leveraged activities and institutions engaged in these activities, including unregulated hedge funds, have emerged on a scale that could pose systemic risks. All in all, financial innovation (especially off-balance-sheet activities) and globalization may have reduced the transparency of the global financial system and increased challenges for market participants and supervisory agencies alike. Let us see the proposed revisions to the Basel Accord on Capital Adequacy and the newly established Financial Stability Forum and then summarize regulatory and supervisory developments during the past year in the following areas:

1. Risk management and internal control systems
2. Disclosure and market discipline
3. Highly Leveraged Institutions (HLI), including hedge funds
4. The supervision of financial conglomerates and international accounting standards

Most of the regulatory and supervisory issues are part of the wider agenda on the international financial architecture. Key pillars of the reform agenda are the development, dissemination, and adoption of internationally recognized standards, and the promotion of greater private sector transparency to bolster market discipline. In the wake of the 1997 Asian crisis, numerous regulatory initiatives were proposed, mostly targeted at setting global standards and guidelines that are in many cases derived from practices in developed countries. These standards were gathered in the Core Principles for Effective Banking Supervision and have recently been extended in some areas, such as bank transparency. In addition, financial market turbulence and in particular the near-collapse of Long Term Capital Market spawned a wave of regulatory and supervisory reports, guidelines, and forums in both the public and private sectors that are primarily directed at improving risk management, strengthening market discipline by increased transparency and disclosure, improving oversight of banks' interaction with Highly Leveraged Instruments, and enhancing consolidated supervision of financial conglomerates.

Table 2.1: Key International Supervisory and Regulatory Reports and Guidance Notes

Subject	Document	Data Issued
Capital Adequacy		
Based Committee on Banking Supervision	A New Capital Adequacy Framework	June 1999
Risk Management and Internal Controls		
Basel Committee on Banking Supervision	Credit Risk Modeling: Current Practices and Applications	April 1999
	Framework for Internal Control Systems in Banking Organizations	September 1998
	Operational Risk Management	September 1998
International Organization of Securities Commissions (IOSCO)	Risk Management and Control Guidance for Securities Firms and Their Supervisors	May 1998
U.S. Federal Reserve	Supervisory Letter 99-3	February 1999
U.S. Office of the Comptroller of the Currency	OCC Bulletin 99-2	January 1999
Counterparty Risk Management Policy Group Institute of International Finance	Improving Counterparty Risk management Practices	June 1999
Institute of International Finance	Report of the Task Force on Risk Assessment	March 1999
International Swaps and Derivatives Association (ISDA)	ISDA 1999 Collateral Review	March 1999

Subject	Document	Date Issued
Disclosure and Market Discipline		
Basel Committee on Banking Supervision and the IOSCO Technical Committee	Recommendations for Public Disclosure of Trading and Derivatives Activities of Banks and Securities Firms	February 1999
Basel Committee on Banking Supervision	Enhancing Bank Transparency	September 1998
Based Committee On Banking Supervision and IOSCO Technical Committee	Supervisory Information Framework for Derivatives and Trading Activities	September 1998
Highly Leveraged Institutions (HLIs)		
Based committee on Banking Supervision	Banks' Interactions with Highly Leveraged Institutions	January 1999
	Sound Practices for Banks' Interactions with Highly Leveraged Institutions	January 1999
United States President's Working Group on Financial Markets	Hedge Funds, Leverage, and the lessons of Long-Term Capital Management	April 1999
Deutsche Bundesbank	Hedge Funds and their Role in the Financial Markets	March 1999
Reserve Bank of Australia	Hedge Funds, Financial Stability and Market integrity	March 1999
Supervision of Financial Conglomerates and International Accounting Standards		
International Accounting Standards Committee	Financial Instruments: Recognition and Measurement	March 1999
Joint Forum on Financial Conglomerates	Supervision of Financial Conglomerates	February 1999
Basel Committee on Banking Supervision	Sound Practices for Loan Accounting and Disclosure	July 1999

Bank for International Settlements (BIS)

The Bank for International Settlements (BIS) is an intergovernmental organization of central banks which "fosters international monetary and financial cooperation and serves as a bank for central banks." It is not accountable to any national government. The BIS carries out its work through subcommittees, the secretariats it hosts, and through its annual General Meeting of all members. It also provides banking services, but only to central banks, or to international organizations like itself. Based in Basel, Switzerland, the BIS were established by the Hague agreements of 1930.

Role of BIS

Monitors Monetary Policy: As an organization of central banks, the BIS seeks to make monetary policy more predictable and transparent among its 58 member central banks. While monetary policy is determined by each sovereign nation, it is subject to central and private banking scrutiny and potentially to speculation that affects foreign exchange rates and especially the fate of export economies.

Regulates Capital Adequacy: Capital adequacy policy applies to equity and capital assets. These can be overvalued in many circumstances because they do not always reflect current market conditions or adequately assess the risk of every trading position. Accordingly the BIS require the capital/asset ratio of central banks to be above a prescribed minimum international standard, for the protection of all central banks involved. The BIS's main role is in setting capital adequacy requirements. From an international point of view, ensuring capital adequacy is the most important problem between central banks, as speculative lending based on inadequate underlying capital and widely varying liability rules causes economic crises as "bad money drives out good" (Gresham's Law).

Tier 1 versus Total Capital: The BIS sets “requirements on two categories of capital, Tier 1 capital and Total capital. Tier 1 capital is the book value of its stock plus retained earnings. Tier 2 capital is loan-loss reserves plus subordinated debt. Total capital is the sum of Tier 1 and Tier 2 capital. Tier 1 capital must be at least 4% of total risk-weighted assets. Total capital must be at least 8% of total risk-weighted assets. When a bank creates a deposit to fund a loan, its assets and liabilities increase equally, with no increase in equity. That causes its capital ratio to drop. Thus the capital requirement limits the total amount of credit that a bank may issue. It is important to note that the capital requirement applies to assets while the bank reserve requirement applies to liabilities.”

Encourages Reserve Transparency: Reserve policy is also important, especially to consumers and the domestic economy. To ensure liquidity and limit liability to the larger economy, banks cannot create money in specific industries or regions without limit. To make bank depositing and borrowing safer for customers and reduce risk of bank runs, banks are required to set aside or “reserve”.

The Basel Accords refer to the banking supervision Accords (recommendations on banking regulations)—Basel I, Basel II and Basel III—issued by the Basel Committee on Banking Supervision (BCBS). They are called the Basel Accords as the BCBS maintains its secretariat at the Bank for International Settlements in Basel, Switzerland and the committee normally meets there.

The Basel Committee on Banking Supervision (BCBS) is a committee of banking supervisory authorities that was established by the central bank governors of the Group of Ten countries in 1974. It provides a forum for regular cooperation on banking supervisory matters. Its objective is to enhance understanding of key supervisory issues and improve the quality of banking supervision worldwide. The Committee also frames guidelines and standards in different areas - some of the better known among them are the international standards on capital adequacy, the Core Principles for Effective Banking Supervision and the Concordat on cross-border banking supervision.

Basel 1

Basel I is the round of deliberations by central bankers from around the world, and in 1988, the Basel Committee (BCBS) in Basel, Switzerland, published a set of minimum capital requirements for banks. This is also known as the 1988 Basel Accord, and was enforced by law in the Group of Ten (G-10) countries in 1992. Basel I is now widely viewed as outmoded. Indeed, the world has changed as financial conglomerates, financial innovation and risk management have developed. Therefore, a more comprehensive set of guidelines, known as Basel II are in the process of implementation by several countries and new updates in response to the financial crisis commonly described as Basel III.

Basel accords (1988 and Basel II 2006–2008) provide standard regulations and accounting for international financial institutions.

The Committee was formed in response to the messy liquidation of a Cologne-based bank (Herstatt Bank) in 1974. On 26 June 1974, a number of banks had released Deutsche Mark (German Mark) to the Bank Herstatt in exchange for dollar payments deliverable in New York. On account of differences in the time zones, there was a lag in the dollar payment to the counter-party banks, and during this gap, and before the dollar payments could be effected in New York, the Bank Herstatt was liquidated by German regulators. This incident prompted the G-10 nations to form towards the end of 1974, the Basel Committee on Banking Supervision, under the auspices of the Bank of International Settlements (BIS) located in Basel, Switzerland.

Basel I, that is, the 1988 Basel Accord, primarily focused on credit risk. Assets of banks were classified and grouped in five categories according to credit risk, carrying risk weights of zero (for example home country sovereign debt), ten, twenty, fifty, and up to one hundred percent (this category has, as an example, most corporate debt). Banks with international presence are required to hold capital equal to 8 % of the risk-weighted assets. The creation of the credit default swap helped large banks hedge lending risk and allowed banks to lower their own risk to lessen the burden of these onerous restrictions.

Basel II

Basel II is the second of the Basel Accords, (now extended and effectively superseded by Basel III), which are recommendations on banking laws and regulations issued by the Basel Committee on Banking Supervision.

Basel II, initially published in June 2004, was intended to create an international standard for banking regulators to control how much capital banks need to put aside to guard against the types of financial and operational risks banks (and the whole economy) face. One focus was to maintain sufficient consistency of regulations so that this does not become a source of competitive inequality amongst internationally active banks. Advocates of Basel II believed that such an international standard could help protect the international financial system from the types of problems that might arise should a major bank or a series of banks collapse. In theory, Basel II attempted to accomplish this by setting up risk and capital management requirements designed to ensure that a bank has adequate capital for the risk the bank exposes itself to through its lending and investment practices. Generally speaking, these rules mean that the greater risk to which the bank is exposed, the greater the amount of capital the bank needs to hold to safeguard its solvency and overall economic stability.

Politically, it was difficult to implement Basel II in the regulatory environment prior to 2008, and progress was generally slow until that year's major banking crisis caused mostly by credit default swaps, mortgage-backed security markets and similar derivatives. As Basel III was negotiated, this was top of mind, and accordingly much more stringent standards were contemplated, and quickly adopted in some key countries including the USA.

The final version aims at:

- Ensuring that capital allocation is more risk sensitive;
- Enhance disclosure requirements which will allow market participants to assess the capital adequacy of an institution;
- Ensuring that credit risk, operational risk and market risk are quantified based on data and formal techniques;
- Attempting to align economic and regulatory capital more closely to reduce the scope for regulatory arbitrage.

While the final accord has largely addressed the regulatory arbitrage issue, there are still areas where regulatory capital requirements will diverge from the economic capital.

Basel II has largely left unchanged the question of how to actually define bank capital, which diverges from accounting equity in important respects. The Basel I definition, as modified up to the present, remains in place.

Basel II uses a "three pillars" concept

1. Minimum capital requirements (addressing risk),
2. Supervisory review
3. Market discipline.

The First Pillar: The first pillar deals with maintenance of regulatory capital calculated for three major components of risk that a bank faces: credit risk, operational risk, and market risk.

Credit Risk: The credit risk component can be calculated in three different ways of varying degree of sophistication, namely standardized approach, Foundation IRB and Advanced IRB. IRB stands for "Internal Rating-Based Approach".

Standardized Approach: The term standardized approach (or standardized approach) refers to a set of credit risk measurement techniques proposed under Basel II capital adequacy rules for banking institutions.

Under this approach the banks are required to use ratings from External Credit Rating Agencies to quantify required capital for credit risk. In many countries this is the only approach the regulators are planning to approve in the initial phase of Basel II Implementation.

The Basel Accord proposes to permit banks a choice between two broad methodologies for calculating their capital requirements for credit risk. The other alternative is based on internal ratings.

Foundation IRB: The term Foundation IRB or F-IRB is an abbreviation of foundation internal ratings-based approach and it refers to a set of credit risk measurement techniques proposed under Basel II capital adequacy rules for banking institutions.

Under this approach the banks are allowed to develop their own empirical model to estimate the PD (probability of default) for individual clients or groups of clients. Banks can use this approach only subject to approval from their local regulators.

Advanced IRB: The term Advanced IRB or A-IRB is an abbreviation of advanced internal ratings-based approach and it refers to a set of credit risk measurement techniques proposed under Basel II capital adequacy rules for banking institutions.

Under this approach the banks are allowed to develop their own empirical model to quantify required capital for credit risk. Banks can use this approach only subject to approval from their local regulators.

For operational risk, there are three different approaches - basic indicator approach or BIA, standardized approach or STA, and the internal measurement approach (an advanced form of which is the advanced measurement approach or AMA).

For market risk the preferred approach is VaR (value at risk)

The Second Pillar (Supervisory Reviewed): The second pillar deals with the regulatory response to the first pillar, giving regulators much improved 'tools' over those available to them under Basel I. It also provides a framework for dealing with all the other risks a bank may face, such as systemic risk, pension risk, concentration risk, strategic risk, reputational risk, liquidity risk and legal risk, which the accord combines under the title of residual risk. It gives banks a power to review their risk management system.

Internal Capital Adequacy Assessment Process (ICAAP) is the result of Pillar II of Basel II accords

The Third Pillar (Market Discipline): This pillar aims to complement the minimum capital requirements and supervisory review process by developing a set of disclosure requirements which will allow the market participants to gauge the capital adequacy of an institution.

Market discipline supplements regulation as sharing of information facilitates assessment of the bank by others including investors, analysts, customers, other banks and rating agencies which leads to good corporate governance. The aim of pillar 3 is to allow market discipline to operate by requiring institutions to disclose details on the scope of application, capital, risk exposures, risk assessment processes and the capital adequacy of the institution. It must be consistent with how the senior management including the board assess and manage the risks of the institution.

When market participants have a sufficient understanding of a bank's activities and the controls it has in place to manage its exposures, they are better able to distinguish between banking organizations so that they can reward those that manage their risks prudently and penalize those that do not.

These disclosures are required to be made at least twice a year, except qualitative disclosures providing a summary of the general risk management objectives and policies which can be made annually. Institutions are also required to create a formal policy on what will be disclosed, controls around them along with the validation and frequency of these disclosures. In general, the disclosures under Pillar 3 apply to the top consolidated level of the banking group to which the Basel II framework applies.

Regulators in most jurisdictions around the world plan to implement the new accord, but with widely varying timelines and use of the varying methodologies being restricted. The United States' various regulators have agreed on a final approach. They have required the Internal Ratings-Based approach for the largest banks, and the standardized approach will be available for smaller banks.

In India, Reserve Bank of India has implemented the Basel II standardized norms on 31 March 2009 and is moving to internal ratings in credit and AMA (Advanced Measurement Approach) norms for operational risks in banks. Existing RBI norms for banks in India (as of September 2010): Common equity (incl. of buffer): 3.6% (Buffer Basel 2 requirement requirements are zero.); Tier 1 requirement: 6%. Total Capital: 9 % of risk weighted assets.

The role of Basel II, both before and after the global financial crisis, has been discussed widely. While some argue that the crisis demonstrated weaknesses in the framework, others have criticized it for actually increasing the effect of the crisis. In response to the financial crisis, the Basel Committee on Banking Supervision published revised global standards, popularly known as Basel III. The Committee claimed that the new standards would lead to a better quality of capital, increased coverage of risk for capital market activities and better liquidity standards among other benefits.

BASEL III

BASEL III is a global regulatory standard on bank capital adequacy, stress testing and market liquidity risk agreed upon by the members of the Basel Committee on Banking Supervision in 2010-11.

This, the third of the Basel Accords was developed in response to the deficiencies in financial regulation revealed by the late-2000s financial crisis. Basel III strengthens bank capital requirements and introduces new regulatory requirements on bank liquidity and bank leverage. For instance, the change in the calculation of loan risk in Basel II which some consider a causal factor in the credit bubble prior to the 2007-8 collapse.

In Basel II one of the principal factors of financial risk management was out-sourced to companies that were not subject to supervision: credit rating agencies. Ratings of creditworthiness and of bonds, financial bundles and various other financial instruments were conducted without supervision by official agencies, leading to AAA ratings on mortgage-backed securities, credit default swaps and other instruments that proved in practice to be extremely bad credit risks.

In Basel III a more formal scenario analysis is applied (three official scenarios from regulators, with ratings agencies and firms urged to apply more extreme ones).

Basel III will require banks to hold 4.5% of common equity (up from 2% in Basel II) and 6% of Tier I capital (up from 4% in Basel II) of risk-weighted assets (RWA). Basel III also introduces additional capital buffers, (i) a mandatory capital conservation buffer of 2.5% and (ii) a discretionary countercyclical buffer, which allows national regulators to require up to another 2.5% of capital during periods of high credit growth.

In addition, Basel III introduces a minimum 3% leverage ratio and two required liquidity ratios. The Liquidity Coverage Ratio requires a bank to hold sufficient high-quality liquid assets to cover its total net cash outflows over 30 days; the Net Stable Funding Ratio requires the available amount of stable funding to exceed the required amount of stable funding over a one-year period of extended stress.

The OECD estimates that the implementation of Basel III will decrease annual GDP growth by 0.05 to 0.15 percentage point. Outside the banking industry itself, criticism was muted. Bank directors would be required to know market liquidity conditions for major asset holdings, to strengthen accountability for any major losses.

Capital Ratios and Credit Assessment

Capital Requirement: The standardized requirements in place for banks and other depository institutions, which determines how much capital is required to be held for a certain level of assets through regulatory agencies such as the Bank for International Settlements, Federal Deposit Insurance Corporation or Federal Reserve Board. These requirements are put into place to ensure that these institutions are not participating or holding investments that increase the risk of default

and that they have enough capital to sustain operating losses while still honoring withdrawals. Also known as “regulatory capital”.

A vital element of the work of any industry regulator is to ensure that the firms operating in the industry are prudently managed. The aim is to protect the firms themselves, their customers and the economy, by establishing rules and principles that should ensure the continuation of a safe and efficient market, able to withstand any foreseeable problems.

The Basel Accords, published by the Basel Committee on Banking Supervision housed at the Bank for International Settlements, sets a framework on how banks and depository institutions must calculate their capital.

The capital ratio is the percentage of a bank’s capital to its risk-weighted assets. Weights are defined by risk-sensitivity ratios whose calculation is dictated under the relevant Accord. Basel II requires that the total capital ratio must be no lower than 8%.

Common Capital Ratios

Tier 1 capital ratio = Tier 1 capital / Risk-adjusted assets $\geq 6\%$

Total capital (Tier 1 and Tier 2) ratio = Total capital (Tier 1 and Tier 2) / Risk-adjusted assets $\geq 10\%$

Leverage ratio = Tier 1 capital / Average total consolidated assets $\geq 5\%$

Common stockholders’ equity ratio = Common stockholders’ equity / Balance sheet assets

Definition of ‘Tier 1 Capital: A term used to describe the capital adequacy of a bank. Tier I capital is core capital; this includes equity capital and disclosed reserves.

Definition of ‘Tier 2 Capital’: A term used to describe the capital adequacy of a bank. Tier II capital is secondary bank capital that includes items such as undisclosed reserves, general loss reserves, subordinated term debt, and more.

Definition of ‘Capital Adequacy Ratio - CAR’: A measure of a bank’s capital. It is expressed as a percentage of a bank’s risk weighted credit exposures.

$$CAR = \frac{\text{Tier One Capital} + \text{Tier Two Capital}}{\text{Risk Weighted Assets}}$$

Also known as “Capital to Risk Weighted Assets Ratio (CRAR).”

This ratio is used to protect depositors and promote the stability and efficiency of financial systems around the world. Two types of capital are measured: tier one capital, which can absorb losses without a bank being required to cease trading, and tier two capital, which can absorb losses in the event of a winding-up and so provides a lesser degree of protection to depositors.

FOREIGN EXCHANGE MARKET

The market for foreign exchange involves the purchase and sale of national currencies. A foreign exchange market exists because economies employ national currencies. If the world economy used a single currency there would be no need for foreign exchange markets. In Europe 11 economies have chosen to trade their individual currencies for a common currency. But the euro will still trade against other world currencies. For now, the foreign exchange market is a fact of life.

The foreign exchange market is extremely active. The foreign exchange market is a 24 hour open Market.

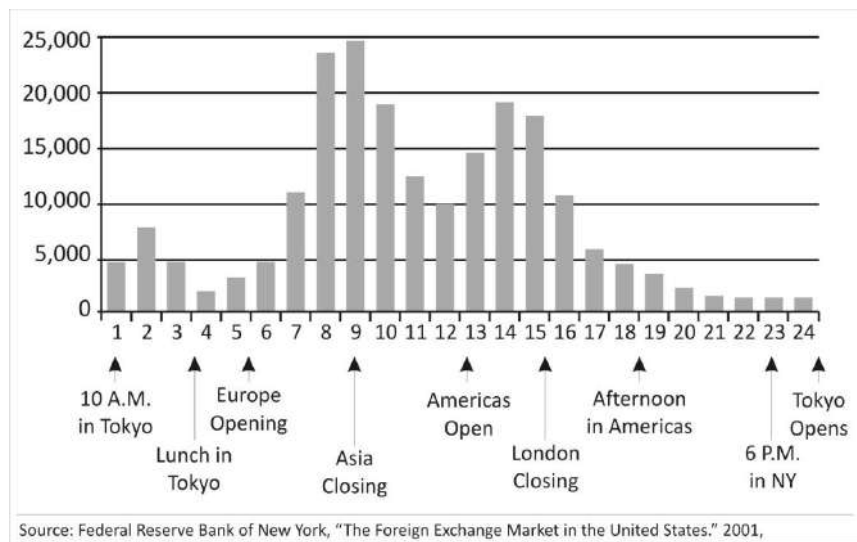


Exhibit 2.24: The Foreign Exchange Market in United States

It is primarily an over the counter market, the exchanges trade futures and option (more below) but most transactions are OTC. It is difficult to assess the actual size of the foreign exchange market because it is traded in many markets. For the US the Fed has estimated turnover (in traditional products) in 1998 to be \$351 billion per day, after adjusting for double counting. This is a 43% increase over 1995, and about 60 times the turnover in 1977. The Bank of International Settlements did survey currency exchanges in 26 major centers and this provides some evidence. In the figure below we present some evidence of the daily trading volume in the major cities. This shows the size and growth of the market. Daily trading volumes on the foreign exchange market often exceed \$1 trillion, which is much larger than volumes on the New York Stock Exchange (the total volume of trade on "Black Monday" in 1987 was \$21 billion). The annual volume of foreign exchange trading is some 60 times larger than annual world trade (\$5.2 trillion), and even 10-12 times larger than world GNP (about \$25-30 trillion in 1995), What accounts for this huge volume and its rapid growth? Although world trade has grown substantially — increasing 2.5 times since 1980 — this is far smaller than the growth in the foreign exchange market. International capital flows have increased more dramatically.

Foreign Exchange Risk

From the perspective of an Indian investor, the cash flows of assets denominated in a foreign currency expose the investor to uncertainty as to the actual level of the cash flow measured in Indian Rupee. The actual number of Indian Rupee that the investor eventually gets depends on the exchange rate between the Indian Rupee and the foreign currency at the time the cash flow is received and exchanged for Indian Rupee. If the foreign currency depreciates (declines in value) relative to the Indian Rupee (that is, the Indian Rupee appreciates), the Rupee value of the cash flows will be proportionately less, leading to foreign exchange risk.

Any investor who purchases an asset denominated in a currency that is not the medium of exchange in the investor's country faces foreign exchange risk.

For example, a Greek investor who acquires a yen-denominated Japanese bond is exposed to the risk that the Japanese yen will decline in value relative to the Greek drachma.

Spot Market

The spot exchange rate market is the market for settlement of a foreign exchange transaction within two business days. The spot exchange rate is also known as the cash exchange rate. Since the early 1970s, exchange rates among major currencies have been free to float, with market forces determining the relative value of a currency.

A key factor affecting the expectation of changes in a country's exchange rate with another currency is the relative expected inflation rate of the two countries. Spot exchange rates adjust to

compensate for the relative inflation rate. This adjustment reflects the purchasing power parity relationship, which postulates that the exchange rate — the domestic price of the foreign currency — is proportional to the domestic inflation rate, and inversely proportional to foreign inflation.

Although quotes can be either direct or indirect, the problem is defining from whose perspective the quote is given. Because of the importance of the U.S. dollar in the international financial system, currency quotations are all relative to the U.S. dollar. When dealers quote, they either give U.S. dollars per unit of foreign currency (a direct quote from the U.S. perspective) or the number of units of the foreign currency per U.S. dollar (an indirect quote from the U.S. perspective).

Quoting in terms of U.S. dollars per unit of foreign currency is called American terms, while quoting in terms of the number of units of the foreign currency per U.S. dollar is called European terms.

Forward Market

A forward foreign exchange transaction is the exchange of currencies at a specified exchange rate (or forward exchange rate) at some specified date in the future. The market where these transactions take place is known as Forward Market.

For example: There is an agreement today (at time 0) to exchange dollars for Rs. at a given (forward) exchange rate three months into the future. Forward contracts are typically written for one-, three-, or six-month periods, but in practice they can be written over any given length of time.

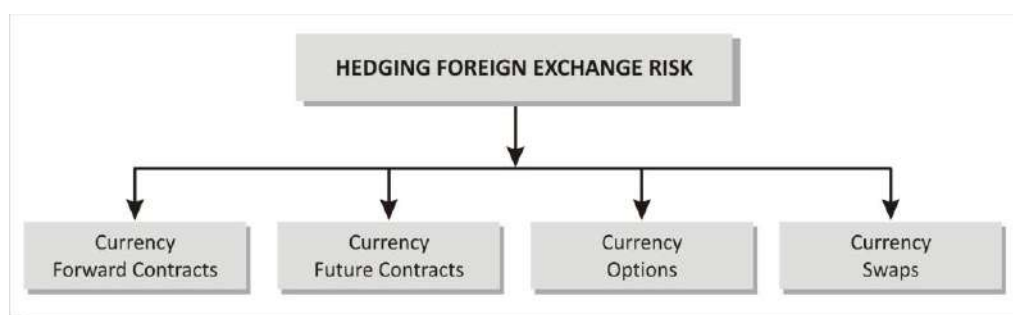


Exhibit 2.25: Instruments for Hedging Foreign Exchange Risk

Four instruments are available to borrowers and investors to protect against adverse foreign exchange rate movements:

1. Currency forward contracts
2. Currency futures contracts
3. Currency options and
4. Currency swaps.

1. **Currency Forward Contracts:** In a forward contract one party agrees to buy the underlying asset, and another party agrees to sell that same underlying asset, for a specific price at a designated date in the future.

Most forward contracts have a maturity of less than 2 years. Longer-dated forward contracts have relatively large bid-ask spreads; that is, the size of the bid-ask spread for a given currency increases with the maturity of the contract.

Both forward and futures contracts can be used to lock in a certain price or the foreign exchange rate. By locking in a rate and eliminating downside risk, the user foregoes the opportunity to benefit from any advantageous foreign exchange rate movement. The forward market is the market of choice, and trading there is much larger than trading on exchanges. However, because the foreign exchange forward market is an inter-bank market, reliable information on the amount of contracts outstanding at any time, or open interest, is not publicly available.

2. **Currency Futures Contracts:** Foreign exchange futures contracts for the major currencies are traded on the International Monetary Market (IMM), a division of the Chicago Mercantile Exchange. The futures contracts traded on the IMM are for the Japanese yen, the German mark,

the Canadian dollar, the British pound, the Swiss franc, the Indian Rupee and the Australian dollar. The amount of each foreign currency that must be delivered for a contract varies by currency. The longest maturity is 1 year. Consequently, as in the case of a currency forward contract, currency futures do not provide a good vehicle for hedging long-dated foreign exchange risk exposure.

Currency futures are traded on the National Stock Exchange, London International Financial Futures Exchange, the Singapore International Monetary Exchange, the Toronto Futures Exchange, the Sydney Futures Exchange, and the New Zealand Futures Exchange.

- 3. Currency Option Contracts:** In contrast to a forward or futures contract, an option gives the option to the buyer the opportunity to benefit from favorable exchange rate movements but establishes a maximum loss. The option price is the cost of arranging such a risk/return profile.

The two types of foreign currency options are options on the 'foreign currency' and 'futures options'. Futures options are traded on the IMM, the trading location of the currency futures contracts. Options on currencies are also traded on the London Stock Exchange and the London International financial Futures Exchange. In addition to the organized exchanges, an over-the-counter market exists for options on currencies. Over-the-counter options are tailor-made products that accommodate the specific needs of clients. Only options on the major currencies are traded on the organized exchanges. An option on other currency must be purchased in the over-the-counter market.

One key factor that affects the price of the option is the expected volatility of the underlying over the life of the option. The volatility that affects the option's value is the expected volatility of the exchange rate between the two currencies from the present time to the expiration of the option. The strike price also affects the option's value: the higher the strike price, the lower the value of a call, and the higher the value of a put.

- 4. Currency Swaps:** currencies swap (or cross currency swap) is a foreign exchange agreement between two parties to exchange a given amount of one currency for another and, after a specified period of time, to give back the original amounts swapped.

An interest rate swap is a contract to exchange cash flow streams that might be associated with some fixed income obligations—say swapping the cash flows of a fixed rate loan for those of a floating rate loan.

A currency swap is exactly the same thing except that the cash flow streams are in different currencies.

Currency swaps can be negotiated for a variety of maturities up to 30 years. A swap is considered to be a foreign exchange transaction (short leg) plus an obligation to close the swap (far leg) being a forward contract.

Unlike interest rate swaps, currency swaps involve the exchange of the principal amount. Interest payments are not netted (as they are in interest rate swaps) because they are denominated in different currencies.

Currency swaps are often combined with interest rate swaps.

For example, one company would seek to swap a cash flow for their fixed rate debt denominated in US dollars for a floating-rate debt denominated in Euro. With an interest rate swap, cash flows occurring on concurrent dates are netted. With a currency swap, the cash flows are in different currencies, so they can't net. Full principal and interest payments are exchanged without any form of netting.

Vanilla currency swaps: are quoted both for fixed-floating and floating-floating structures. Fixed-floating swaps are quoted with the interest rate payable on the fixed side. The rate can either be expressed as an absolute rate or a spread over some government bond rate. The floating rate is always "flat"—no spread is applied. Floating-floating structures are quoted with a spread applied to one of the floating indexes.

Currency swaps can be used to exploit inefficiencies in international debt markets.

Example: Suppose a corporation needs an AUD 100MM loan, but US-based lenders are willing to offer more favorable terms on a USD loan. The corporation could take the USD loan and then find a third party willing to swap it into an equivalent AUD loan. In this manner, the firm would obtain its AUD loan but at more favorable terms than it would have obtained with a direct AUD loan. That advantage must be balanced against the transaction costs, pre-settlement risk and settlement risk associated with the swap. By entering into a swap with a third party, a corporation can convert an USD loan into an AUD loan.

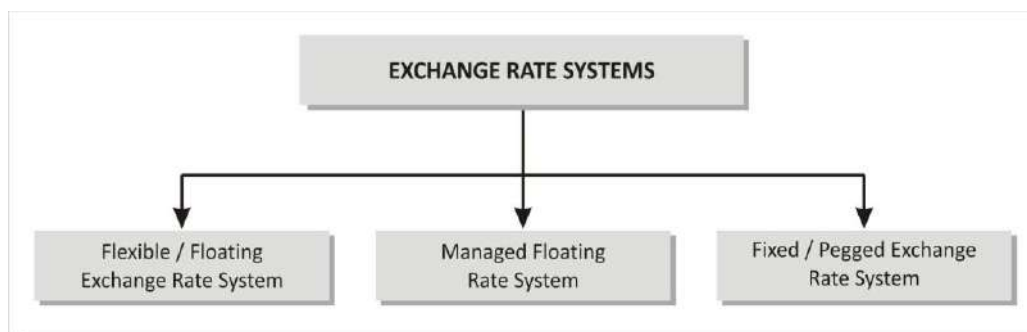


Exhibit 2.26: Exchange Rate Systems

We can roughly categorize countries as falling into three main categories of exchange rate regimes.

1. Flexible exchange rate systems (also known as floating exchange rate systems.)
2. Managed floating rate systems.
3. Fixed exchange rate systems (also known as pegged exchange rate systems).

Flexible Exchange Rate Systems

- In a flexible exchange rate system, the value of the currency is determined by the market, i.e. by the interactions of thousands of banks, firms and other institutions seeking to buy and sell currency for purposes of transactions clearing, hedging, arbitrage and speculation.
- So higher demand for a currency, all else equal, would lead to an appreciation of the currency. Lower demand, all else equal, would lead to a depreciation of the currency. An increase in the supply of a currency, all else equal, will lead to a depreciation of that currency while a decrease in supply, all else equal, will lead to an appreciation.
- Essentially, we can characterize the equilibrium exchange rate under a flexible exchange rate system as the value that is consistent with covered and uncovered interest rate parity given values for the expected future spot rate and the forward exchange rate.
- Since 1971, economies have been moving towards flexible exchange rate systems although only relatively few currencies are classifiable as truly floating exchange rates.
- Most OECD countries have flexible exchange rate systems: the U.S., Canada, Australia, Britain, and the European Monetary Union.

Managed Floating Rate Systems

- A managed floating rate systems is a hybrid of a fixed exchange rate and a flexible exchange rate system. In a country with a managed floating exchange rate system, the central bank becomes a key participant in the foreign exchange market.
- Unlike in a fixed exchange rate regime, the central bank does not have an explicit set value for the currency; however, unlike in a flexible exchange rate regime, it doesn't allow the market to freely determine the value of the currency.
- Instead, the central bank has either an implicit target value or an explicit range of target values for their currency: it intervenes in the foreign exchange market by buying and selling domestic and foreign currency to keep the exchange rate close to this desired implicit value or within the desired target values.

- Example: Suppose that Thailand had a managed floating rate system and that the Thai central bank wants to keep the value of the Baht close to 25 Baht/\$. In a managed floating regime, the Thai central bank is willing to tolerate small fluctuations in the exchange rate (say from 24.75 to 25.25) without getting involved in the market.
- If, however, there is excess demand for Baht in the rest of the market causing appreciation below the 24.75 level the Central Bank increases the supply of Baht by selling Baht for dollars and acquiring holdings of U.S dollars. Similarly if there is excess supply of Baht causing depreciation above the 25.25 level, the Central Bank increases the demand for Baht by exchanging dollars for Baht and running down its holdings of U.S dollars.

Fixed (Pegged) Exchange Rate Systems

- Prior to the 1970's most countries operated under a fixed exchange rate system known as the Bretton-Woods system. In which the exchange rates of the member countries were fixed against the U.S. dollar, with the dollar in turn worth a fixed amount of gold.
- Even though this system broke down, many countries still have an exchange rate system where the central bank announces a fixed exchange rate for the currency and then agrees to buy and sell the domestic currency at this value.
- The basic motivation for keeping exchange rates fixed is the belief that a stable exchange rate will help facilitate trade and investment flows between countries by reducing fluctuations in relative prices and by reducing uncertainty.
- However, it is important to note that financial markets have developed sophisticated derivatives that allow firms to hedge future exchange rate fluctuation risks. Regardless, fixed exchange rates are still fairly common.

Why would a country set a fixed rate that makes its currency artificially more valuable?

Conversely, some countries choose to set a fixed rate that makes its currency seem less valuable. This is done for the opposite reason, namely to encourage foreigners to buy your exports.

- This type of system, where the central bank fixes the value of the currency, but has the ability to change the value of the currency when it so desires is known as an adjustable pegged exchange rate system
- There are other variants of fixed exchange rate systems. Some countries (like Brazil at various points in its history) have adapted a system known as a crawling peg exchange rate system. This is just a fixed exchange rate system like the one described above except that the fixed rate changes in a pre-determined manner instead of in an arbitrary way. In other words, the Brazilian government would announce a fixed exchange rate of 10,000 cruzeiros to the dollar and also state that the rate would devalue by 10% each year.
- In the cases of an adjustable peg, a crawling peg or even a managed float, the central bank may not be able to sustain the exchange rate they desire if they don't have enough reserves.

Determinants of Foreign Exchange Rates

There are several factors that influence and determine the exchange rate of one currency with another.

Some of the major ones are listed below

1. Trade Balance
 2. Relative Purchasing Power Parity
 3. Relative Interest Rates
 4. Relative Price Changes
 5. Speculators, Traders and Financial Instruments
 6. Political and Psychological Factors
1. **Trade Balance:** Exports, imports and the trade balance can influence the demand of currency aimed at real transactions. An increasing trade surplus will increase the demand for country's

currency by foreigners (e.g. if the United States is running a trade surplus, there will be demand from overseas for the USD to pay for these goods), so that there should be a pressure for appreciation. A trade deficit should lead to the currency weakening.

If exports and imports largely determined by price competitiveness and the exchange rate truly sensitive to trade imbalances, then any deficit would imply a depreciation followed by booming exports and falling imports. Thus, the initial deficit would be quickly reversed. Trade balances would almost always be zero.

But exports and imports are not only determined by price competitiveness (and the exchange rate is not truly sensitive to trade imbalances), therefore trade imbalances can be quite persistent (as is the case with the current trade deficit in the United States). One reason is tariffs and quotas that exist to protect a country's foreign exchange by reducing demand. For e.g. till before liberalization, India followed a policy of tariffs and restrictions on imports. Very few items were permitted to be freely imported.

2. **Relative Purchasing Power Parity:** Another form of real determination of exchange rate is offered by the "one price law" or the "purchasing power parity", according to which any freely good or service has the same price worldwide, after taking into account nominal exchange rates. But in order to equalize the price of several goods, more than one exchange rate may turn out to be necessary, or an exchange rate that represents a tradable basket of goods and services.

The purchasing power parity exchange rate (PPP) between a foreign currency and the U.S. dollar can be defined as:

$$\text{PPP} = (\text{Cost of a Market Basket of Goods and Services at Foreign Prices}) / (\text{Cost of the Same Market Basket of Goods and Services at U.S. Prices})$$

This gives us the exchange rate in terms of the units of foreign currency per dollar. The dollars per unit of foreign currency is just the reciprocal.

The exchange rate between countries, therefore, should be such that the currencies have equivalent purchasing power. For e.g. if a hamburger costs 3 US dollars in the United States and 300 yen in Japan, then the exchange rate must be 100 yen per dollar. The foreign exchange market would adjust, over the long term, to permit the functioning of the "one price law", because the purchasing power of one currency increases (or decreases) relative to another currency.

History provides us with evidence of the forces of purchasing power parity. For example, from 1879 to 1990, the general level of prices in the U.K. has increased by about a factor of three relative to those in the U.S. Over the same period, the pound has declined from US\$ 4.86 to about US\$ 1.50 (See Table).

Year	1879	1990
Nominal Exchange Rate	1 GBP = US\$ 4.86	1 GBP = US\$ 1.50
Price of Basket Goods (US\$)	US\$ 48.60	US\$ 1300.00*
Price of Basket of Goods (GBP)	GBP 10	GBP 800 00**
Real Exchange Rate (NER* (GBP Price / USS Price))	1.0	0.93 (approximately 1.0

* Calculated using an estimated annual inflation rate of 3% from 1879-1990. 1990 U.S. prices are approximately 26.7 times those in 1870.

** Calculated as a price increase three times that in the U.S. ($26.7 \times 3 = 80$) from 1879-1990

3. **Relative Interest Rates:** Interest rates on treasury bonds will influence the decision of foreigners to purchase domestic currency in order to buy these treasury bonds. Higher interest rates will attract capital from abroad, thereby increasing demand for the currency, and therefore the currency will appreciate. Note, what is important is difference between domestic and foreign interest rates, thus a reduction in foreign interest rates would have a similar effect.

Accordingly, an increase of domestic interest rates by the central bank could be considered a way to defend the currency.

But, it may be the case that foreigners rather buy shares instead of treasury bonds. If this were the strongest component of currency demand, then an increase of interest rate may even lead to the opposite results, since an increase of interest rate quite often depresses the stock market, leading to share sales by foreigners. A restrictive monetary policy (increasing interest rates) usually also depresses the growth perspective of the economy.

If foreign direct investment are mainly attracted by future growth prospects and they constitute a large component of capital flows, then this FDI inflow might stop and the currency could weaken. Therefore, interest rates do have an important impact on exchange rate but one has to be careful to check additional conditions.

4. **Relative Price Changes:** The inflation rate is also considered to be a determinant of the exchange rate. A high inflation rate should be accompanied by depreciation of the exchange rate. The more so if other countries enjoy lower inflation rates, since it should be the difference between domestic and foreign inflation rates to determine the direction and the scale of exchange rate movements.

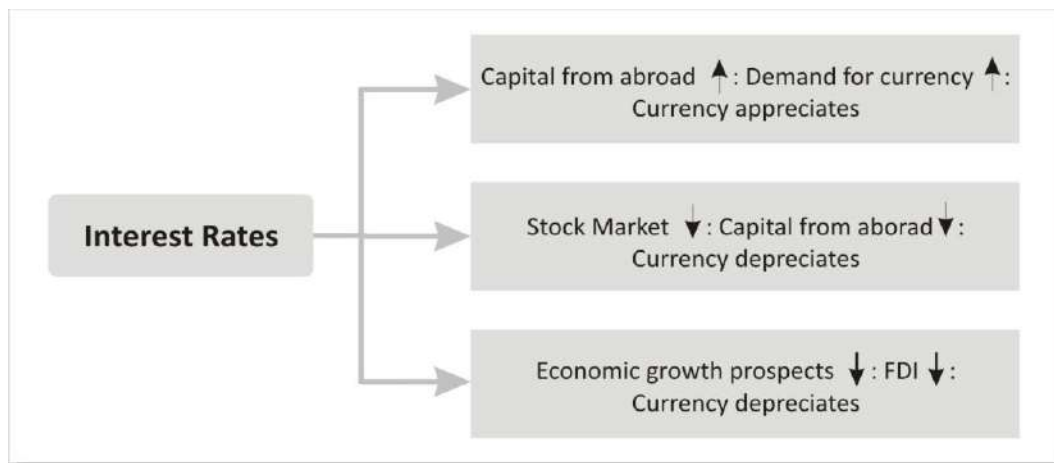


Exhibit 2.27: Impact on the Exchange Rate when Interest Rate are Raised

Therefore, if a hamburger costs 5% more in Japan than a year ago, while in USA it costs 8% more, then the dollar should have been depreciated this year by about $8\% - 5\% = 3\%$.

Here we have used the hamburger as a general example. The relationship between real, nominal exchange rates and inflation can be expressed as the following approximation (which can be applied to any two countries, not just the United States and Japan):

$\% \Delta \text{ Real Exchange Rate } (\text{¥}/\text{\$}) \approx \% \Delta \text{ Nominal Exchange Rate } (\text{¥}/\text{\$}) - (\text{Japanese Inflation \%} - \text{U.S. Inflation \%})$

In reference to the overall price level of the economy, if exchange rates would move exactly counter balancing inflation dynamics, then real exchange rates should be constant.

5. Speculators, Traders and Financial Instruments

George Soros is most famous for his single-day gain of US\$1 billion on Sept 6, 1992, which he made by short selling the British pound. At the time, England was part of the European Exchange Rate Mechanism, a fixed exchange-rate system which included other European countries. The other countries were pressuring England to devalue its currency in relation to the other countries in the system or to leave the system. England resisted the devaluation, but with continued pressure from the fixed system and speculators in the currency market, England floated its currency and the value of the pound suffered. By leveraging the value of his fund, Soros was able to take a \$10 billion short position on the pound which made him US\$1 billion. This trade is considered one of the greatest trades of all time.

Past and expected values of the exchange rate itself may impact on current values of it. The activities of foreign exchange traders, speculators and investors may turn out to be extremely

relevant to the determination of the market exchange rate. Financial instruments like futures and forwards may also play an important role on the determination of exchange rates.

Covered Interest Arbitrage: Covered interest arbitrage is the transfer of liquid funds from one currency to another to take advantage of higher rates of return or interest, while covering the transaction with a forward currency hedge. Since the foreign currency is likely to be at a forward discount, the investor loses on the foreign transfer currency transaction per se. But if the positive interest differential in favor of the foreign money center exceeds the forward discount on the foreign currency (when both are expressed in percentage per year), it pays to make the foreign investment.

For e.g., when interest rates in the United States are greater than in Brazil (or elsewhere), a Brazilian investor can exchange 'Brazilian Real for 'US dollars' today and use these dollars to buy a 3-month T-bill in New York at 12%. She earns 4% more per year (or 1% more per 3 months) than if he had used his Real to buy a 3-month T-bill in Brazil at 8%. If the spot rate today is 3.0 real/\$ and the spot rate in three months is 2.97 real/\$, she will lose 0.3 Real or 1% on the foreign exchange conversion. The annualized 4% gain from the U.S. T-bill is just offset by the annualized 4% currency loss. She breaks even.

If, on the other hand, the 3-month forward rate is between 3.0 and 2.97, the investor can cover her foreign exchange rate risk by buying a forward contract to sell dollars in 3 months in exchange for Real E.g. if the forward rate us 2.985:

$$\begin{aligned}\text{Foreign currency loss} &= (3 \text{ month forward rate} - \text{spot rate}) / \text{spot rate} \\ &= (2.985 \text{ Real} - 3.0 \text{ Real}) / 3.0 \text{ real} = -.015/3.0 = -0.5\%\end{aligned}$$

If the 3-month interest differential is 1% and the foreign exchange differential is only 0.5%, the investor nets 0.5% and should undertake the investment. This return (0.5%) annualized is 2% per year. As long as the interest rate differential is greater than the forward exchange rate differential, the Brazilian investor profits from buying U.S. T-bills and selling forward dollars. In the process, she raises his return from 8% on the Brazilian T-bill to 10.30% on the U.S. T-bill plus the foreign currency translation.

As funds are transferred from Brazil to the U.S., the supply of funds is reduced in Brazil and increased in the US. This tends to put upward pressure on interest rates in Brazil and downward pressure on interest rates in the US, so that the positive interest differential of 4% per year will tend to fall toward 2% per year.

At the same time, the increased demand for dollars in the spot market tends to raise the spot rate for dollars and the increased forward supply of dollars tends to push down the forward rate. For both reasons, the forward discount on the dollar will tend to increase, pushing it up to the interest rate differential.

Under normal conditions, the relationship between spot and forward rates is determined largely by covered interest arbitrage (this relationship is known as the interest rate parity). If interest rates are higher abroad, covered interest arbitrage tends to keep the foreign currency at a forward discount (and the domestic currency at a forward premium) equal to the positive interest differential in favor of the foreign monetary center. If domestic interest rates are higher, covered interest arbitrage tends to keep the foreign currency at a forward premium relative to the spot rate (and the domestic currency at a forward discount) equal to the domestic positive interest differential. However, this may not hold even approximately when covered interest arbitrage is forbidden or with large destabilizing speculation taking place.

Interest Rate Parity: Interest rate parity is a relationship that must hold between the spot interest rates of two currencies if there are to be no arbitrage opportunities. The relationship depends upon spot and forward exchange rates between the currencies.

$$\frac{f}{s} = \left(\frac{1+r_a}{1+r_b} \right)^m$$

s is the spot exchange rate, expressed as the price in currency a of a unit of currency b

f is the corresponding forward exchange rate

r_a and r_b are the interest rates for the respective currencies

m is the common maturity in years for the forward rate and the two interest rates

The interest rate parity (covered interest arbitrage) plays a fundamental role in foreign exchange markets, enforcing an essential link between short-term interest rates, spot exchange rates and forward exchange rates.

Influence of the FX Options Market on Short-Term Exchange Expectations Implied volatility is one of the key variables used to calculate the price of an FX option.

It is often interpreted as the market's measure about possible future movements in spot (related to the standard deviation of returns over a sample period). In the FX options market, the preference of calls (right to buy a currency) over puts (right to sell a currency) is measured by an asset class called risk reversal skew (RR) which is mathematically defined as:

D delta Risk Reversal Skew = Implied Volatility of a D delta Call – Implied Volatility of a D Delta Put

The FX market closely watches these risk reversals. A positive RR, for example, indicates preference for calls over puts, a signal often perceived as bullish by the market, leading to overbought positions in the underlying currency, that further exacerbate the RR.

FX Option positions also give rise to a phenomenon referred to as strike gravity. As the FX option trader deals in the spot market to hedge a significant FX option position against counterparty that is not an active market participant, the spot gravitates towards the strike of the option as the trade approaches maturity. This effect is more pronounced when the said position is an exotic option with a digital payout and both the participants have access to liquidity in the cash market to actively manage the exotic option. These FX flows arising from aggressive hedging by the FX Option market players often dictate short-term currency moves.

6. Political and Psychological Factors

Political or psychological factors are also believed to have an influence on exchange rates. Many currencies have a tradition of behaving in a particular way such as Swiss francs which are known as a refuge or safe haven currency while the dollar moves (either up or down) whenever there is a political crisis anywhere in the world. Exchange rates can also fluctuate if there is a change in government. A few years back, India's foreign exchange rating was downgraded because of political instability and consequently, the external value of the rupee fell. Wars and other external factors also affect the exchange rate. For example, when Bill Clinton was impeached, the US dollar weakened. During the Indo-Pak war the rupee weakened. After the 1999 coup in Pakistan (October/November 1999), the Pakistani rupee weakened.

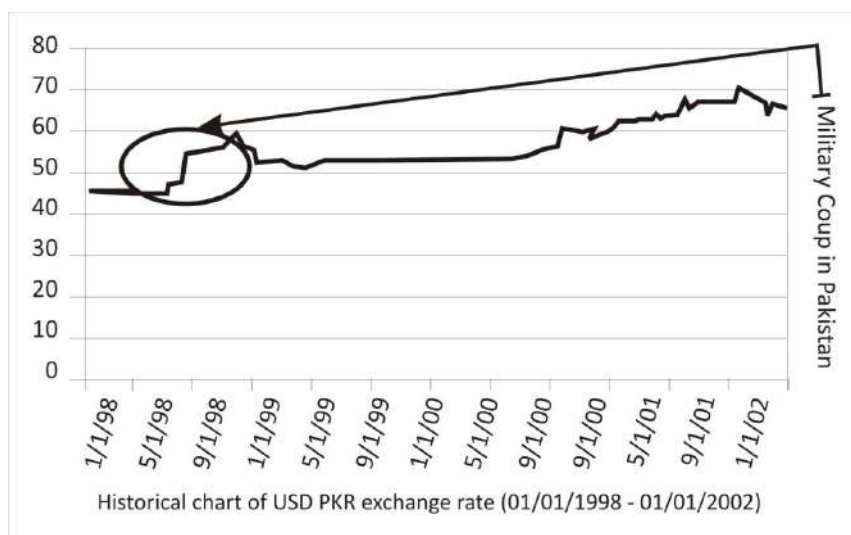


Exhibit 2.28: USD and PKR Exchange Rate

Commodity Markets

When Stock markets are volatile, Investors look for other avenues to diversify their risks. According to experts, commodities are an effective portfolio diversifier. Commodity includes all kinds of goods.

FCRA (Foreign Contracts Regulations act) defines 'Goods' as every kind of movable property other than actionable claims, money and securities.

A commodity market is a market that trades in primary economic sector rather than manufactured products. Soft commodities are agricultural products such as wheat, coffee, cocoa and sugar. Hard commodities are mined, such as gold and oil.¹ Investors access about 50 major commodity markets worldwide with purely financial transactions increasingly outnumbering physical trades in which goods are delivered. Futures contracts are the oldest way of investing in commodities. Futures are secured by physical assets. Commodity markets can include physical trading and derivatives trading using spot prices, forwards, futures, and options on futures. Farmers have used a simple form of derivative trading in the commodity market for centuries for price risk management.

Commodity trading is progressively becoming a prominent business in India. To facilitate this trading there are various exchanges setup in India. These exchanges are the center of the trading of various commodities. The two important commodity exchanges in India are as follows:

- Multi Commodity Exchange of India (MCX)
- National Commodities and Derivatives Exchange Limited (NCDEX)

The main Indian commodity exchange is the Multi Commodity Exchange of India (MCX). The other very famous commodity exchange is National Commodities and Derivatives Exchange Limited (NCDEX). NCDEX is located in Mumbai and offers facilities in more than 550 centers in India.

MCX features amongst the world's top three bullion exchanges and top four energy exchanges. MCX is the only Exchange in India to have such investment and technical support from the commodity pertinent institutions. The day-to-day operations of the Exchange are administered by the experienced and qualified professionals with perfect integrity and expertise.

National Commodity & Derivatives Exchange Limited (NCDEX)

National Commodity & Derivatives Exchange Limited (NCDEX) is a proficiently managed on-line multi commodity exchange promoted by ICICI Bank Limited (ICICI Bank), Life Insurance Corporation of India (LIC), National Bank for Agriculture and Rural Development (NABARD) and National Stock Exchange of India Limited (NSE), Canara Bank, PNB, CRISIL Limited (formerly the Credit Rating Information Services of India Limited), Goldman Sachs, Indian Farmers Fertilizer Cooperative Limited (IFFCO) and Punjab National Bank by subscribing to the equity shares have joined the initial promoters as shareholders of the Exchange. NCDEX is the only commodity exchange in the country sponsored by national level institutions. This unique parentage enables it to offer a bouquet of advantages, which are currently in short supply in the commodity markets. The institutional promoters and shareholders of NCDEX are famous players in their respective fields and bring with them institutional building experience, trust, nationwide reach, technology and risk management skills.

NCDEX is a public limited company incorporated on April 23, 2003 under the Companies Act, 1956. It obtained its Certificate for Commencement of Business on May 9, 2003. It started its operations on December 15, 2003. It is a nation-level, technology driven de-metalized on-line commodity exchange with an independent Board of Directors and professional management - both not having any vested interest in commodity markets. It is committed to provide a world-class commodity exchange platform for market participants to trade in a broad spectrum of commodity derivatives driven by best global practices, professionalism and transparency.

NCDEX is synchronized by Forward Markets Commission. NCDEX is subjected to various laws of the land like the Forward Contracts (Regulation) Act, Companies Act, Stamp Act, Contract Act and various other legislations. NCDEX currently facilitates trading of 57 commodities

Multi Commodity Exchange of India Ltd. (MCX)

MCX is a self-governing and demutualized multi commodity exchange. It was inaugurated on November 10, 2003 by Mr. Mukesh Ambani, Chairman and Managing Director, Reliance Industries Ltd.; and has permanent recognition from the Government of India for facilitating online trading, clearing and settlement operations for commodities futures market across the country. Today, MCX features amongst the world's top 3 bullion exchanges and top 4 energy exchanges.

MCX offers a broad spectrum of opportunities to a large cross section of participants including producers/processors, traders, corporate, regional trading center, importers, exporters, co-operatives and industry associations amongst others. Headquartered in the financial capital of India, Mumbai, MCX is led by an expert management team with in-depth domain knowledge of the commodities futures market. Presently, the average daily turnover of MCX is around USD1.55 Bn (Rs. 7,000 crore - April 2006), with a record peak turnover of USD3.98 Bn (Rs. 17,987 crore) on April 20, 2006. In the 1st calendar quarter of 2006, MCX holds more than 55% market share of the total trading volume of all the domestic commodity exchanges. The exchange has also affected large deliveries in domestic commodities, signifying the efficiency of price discovery.

Being a nation-wide commodity exchange having state-of-the-art infrastructure, presenting multiple commodities for trading with wide reach and penetration, MCX is well placed to tap the immense potential poised by the commodities market.

Development of the Industry

India has a long history of trading commodities and considered the pioneer in some forms of derivatives trading. The first derivative market was set up in 1875 in Mumbai, where futures cotton was traded. This was followed by establishment of futures markets in edible oilseeds complex, raw jute and jute goods and bullion. This became an active industry with volumes reported to be large.

However, in 1935 a law was passed allowing the government to in part restrict and directly control food production (Defense of India Act, 1935). This included the ability to restrict or ban the trading in derivatives on those food commodities. Post-independence, in the 1950s, India continued to struggle with feeding its population and the government increasingly restricting trading in food commodities.

The industry was pushed underground and the prohibition meant that development and expansion came to a halt. In the 1970 as futures and options markets began to develop in the rest of the world, Indian derivatives markets were left behind. The apprehensions about the role of speculation, particularly in the conditions of scarcity, prompted the Government to continue the prohibition well into the 1980s.

The result of the period of prohibition left India with a large number of small and isolated regional futures markets. The futures markets were dispersed and fragmented, with separate trading communities in different regions with little contact with one another. The exchanges had not yet embrace modern technology or modern business practices.

Next to the officially approved exchanges, there were also many Havala markets. Most of these unofficial commodity exchanges have operated for many decades. Some unofficial markets trade 20–30 times the volume of the "official" futures exchanges. They offer not only futures, but also option contracts. Transaction costs are low, and they attract many speculators and the smaller hedgers. Absence of regulation and proper clearing arrangements, however, meant that these markets were mostly "regulated" by the reputation of the main players.