Lecture



Class: SY BSc

Subject: Introduction to Derivatives and Financial Markets

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Chapter: Unit 1 Chapter 1

Chapter Name: Introduction to Financial Markets and Systems



Today's Agenda

- Introduction to Financial Market
 - What is Financial Market?
 - About the Financial Market
 - 3. Why do we need Financial Market?
 - 4. Functions of Financial Markets
- Classification of Financial Market
 - 1. Types of Markets
 - 2. Organized Market
 - 3. Unorganized Financial Market
 - 4. Primary Market
 - 5. Secondary Market
 - 6. Quote-Driven Market
 - 7. Order-Driven Market
 - 8. Brokered Market

- 3. Financial Intermediaries and their services
 - 1. Brokers
 - 2. Investment Banks
 - 3. Exchanges
 - 4. Arbitrageurs
 - 5. Dealers
 - 6. Securitizers
 - 7. Depository Institutions
 - 8. Insurance Companies
 - 9. Clearing House
- 4. Well Functioning Financial System
- 5. Market Regulation
 - 1. Objectives of Market regulation



1 Introduction to Financial Markets

- What do you understand by Financial Markets?
- What are the types of financial markets you know about or you have come across?
- Have any of you ever transacted across any financial markets?



1.1 What is Financial Market?



Financial markets refer broadly to any marketplace where the trading of securities occurs, including the stock market, bond market, forex market, and derivatives market, among others.





1.2 About the financial markets

- The markets make it easy for buyers and sellers to trade their financial holdings.
- Financial markets create securities/products that provide a return for those who have excess funds (Investors/lenders) and make these funds available to those who need additional money (borrowers).
- Financial markets rely heavily on informational transparency to ensure that the markets set prices that are efficient and appropriate.



1.3 Why do we need financial markets?

?

What functions do you think does the financial market perform and how? List some of them.

Α.

B.

 $\overline{}$

D.

Ε.



There are different functions that the financial markets perform. Let's understand the important ones here:

1.4.A Price Determination –

- The financial market performs the function of price discovery of the different financial instruments which are traded between the buyers and the sellers on the financial market.
- The financial market provides the vehicle by which the prices are set for both financial assets which are issued newly and for the existing stock of the financial assets.



What factors do you think affects the market prices of securities?



Factors Affecting Market Prices

There are many factors that affect the prices of securities like:

- Demand & Supply
- Interest Rates
- Credit Availability
- Government Stability
- Foreign Investment
- Company statistics etc.

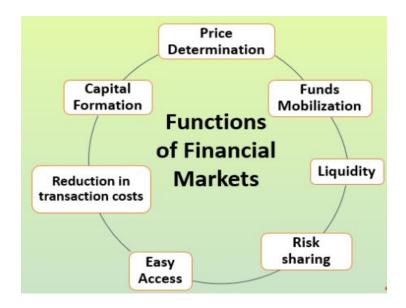


Read article – Factor affecting Stock market prices



1.4.B Funds Mobilization -

- Along with the determination of the prices at which the financial instruments trade in the financial market, the required return out of the funds invested by the investor is also determined by participants in the financial market.
- To mobilize funds also refers to activities undertaken by an organization to secure new and additional financial funds or to distribute the excess funds in hand.





1.4.C Capital Formation –

- Financial markets provide the channel through which the new savings of the investors flow in the country which aid in the capital formation of the country.
- In case of expansion when the company requires funds, it could either raise it in the form debt issue or it could move to markets for issuing shares, if the MoA allows so.
- **For example**, Facebook went public in May 2012, raising \$16 billion in capital through its IPO, which put the company's value at \$104 billion.



1.4.D Liquidity –

- The liquidity function of the financial market provides an opportunity for the investors to sell their financial instruments at its fair value prevailing in the market at any time during the working hours of the market.
- Financial markets provide transparency that help the investors to keep a check on the liquidity of the stocks they invest in.

Trading Liquidity

• Trading liquidity is a market's feature whereby an individual or firm can quickly purchase or sell an asset without causing a drastic change in the asset's price.

Funding Liquidity

- Funding liquidity is the **availability of credit** to finance the purchase of financial assets.
- · It is the ability of a solvent institution to make agreed-upon payments in a timely fashion i.e. to **run a smooth cycle.**



Was 2008 a Liquidity Crisis?

• Liquidity Risk and Credit in the Financial Crisis



Read article – Liquidity and Credit Risk



1.4.E Risk sharing –

- Financial market performs the function of the risk-sharing as the person who is undertaking the investments are different from the persons who are investing their fund in those investments.
- The risk is transferred from the person who undertakes the investments to those persons who provide the funds for making those investments.
- Since there is a variety of securities that trade across the financial markets, an investor can create a well diversified portfolio to mitigate risk. For instance to include risky (say equities), moderate (say debentures) and very less risky (say T-bills) securities in appropriate proportions in the portfolio.
- Also as there are large number of people that invest in a particular security, the risk associated with the security is divided between the large number of people and hence it is shared.



1.4.F Easy Access –

- The industries require the investors for raising the funds and the investors require the industries for investing its money and earning the returns from them.
- So the financial market platform provides the potential buyer and seller easily, which helps in saving their time and money in finding the potential buyer and seller.



Easy access to What?

- -To funds
- -To counter parties
- -To investment opportunities
- -To variety of asset classes
- -To different brokers
- -To information etc.



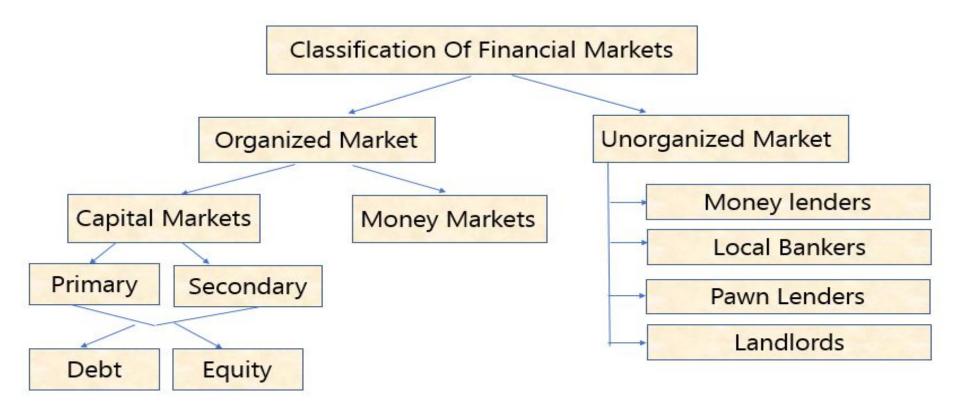
1.4.G Reduction in Transaction Costs and Provision of the Information –

- The trader requires various types of information while doing the transaction of buying and selling the securities. For obtaining the same, time and money is required.
- The financial market helps in providing every type of information to the traders without the requirement of spending any money by them.
- The quality and quantity of information has wonderfully improved since now data is available at the tips of the hand.
- The transaction costs have reduced as now the markets operate electronically compared to earlier forms when trading had a lot of paper work.



2 Classification of Financial Market

The financial system can be classified into smaller segments, based on various on various grounds of classification. We understand the broader area of classification here.





2 Classification of Financial Market

?

On the basis of the security traded, markets can be classified into different types. What different securities and their respective markets could you think off?



2.1 Types of Markets

- The Financial Market can also be sub-divided into smaller segments on the basis of the security traded or the types of asset.
- This classification divides the entire financial market into different markets which work separately as well as with interconnection.
- The kind of asset or security traded is also different under each market.



Two types of assets mainly traded in the organized market are:

- A. Physical Assets
- B. Financial Assets



State the type of Physical and Financial assets that you know.



2.2.A Types of Assets – Physical Assets

1. Commodities

It includes agriculture products (like wheat, corn, or coffee), metals (like gold, silver, or iron), energy products (like oil or electricity).

Some of the earliest exchanges focused on commodities, as farmers and other producers of goods sought corresponding buyers.



See the volumes and values by which commodities trade in todays time. Read article – Commodity Trade



2.2.A Types of Assets - Physical Assets

2. Real estate

It includes land and the fixed developments upon it.

As such, transactions tend not to occur in organized markets, but are handled by localized agents arranging specific transactions.

The value in this market is significant (mainly because the value of the underlying is very large); for homeowners, real estate is typically the largest capital investment.

3. Currency

This trading has become more significant since the largest economies removed tying their currencies directly to the value of precious metals.

Globalization, increased imports and exports, countries becoming open economies etc are factors that contribute to immense growth of currency trading.

Given the high level of liquidity in most currencies, these markets are very competitive and active 24 hours a day due to different time zones in different countries and markets.



2.2.A Types of Assets - Physical Assets

4. Alternative investments

It includes art, antiques, wine, and collectibles (like rare baseball cards) are extremely illiquid and hard to value.

There are auction houses that specialize in pricing and trading these items, but the market is relatively small compared to other assets.

Example:

A handwritten letter by Albert Einstein which is rare for containing his famous E=mc² mass-energy equivalence formula has gone on sale for the sum of GBP 282,000 (approx. Rs 2,91,94,106). The letter is dated October 26, 1946, and is one of only four known examples of the formula having been written by Einstein. According to Boston-based RR Auction, the letter, which is one-page long and blind stamped on a personal Princeton letterhead will be auctioned in a time sale which will end on May 20.



2.2.B Types of Assets - Financial Assets

- There exist financial assets, whose value derives from some sort of contractual agreement involving future transfers of wealth.
- The three main categories of financial assets are: debt instruments, equity, and derivatives.
- Many financial assets have contracts written so that the owner of the instrument has the
 ability to transfer the benefits (that is, sell it) to another, in which case we call the asset
 a security.



2.2.B Types of Assets - Financial Assets

1. Bonds and Debt instruments (certificates of deposit)

These are securitized loans, principally traded over the counter (OTC). While some government issues can be liquid, the majority of this market has a lower liquidity.

Many loans, however, are not securitized, and typically remain between the bank and the borrower until they are fulfilled.

Bonds have maturity dates at which point the principal amount must be paid back in full or risk default.

Example: The Sovereign Gold Bond scheme – Government securities denominated in grams of gold.



2.2.B Types of Assets - Financial Assets

2. Equity

It includes shares of stock, securitized ownership in a corporation, which can range in liquidity depending upon the size of the company, many other factors.

Many shares are traded in exchanges, either physically located (like the NYSE) or electronically (like the NASDAQ). Smaller companies can be traded in the distributed OTC markets.

Private equity is also an asset, though it tends to be very illiquid



State names of equities you could think of. Example: Reliance - RiL



2.2.B Types of Assets - Financial Assets

3. Derivatives

These are financial instruments which primarily derive their value from any other asset.

It includes financial instruments like futures contracts, options, swaps which derive value from other forms of assets.

The derivative market can be divided into two, that for exchange-traded derivatives and that for over-the-counter derivatives.



Indian Derivative Market - NSE is now world's largest derivatives exchange. Read Article - NSE_Derivatives_Trading



2.3 Unorganized Financial Market

- Unorganized Financial System, includes relatively less controlled moneylenders, indigenous bankers, landlords, traders etc. This part of the financial system is not directly amenable to control by the Reserve Bank of India (RBI).
- Amongst the features of this sector are ease of entry, smaller scale of operation, local ownership, uncertain legal status, operating using lower technology based methods, a higher proportion of migrants, etc.
- The main demand in the unorganised market comes from the agriculturists, private individuals for consumption rather than production and even small traders.
- The supply of money-capital comes, usually from own resources of money lenders and from savings and deposits of customers.



2.3 Unorganized Financial Market

2.3.A Traders in the Unorganized Markets

- 1. Money Lenders A moneylender is a person or group who offers small Personal Loans at high rates of interest. Most of the time the borrower prefers to take Loan without any collateral
- 2. Pawn Brokers Pawnbroker is an individual or business, that offers secured loans to people, with items of personal property used as collateral. The personal property kept as collateral can be sold if the money is not returned within a certain time.
- **3.** Landlords landlord is the owner of a house, apartment, land which is rented to an individual or business, who is called a tenant. People give their land as a collateral in order to fulfil urgent need to heavy finance. etc.



2.3 Unorganized Financial Market



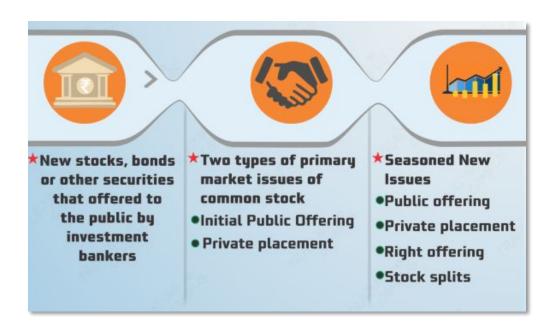
Discuss

If people can get loan through a bank at a lower rate of interest why do you think they tend towards the unorganized market and agree to pay higher rates??



2.4 Primary Market

- A primary market issues new securities on an exchange for companies, governments, and other groups to obtain financing through debt-based or equity-based securities.
- The primary market is where securities are created. It's in this market that firms sell (float) new stocks and bonds to the public for the first time.
- The important thing to understand about the primary market is that securities are purchased directly from an issuer.





2.4 Primary Market

2.4.A Issues on the Primary Markets

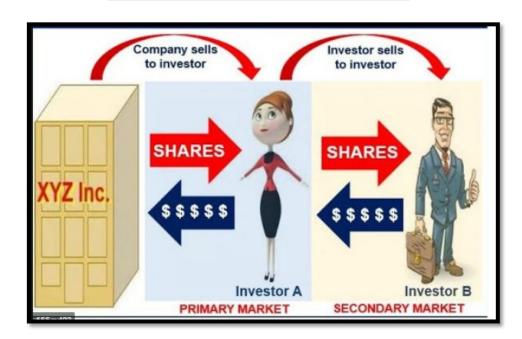
- An initial public offering, or IPO, is an example of a primary market issue. **Example:** Nykaa is looking at going public and getting a stock exchange listing by the end of 2021 or early 2022 at a valuation of \$3 billion.
- Other types of primary market offerings for stocks include private placement and preferential allotment, qualified institutional placement etc. **Example:** Jindal Steel and Power Ltd raised Rs 1,200 cr through qualified institutional placement (QIP) in 2018.
- Similarly, businesses and governments that want to generate debt capital can choose to issue new short- and long-term bonds on the primary market. **Example**: Wockhardt plans to raise up to Rs.150 cr via Non-Convertible Debentures dated March,2021.
- All are subject to strict regulation. Companies must file all required statements with the concerned agencies.



2.5 **Secondary Market**

- The secondary market is where investors buy and sell securities they already own.
- It includes the "stock market," though stocks are also sold on the primary market when they are first issued.
- Transactions termed secondary simply because they are one step removed from the transaction
- that originally created the securities in question.
- Though stocks are one of the most commonly traded securities, bonds, mortgages, mutual funds also have secondary markets.
- Prices in the secondary market are determined by the basic forces of supply and demand in the market.

Example





2.5 **Secondary Market**

2.5.A Support of the Secondary Market - Liquidity

- The Secondary Market provides liquidity to the shares you buy in the primary market.
- This gives investors the ability to liquidate his assets or transfer his risk to another investor as and when he feels the need for it.
- This liquidity helps issuers attract more demand for their security offerings in the primary markets, which leads to higher initial sale prices and thus a lower cost of capital.



2.5 **Secondary Market**

2.5.B Support of the Secondary Market – New Issues

- The price of a stock trading in the secondary market acts as a report card for the company.
 Example, the trading and growth in share price of Reliance over time helps the investors to analyse the working of the company and thus to make an informed decision whether to invest or not. Now since we know that RiL has performed really well on the list, it is easy for the company to raise finance as investors would be willing to buy shares.
- The price at which a company is trading in the secondary market can be used as a reference rate for raising further capital in the primary market or, their shares can be used as a means of payment for new acquisitions. Example: Generally IPO's are priced lower than the current price at which the share is trading.



Question

- 1. _____ is a link between savers & borrowers, helps to establish a link between savers & investors.
 - (a) Marketing
 - **(b)** Financial market
 - (c) Money market
 - (d) None of these
- 2. Stock exchange is known as _____ market for securities.
 - (a) Primary market
 - **(b)** Secondary market
 - (c) Capital market
 - (d) None of the above
- 3. Which of the following is the function of financial market?
 - (a) Mobilization of savings
 - **(b)** Price fixation
 - (c) Provide liquidity to financial assets
 - (d) All of the above



Question

- 4. When securities are allotted to institutional investors & some selected individuals is referred to as ______.
- (a) Initial public offer
- **(b)** Offer through prospectus
- (c) Private placement
- (d) Offer for sale
- 5. _____ is the organisations, institutions that provide long term funds.
- (a) Capital market
- **(b)** Money market
- (c) Primary market
- (d) Secondary market



2.6 Quote-Driven Market

- A quote-driven market is a system in which prices are determined from bid and ask quotations made by market makers and dealers. They are referred to as a dealers market because each trade is executed through a dealer.
- Quote-driven markets are the most commonly used execution systems for markets such as bonds, currencies and commodities.
- In these markets trades are conducted through in-house digital communication systems, telephone or even though instant messaging.
- There are some dealers markets where traders can trade directly with each other. However such a market is not a pure quotes-driven market. **For example**, Nasdaq Stock Market is a quotes-driven market in which even trades are brokered directly between traders.

2.6 Quote-Driven Market

2.6.A Trading in a quote-driven market

- The dealers, working with investment banks, commercial banks, and broker-dealers, provide quotes for different instruments and all customers need to trade through them at the quoted prices.
- Most trades in these markets are conducted through proprietary computer communications networks or by phone.
- Order execution is guaranteed in a quote-driven market because market makers are required to meet the bid and ask prices they quote.
- Furthermore, a quote-driven market is more liquid due to the presence of market makers, however it lacks transparency.



2.7 Order-Driven Market

An order-driven market is a financial market where all buyers and sellers display the prices at which they wish to buy or sell a particular security, as well as the amounts of the security desired to be bought or sold.

Here's an example of the working of an order-driven market.

Order Driven Market			
Buy Orders		Sell Orders	
Shares	Price	Shares	Price
134,084	42.64	59,100	42.65
477,634	42.63	184,969	42.66
387,190	42.62	195,682	42.67
190,780	42.61	372,964	42.68
250,441	42.60	300,630	42.69
252,286	42.59	162,506	42.70
526 Buy Orders		445 Sell Orders	



2.6 Order-Driven Market

2.6.A Trading in an order-driven market

- Order driven trading systems rank buy and sell orders according to price, matching the
 highest-ranking orders (if possible) at the minimum order amount. If there is a remaining volume
 of shares to be bought or sold in a given order, trading systems will match the order with the
 next highest-ranked sell or buy order.
- The biggest advantage of participating in an order-driven market is transparency but it may not have the same degree of liquidity as a quote-driven market.
- For Example, NSE is an Order Driven market.



2.7 Brokered Market

- A brokered market involves agents or intermediaries in purchase and sale transactions to facilitate price discovery and transacting the execution.
- The use of brokers as intermediaries between buyers and sellers aids market efficiency by fostering liquidity, reducing bid-ask spreads and boosting transaction volumes.





2.7 Brokered Market

2.7.A Trading in an brokered market

- Brokered markets are used for all manner of securities, especially those with initial issues.
- An IPO, for example, will usually be launched through an investment bank, who brokers the issue trying to find subscribers. This is also similar for new bond issues.
- Brokered markets are preferred for expensive and less liquid assets. Trades in this market usually take place between a small number of people or institutions



2.7 Brokered Market

The example of the forex dealer and forex broker

A bank dealer quotes a BID rate for his export base customer \$ 5 million at 76.00. In this transaction, he has bought \$5 million at 76.00. the bank dealer can immediately sell the dollars which he had purchased from his customer in the market at the same rate or if he has a view that the rate will be going up he may opt to hold the long position and sell it when the rate of the dollar increases. Thus, to earn profit by selling above the price at which he has bought from his customer.

In the case of a broker the situation is not the same, if any entity approaches him to sell the dollar he has to find a suitable counterparty for the same and he has to transact at the market rate. Thus, the broker doesn't earn in the price difference. He earns brokerage by bringing two parties.

The above example shows the dealer also has to face exchange rate risk at times when he doesn't cover the transaction at the same time as the market is volatile and can go against the direction of the dealer. Brokers do not take their own position in the market, they just bring two parties together to transact.





Financial intermediaries help entities achieve their goals by providing products and services that help connect buyers and sellers.

Financial intermediaries connect market participants with each other and allow them to transfer capital and risk.





3.1 Brokers

- Agents who fill orders for their clients, helping to reduce their client's transaction costs by
 efficiently matching them with someone else willing to take the other side of their trades.
- A broker can also refer to the role of a firm when it acts as an agent for a customer and charges the customer a commission for its services.



3.1.A Types of Brokers

- Discount brokers execute trades on behalf of a client, but typically don't provide investment advice.
 Late in 2019 many discount brokers made a significant shift in their business model that included
 charging no commissions on some or all of their equity trades. Examples of some discount brokers
 include Fidelity, Charles Schwab, E-Trade, Interactive Brokers and Robinhood.
- Full-service brokers provide execution services as well as tailored investment advice and solutions.
 Examples of a full service broker might include offerings from a company such as Morgan Stanley or Goldman Sachs or even Bank of America Merrill Lynch. Such companies may also use their broker services on behalf of themselves or corporate clients to make large block equity trades.
- **Block brokers** deal only in large orders. Block brokers serve to manage large orders in such a way that their clients lose the least amount of money due to adverse movements in the market.



3.2 Investment Banks

It primarily helps corporate clients in issuing a wide range of securities, including common stock, preferred stock, notes, and bonds in addition to assisting their clients with potential takeover targets.

Example: Axis Bank Ltd, Barclays Bank PLC and many others.

3.3 Exchanges

They provide places where traders can meet to arrange their trades.

The distinction between brokers and dealers and exchange has blurred recently because exchanges can act as brokers. The distinguishing features of exchanges are the existence of listing regulation and financial disclosures.

Example: The Indian Exchanges - NSE and BSE.



3.4 Arbitrageurs

They make a profit from market imperfections. Even if pure arbitrage does not exist, arbitrageurs use valuation relationships between financial instruments based on the same underlying to identify arbitrage opportunities.

3.5 Dealers

They trade with their clients either on an exchange or through a computerized network. They buy securities when the client wants to sell them and vice versa. They differ from brokers in that brokers do not trade with clients.



3.6 Securitizers

They issue of securities that are backed by a pool of assets such as mortgages, credit card debt, etc. through a process called securitization.

Asset-backed securities benefit from diversification, economies of scale in debt services and liquidity.

Example: It is interesting to note that the ICICI Bank has emerged as the biggest institution dealing in securitization. It commands 40 percent of the securitization transactions amounting to Rs. 1929.9 crore backed by its new and old car loans.



3.7 Depository Institutions

It includes commercial banks, savings and loan banks, credit unions, and similar institutions that raise funds from depositors and other investors and lend it to borrowers. Depositors benefit from the banks' transaction services and interest payments on their deposits while the bank benefits by obtaining funds without finding and raising capital from investors..

3.8 Insurance companies

They help individuals and companies offset the risks they want to avoid in exchange for a premium. Insurers are able to offer risk mitigation at a low cost due to diversification.

Example: ICICI Lombard General Insurance, Bajaj Allianz General Insurance.



3.9 Clearing House

A clearinghouse is an exchange that facilitates settlement of contracts. It allows only its members to trade. Depositories or custodians hold securities on client's behalf.

For Example, In India, the capital market regulator SEBI has said that National Securities Clearing Corporation Ltd (NSCCL), Indian Clearing Corporation Ltd (ICCL) and MCX-SX Clearing Corporation Ltd (MCX-SXCCL) are the only qualified central counterparties (QCCPs) in the Indian securities market.

The three corporations clear and settle trades in securities or other instruments/ products traded on the stock exchange.



4 Well functioning Financial system

A well-functioning financial system has complete markets with effective financial intermediaries and financial instruments allowing:

- Investors to move money from the present to the future at a fair rate of return;
- Borrowers to easily obtain capital;
- Hedgers to offset risks; and
- Traders to easily exchange currencies and commodities.

Characteristics

- Well-functioning financial systems are characterized by financial instruments that help to solve financial problems, liquid markets with low trading costs, timely financial disclosures resulting in market prices that reflect available information, and therefore prices that move primarily with changes in fundamental value instead of liquidity demands.
- Well-functioning markets ultimately lead to efficient allocations, which use resources where they
 are most valuable.



5 Market Regulation

Market regulation is often controlled by the government and involves determining who can enter the market and the prices they may charge.

The objectives of market regulation are to control fraud, set mutually beneficial standards, prevent undercapitalized financial firms from making excessively risky investments, and to ensure that long-term liabilities are funded.



5 Market Regulation

5.1 The objectives of market regulation

- **Control Fraud**: market regulators put systems in place to prevent fraud as financial customers aren't always sophisticated enough to do so themselves.
- Control Agency Problems: regulators solve agency problems by setting minimum standards of competence for agents.
- Promote Fairness: Laws against insider trading, for instance, help to level the playing field.
- Ensure Liabilities are Funded, Excessive risky investments without capital is prevented etc.



NSEL Fraud Case Read Article - NSEL Case



Quick Recap

- Financial markets are a kind of marketplace (not necessary physical) that provides an approach to buy and sale of assets such as stocks, bonds, foreign exchange, etc.
- In modern day times financial markets perform various important functions for the various financial counter parties.
- The functions include:
 - A. Price Determination
 - B. Fund Mobilization & Capital Formation
 - C. Liquidity
 - D. Risk sharing
 - E. Easy Access
 - F. Reduction in Transaction costs.
 - G. Provision of Information to trade



Quick Recap

- Financial Market is broadly classified into Organized and Unorganized market.
- Physical Assets assets having physical existence it includes commodities, real estate, currencies and alternative investments.
- Financial Assets value derives from some sort of contractual agreement involving future transfers of wealth – it includes debt, equity and derivatives.
- Capital Market is divided into Primary and Secondary.
- The primary market is where securities are created. The secondary market is where investors buy and sell securities they already own.
- Unorganized markets include money lenders, pawn brokers, landlords etc.
- Trading can happen through a quote-driven, order-driven or brokered market.



Quick Recap

- Financial intermediaries help entities achieve their goals by providing products and services that help connect buyers and sellers.
- It includes brokers, investment banks, exchanges, arbitrageurs, dealers, securitizes, depository institutions, insurance companies and clearing house.
- A well-functioning financial system has complete markets with effective financial intermediaries and financial instruments allowing effective trading.
- Market regulation is often controlled by the government and involves determining who can enter the market and the prices they may charge. The objectives are to control fraud and promote fairness.



Question

An investor primarily invests in stocks of publicly traded companies. The investor wants to increase the diversification of his portfolio. A friend has recommended investing in real estate properties. The purchase of real estate would best be characterized as a transaction in the:

- A. derivative investment market.
- B. traditional investment market.
- C. alternative investment market.



Question

A financial analyst is examining whether a country's financial market is well functioning. She finds that the transaction costs in this market are low and trading volumes are high. She concludes that the market is quite liquid. In such a market:

A. traders will find it hard to make use of their information.

- B. traders will find it easy to trade and their trading will make the market less informationally efficient.
- C. traders will find it easy to trade and their trading will make the market more informationally efficient.