

IFN 201 – INTERNATIONAL FINANCIAL MARKETS

Introduction to Financial Markets

Financial markets are institutional structures that facilitate the flow of funds between savers and investors within an economy.

In other words, they serve as platforms where those with surplus funds (savers) and those with a deficit of funds (investors) interact. Without such a system, individuals would have to locate one another directly to exchange funds—an inefficient process prone to issues of trust and coordination.

Essentially, financial markets act as mechanisms that connect the surplus units (households, corporations, or governments with excess funds) with the deficit units (those requiring capital for investment or spending).

In this way, they ensure the efficient allocation of resources by channeling idle money from areas of surplus to areas where it is needed most, thereby supporting economic growth and stability.

Simple Definition:

Financial markets are places where money changes hands and where investment opportunities and financial instruments are bought and sold.

The Main Purpose of Financial Markets

One of the fundamental problems in an economy is the *efficient allocation of resources*. In every country, many individuals choose to save a portion of their income rather than spend it. At the same time, many people or firms wish to invest but lack sufficient funds.

Financial markets exist to connect these two groups.

As a result:

- Those with a surplus of funds earn interest, dividends, or returns.
- Those with a shortage of funds gain the opportunity to invest.
- Overall, production, employment, and economic growth are supported within the economy.

The Role of Financial Markets in the Economy

Financial markets are the *heart of a country's economic system*.

Just as the heart pumps blood throughout the body, financial markets pump money into the economy.

Simple Example:

Ayşe has ₺10,000 in her bank account. Mehmet wants to start a business but lacks the necessary capital.

The bank collects Ayşe's savings and lends them to Mehmet as a loan.

Ayşe earns interest income, while Mehmet is able to invest and create value.

This entire process represents the core function of the *financial system*.

Main Components of the Financial System

- 1. Financial Institutions:**
Banks, investment funds, insurance companies, and brokerage firms.
They ensure the flow of funds and manage financial risks.
- 2. Financial Instruments:**
Documents used for transferring funds — such as stocks, bonds, bills, and derivatives.
- 3. Financial Markets:**
The platforms where these instruments are traded — for example, Borsa Istanbul, the foreign exchange (Forex) market, and the bond market.
- 4. Regulatory Institutions:**
Organizations such as the Central Bank of the Republic of Türkiye (CBRT), the Capital Markets Board (CMB), the Banking Regulation and Supervision Agency (BRSA), the IMF, and the World Bank that maintain stability and oversight within the system.

Role	Explanation	Real-Life Example
Facilitates fund transfer	Channels savings into investments	Banks collect deposits and provide loans
Provides liquidity	Allows investors to easily convert assets into cash	Selling shares on the stock exchange
Enables risk sharing	Diversifies risk through various financial instruments	Portfolio diversification
Performs price determination	Prices are set according to market supply and demand	Stock prices, exchange rates
Ensures information flow	Market prices reflect economic information	High stock prices indicate strong expectations

The Working Mechanism of Financial Markets

In a financial market, three main actors play essential roles in maintaining the flow of funds:

1. Fund Suppliers (Savers)

- **Individuals:** Salary earners, investors, and households with surplus income.
- **Corporations:** Firms holding excess cash reserves.
- **Public Institutions:** Government bodies or agencies with budget surpluses.

2. Fund Demanders (Borrowers/Investors)

- **Corporations:** Firms seeking to expand production capacity.
- **Governments:** Borrowing to finance infrastructure or development projects.
- **Households:** Requesting loans for major expenditures such as housing or vehicles.

3. Financial Intermediaries

- Banks, investment firms, insurance companies, and stock exchanges act as bridges between savers and borrowers.
- They reduce *information asymmetry*, build *trust*, and increase the *efficiency and speed* of financial transactions.

Example of Operation:

1. Ayşe saves ₺100,000 and deposits it into a bank.
2. The bank lends this money to Mehmet, who uses it to start a business.
3. Ayşe earns interest income, Mehmet produces goods and services, and the government collects taxes.

This continuous cycle represents the *core of the financial system* — transforming savings into productive investments that sustain economic growth.

Types of Financial Markets

Classifying financial markets helps students better understand how the system functions. Below are the most common forms of classification:

A. Based on Maturity (According to the Term of Instruments)

Type	Explanation	Example
Money Market	Market where short-term funds (less than 1 year) are traded	Treasury bills, repurchase agreements (repos)
Capital Market	Market where long-term funds (more than 1 year) are traded	Stocks, bonds

B. Based on Issuance Timing (According to the Time of Issue)

Type	Explanation	Example
Primary Market	The market where newly issued securities are sold for the first time	Initial public offering (IPO) of a company
Secondary Market	The market where previously issued securities are traded among investors	Trading activities on Borsa Istanbul

C. Based on the Type of Financial Instrument

Type	Explanation	Example
Stock Market (Equity Market)	Market for instruments representing ownership rights	Stock exchange
Bond Market	Market for debt instruments	Government and corporate bonds
Foreign Exchange Market (Forex)	Market for exchanging different currencies	USD/TRY transactions
Derivative Markets	Markets for futures, options, and other derivative instruments	Futures contracts, options

1. Financial Institutions

These are the intermediaries that operate within financial markets:
Banks, brokerage firms, insurance companies, and investment funds.

Examples:

Ziraat Bank, Garanti BBVA, Türkiye Sigorta, İş Investment.

2. Financial Instruments

Investors trade through these instruments, each carrying different levels of risk and return.

Examples:

- Stocks (Equities)
- Bonds
- Eurobonds
- Futures contracts

3. Regulatory Institutions

These institutions ensure that the market operates in a fair, transparent, and stable manner.

In Türkiye:

- CMB (Capital Markets Board – SPK)
- CBRT (Central Bank of the Republic of Türkiye – TCMB)
- BRSA (Banking Regulation and Supervision Agency – BDDK)
- Takasbank and MKK (Central Securities Depository) – handle clearing and settlement operations

Internationally:

- IMF (International Monetary Fund)
- World Bank
- BIS (Bank for International Settlements)

The Contribution of Financial Markets to the Economy

1. Encourages Investment

Firms access long-term capital, allowing them to expand production capacity.

2. Creates Employment

Investments lead to the creation of new jobs and business opportunities.

3. Supports Economic Growth

Efficient allocation of resources accelerates economic development.

4. Balances Inflation and Interest Rates

Increased liquidity promotes price stability and balanced interest rates.

5. Strengthens Global Integration

International capital flows connect economies and enhance financial interdependence.

***If today you can purchase mutual funds, exchange currencies, or trade stocks directly from your phone — you are, in fact, a participant in the financial markets.*

****Today, financial markets are no longer systems reserved only for large investors — individuals also play an active role through digital platforms.**

Mini Example:

Imagine a country where:

- People save a significant portion of their income,
- Companies want to invest,
- Banks act as intermediaries connecting these two groups.

If financial markets operate efficiently:

- Interest rates remain reasonable,
- Investments increase,
- Economic growth accelerates.

However, if markets are weak:

- Investors cannot obtain the necessary funds,
- Unemployment rises,
- Economic stagnation occurs.

A short summary:

Main Point	Explanation
Definition	A mechanism that connects surplus fund holders with those in need of funds
Purpose	Efficient use of resources and promotion of economic growth
Roles	Fund transfer, liquidity provision, price discovery, and risk sharing
Types	Money markets, capital markets, primary and secondary markets
Contribution	Supports investment, employment, and financial stability

Fundamental Functions of Financial Markets

Function	Explanation	Example
Fund Transfer	Converts savings into investments	Individual → bank → company loan
Price Determination	Markets set prices based on supply and demand	Exchange rate, stock price
Risk Distribution	Risk is shared through different financial instruments	Bond + stock portfolio
Liquidity	Assets can be easily converted into cash	Selling shares on the stock exchange
Information Flow	Prices convey economic information	Rising stock price = positive company outlook

-Financial Markets as Indicators of Economic Health

Financial markets are a reflection of a country's overall economic health. The more developed, transparent, and reliable they are, the stronger the country's growth potential becomes.

Mini Summary

Financial markets are the *heartbeat of the economy*. They ensure that money flows to its most productive uses and act as the *driving force of economic growth*.

Types of Financial Markets: Money Market and Capital Market

1. Money Market

Definition:

The money market is the segment of financial markets where the supply and demand for short-term funds meet.

The instruments traded in this market typically have a maturity of less than one year.

Its main purpose is to provide liquidity and meet short-term financing needs.

In simple terms:

The money market is the market that manages the “money of the day, week, or month.”

Investors can quickly access or invest their cash in this market.

Money Market Functions

- **Provides short-term fund flow:**
Corporations, governments, and banks finance their temporary cash shortages through money market instruments.
- **Creates liquidity:**
Instruments traded in the money market can be easily converted into cash.
- **Implements monetary policy:**
Central banks control interest rates and money supply through operations in the money market.

Participants

- Central Bank (CBRT – Central Bank of the Republic of Türkiye)
- Commercial banks
- Ministry of Treasury and Finance
- Financial investment institutions
- Large corporations (institutional investors)

Money Market Instruments

Instrument	Explanation	Example
Treasury Bills (T-Bills)	Short-term debt instruments issued by the government. Sold at a discount, and interest is determined by the difference between the purchase and face value.	3–6 month government borrowing
Repurchase Agreements (Repos)	The sale of securities with an agreement to repurchase them later at a predetermined price.	Overnight repo between banks
Certificates of Deposit (CDs)	Time deposits issued by banks with a fixed maturity and interest rate.	6-month TL certificate of deposit
Reverse Repos	The opposite of a repo — the investor lends short-term funds secured by securities.	Banks providing short-term funding
Commercial Papers (CPs)	Short-term debt instruments issued by corporations, typically without bank guarantees.	Koç Holding issues 6-month CPs
Bankers' Acceptances (BAs)	Short-term credit instruments guaranteed by a bank, commonly used in international trade.	Used in export transactions
Central Bank Open Market Operations (OMO)	Short-term liquidity operations conducted by the central bank to control money supply and interest rates.	Determining the overnight lending rate

Practical Example:

If a bank experiences a liquidity shortage during the week it needs to pay salaries, it can obtain funds from the Central Bank through a **one-week repo transaction**. In this way, the bank meets its short-term cash requirement efficiently.

Advantages

- Provides high liquidity in the short term.
- Carries low risk.
- Interest rates reflect the overall condition of the market.

Disadvantages

- Returns are relatively low.
- Does not offer long-term investment opportunities.

Mini Summary

The money market is the *heart of short-term monetary flows* in the economy.

It manages the “daily money” — where **risk is low, and speed is high**.

2. Capital Market

Definition:

The capital market is the segment of financial markets where the supply and demand for long-term funds meet.

It involves instruments with maturities longer than one year.

The primary purpose of the capital market is to finance investments and support economic growth.

In simple terms:

When a company wants to build a new factory or the government plans to construct a highway, the long-term funds required for such large-scale projects are obtained through the capital market.

Functions:

1. **Provides long-term financing:**
Companies obtain funds for new investments.
2. **Encourages capital accumulation:**
Individual savings are transformed into productive investments.
3. **Enables ownership sharing:**
Through the purchase of stocks, individuals become shareholders in companies.
4. **Deepens the economy:**
Long-term capital flows foster sustainable economic growth.

Participants:

- Companies (issuers)
- Individual and institutional investors
- Brokerage firms
- Borsa Istanbul (BIST)
- Capital Markets Board (CMB / SPK)

Capital Market Instruments

Instrument	Explanation	Example
Corporate Stock (Equity Share)	Represents ownership in a company and provides the right to receive dividends.	BIST100 stocks (e.g., ASELS, TUPRS)
Corporate Bond	A long-term debt instrument issued by corporations, offering periodic interest (coupon) payments.	Sabancı Holding bond
Treasury Bond	A long-term debt instrument issued by the government.	10-year government bond
Municipal Bond	Bonds issued by local governments to finance infrastructure projects.	New York City municipal bond
Agency Bond	Long-term debt securities issued by government agencies.	Fannie Mae and Freddie Mac bonds
Mortgages	Long-term loans granted for the purchase of real estate.	Mortgage-backed securities (MBS)
Eurobond	A debt instrument issued in foreign currency, typically USD or EUR.	Türkiye's U.S. dollar-denominated bond
Mutual Fund	Pools resources from small investors into a diversified portfolio.	Equity mutual fund
Sukuk (Lease Certificate)	An Islamic finance instrument that provides profit-sharing instead of interest.	Issuances by participation banks
Bank and Consumer Loans	Long-term loans provided by banks to individuals or firms.	Residential mortgage or investment loan

Practical Example:

Arçelik A.Ş. issues ₺500 million in corporate bonds to expand its production capacity. Investors purchase these bonds, providing funds to Arçelik, which in turn pays them annual interest. This transaction takes place within the capital market.

Advantages

- Provides long-term financing.
- Offers higher return potential.
- Contributes to overall economic growth.

Disadvantages

- High market risk and price volatility.
- Lack of information may lead to investment mistakes.
- Includes complex financial instruments.

Mini Summary

The capital market is the *engine of long-term economic growth*.

It manages “**investment money**” — where **risk is higher, but so is the potential return**.

Money Market and Capital Market Comparison Table

Feature	Money Market	Capital Market
Maturity	Short-term (less than 1 year)	Long-term (more than 1 year)
Purpose	Provides liquidity and meets short-term financing needs	Provides long-term financing for investments and economic growth
Instruments	Treasury bills, repos, certificates of deposit, commercial papers	Stocks, bonds, Eurobonds, mutual funds, sukuk
Return	Low return due to short-term and low risk	Higher potential return with higher risk
Risk Level	Low (safe and stable instruments)	Medium to high (subject to market fluctuations)
Participants	Central Bank, commercial banks, financial institutions, large corporations	Companies (issuers), individual and institutional investors, stock exchanges
Liquidity	Very high – assets can be quickly converted into cash	Lower compared to money markets; investments are held longer
Regulators	Central Bank (CBRT) and Money Market Authorities	Capital Markets Board (CMB), Stock Exchanges (e.g., Borsa Istanbul)
Example Transaction	A bank borrows overnight funds via a repo agreement	A company issues bonds or shares to finance a new factory
Economic Role	Manages short-term cash flow in the economy	Drives long-term capital formation and economic development

PRIMARY MARKET

Definition:

The primary market is where securities are issued and sold to investors for the first time. In this market, the funds raised go directly to the issuing entity — either a corporation or the government.

In simple terms:

When a company goes public and sells its shares to investors for the first time, the transaction takes place in the primary market.

Operation Process:

1. The company determines its funding needs.
2. Approval is obtained from the Capital Markets Board (CMB) and Borsa Istanbul.
3. The public offering process is initiated through intermediary institutions.
4. Investors purchase the securities.
5. The raised funds are transferred directly to the company.

Primary Market Instruments:

- **Initial Public Offering (IPO):** The process of a company going public.
- **Bond Issuance:** Long-term borrowing by a company or the government.

- **Sukuk (Lease Certificates):** Used as an Islamic, interest-free financing tool.

Example:

When Migros A.Ş. conducts an IPO, investors purchase Migros shares for the first time. The proceeds from this sale go directly to the company.

Advantages:

- Provides new funding sources for companies.
- Enhances corporate visibility and reputation.
- Channels new capital into the economy.

Disadvantages:

- Pricing uncertainty may occur.
- High issuance and regulatory costs.

Mini Summary:

The primary market is the *market for capital creation*.

Here, securities are offered to investors for the first time, ensuring a direct flow of funds to issuers.

SECONDARY MARKET

Definition

The secondary market is the marketplace where previously issued securities are traded among investors. In this market, the issuer (company or government) does not receive any direct income from the transactions.

However, it provides liquidity and enables price formation for securities.

In simple terms:

After an IPO (Initial Public Offering), when investors buy and sell shares among themselves on the stock exchange, those transactions occur in the secondary market.

Functions

- **Provides Liquidity:**
Investors can sell their securities whenever they wish.
- **Facilitates Price Discovery:**
Prices are determined through the balance of supply and demand.
- **Builds Market Confidence:**
Transparent and efficient markets attract both domestic and foreign investors.

Secondary Market Instruments

- Stocks (Equities)
- Bonds
- Exchange-Traded Funds (ETFs)
- Derivatives (Futures and Options Contracts)
- Foreign Exchange Instruments (Forex Trading)

Mini Summary

The secondary market is the *market for trading existing securities*.

It ensures liquidity, transparency, and continuous price discovery — essential elements for a healthy financial system.

Instrument	Explanation
Stock Trading	Shares traded on stock exchanges are bought and sold among investors.
Bond Market Transactions	Previously issued bonds are traded based on interest rate changes.
Derivative Instruments	Futures, options, and swaps are used for hedging against financial risks.

Example:

A student buys ASELSAN shares on Borsa Istanbul and sells them a week later for a profit.

This transaction takes place in the secondary market.

Advantages

- Provides liquidity for investors.
- Enhances price transparency.
- Brings dynamism to the capital market.

Disadvantages

- Subject to high price volatility.
- May encourage speculative trading activities.

Mini Summary

The secondary market is the *marketplace where investors meet*.

Securities are exchanged, liquidity is created, and prices are determined.

Primary Market and Secondary Market Comparison Table

Feature	Primary Market	Secondary Market
Definition	The market where securities are issued and sold to investors for the first time.	The market where previously issued securities are traded among investors.
Purpose	To raise new capital for companies or governments.	To provide liquidity and enable continuous price discovery.
Participants	Issuers (companies or government) and initial investors.	Investors trading among themselves (buyers and sellers).
Fund Flow	Funds go directly to the issuing entity.	Funds circulate between investors; the issuer receives no additional income.
Risk Level	Lower, as prices are usually set during issuance.	Higher, due to price fluctuations and speculative trading.
Market Examples	Initial Public Offerings (IPOs), bond issuance.	Stock exchange trading (e.g., Borsa Istanbul).
Main Benefit	Generates new financing and supports economic growth.	Provides liquidity, transparency, and market efficiency.

General Comparison Table

Feature	Money Market	Capital Market	Primary Market	Secondary Market
Maturity	Short-term (< 1 year)	Long-term (> 1 year)	Initial issuance	Subsequent trading
Purpose	To provide liquidity	To finance investments	To raise funds	To ensure liquidity and price formation
Risk	Low	Medium to high	High (initial sale)	Moderate
Participants	Banks, Central Bank	Companies, investors	Company, investors	Investors
Example Instruments	Repo, treasury bills	Stocks, bonds	IPO (Initial Public Offering)	Stock exchange transactions

General Conclusion

Financial markets are the circulatory system of an economy, reflecting its vitality and strength.

- The Money Market provides short-term liquidity flow,
- the Capital Market fuels long-term growth,
- the Primary Market creates new sources of funding,
- and the Secondary Market adds liquidity to investments.

When these four markets operate together harmoniously, the economy achieves sustainable growth.

Loanable Funds Theory and Interest Rates

Core Idea:

Interest rates are determined by the **balance between the supply of funds (savings) and the demand for funds (investments)**.

- If **Supply > Demand** → Interest rates decrease.
- If **Demand > Supply** → Interest rates increase.

Example:

If people in an economy save more, the supply of funds rises, and interest rates fall — making it easier for investors to obtain credit.

However, if inflation is high and savings decline, the demand for funds exceeds supply, causing interest rates to rise.

Factors Affecting Interest Rates

1. Inflation expectations
2. Economic growth rate
3. Central Bank monetary policies
4. Risk premium (country risk, credit risk)
5. Liquidity conditions

Fisher Equation:

$$\text{Nominal Interest Rate} = \text{Real Interest Rate} + \text{Expected Inflation}$$

Example:

If expected inflation is 6% and the real interest rate is 4%, then the nominal interest rate will be **10%**.

Time Value of Money

Basic Concept:

“One Turkish Lira today is worth more than one Turkish Lira in the future.”

This is because money today can be invested to earn interest or generate returns.

Therefore, in financial analysis, all future cash flows are discounted to their present value.

Future Value Formula:

$$FV = PV \times (1 + i)^n$$

Where:

- **FV** = Future Value
- **PV** = Present Value

- i = Interest rate per period
- n = Number of periods

Example:

If you invest ₺1000 at an 8% annual interest rate for 3 years:

$$FV = 1000 \times (1.08)^3 = 1259 \text{ TL}$$

Present Value (PV)

$$PV = FV / (1 + i)^n$$

 Example:

If you will receive ₺1259 in 3 years and the interest rate is 8%, then:

$$PV = 1259 / (1.08)^3 = 1000 \text{ TL}$$

Net Present Value (NPV)

$$NPV = \sum (CF_t / (1 + i)^t) - I_0$$

Where:

- CF_t = Cash flow at time t
- i = Discount rate (interest rate)
- I_0 = Initial investment

Interpretation:

If $NPV > 0$, the investment is **profitable**.

If $NPV < 0$, the investment **reduces value** and should be rejected.

Example:

An investment costs ₺1000 and generates ₺400 each year for 3 years.

The interest (discount) rate is 10%.

$NPV \approx +5 \text{ TL} \rightarrow$ The investment is profitable.

Excel Application

Calculation	Excel Formula	Explanation
Future Value (FV)	=FV(0.08, 3, 0, -1000)	Calculates the future value of £1000 invested at 8% for 3 years
Present Value (PV)	=PV(0.08, 3, 0, 1259)	Calculates the present value of £1259 to be received in 3 years at 8%
Net Present Value (NPV)	=NPV(0.10, 400, 400, 400) - 1000	Calculates the project's net present value using a 10% discount rate

Loanable Funds Theory and the Determinants of Interest Rates

1) Core Principle: "Supply of Funds" and "Demand for Funds"

The Loanable Funds Theory explains that the equilibrium interest rate in an economy is determined at the point where the supply of funds (savings) and the demand for funds (investment or borrowing needs) intersect in the market.

- **Supply of Funds (S):**
Savings provided by households and institutions — such as bank deposits, voluntary pension contributions, or government budget surpluses.
- **Demand for Funds (D):**
Borrowing needs of firms for investment projects, households for credit (e.g., housing, consumption), and government borrowing for public spending.

Equilibrium:

The intersection of the supply curve (S) and demand curve (D) determines the equilibrium interest rate (i^*), which represents the *price of money* in the market.

Intuition:

- When interest rates rise: borrowing becomes more expensive → investment demand decreases (D shifts left), while savings become more attractive (S shifts right).
- When interest rates fall: borrowing becomes cheaper → investment demand increases, while the incentive to save may decline.

2) Factors that Shift the Equilibrium (What Moves the S and D Curves?)

The following elements can shift either the supply of funds (S) or the demand for funds (D), thereby changing the equilibrium interest rate:

A) Factors Affecting the Supply Side (S – Savings Supply)

- **Income and Demographics:**
As household income rises (especially among middle and high-income groups), savings tend to increase → **S shifts right.**

- **Preferences and Precautionary Motives:**
When uncertainty in the economy grows, precautionary savings rise → **S shifts right.**
- **Financial Inclusion:**
Greater access to banking and fintech services encourages households to channel their savings into the financial system → **S shifts right.**
- **Tax Policy:**
Tax incentives promoting savings (e.g., private pension plans, tax exemptions) lead to higher savings → **S shifts right.**
- **Inflation Expectations:**
If expected inflation increases, the real return on savings declines; the effect on savings is **ambiguous** — some savers may demand higher nominal interest rates, while others may reduce savings due to eroding value.

B) Factors Shifting Investment Demand (D – Demand for Funds)

- **Technology and Profitability Expectations:**
When the expected net return on investment projects increases, firms are more willing to borrow → **D shifts right.**
- **Institutional Efficiency and Investment Climate:**
Improvements in legal predictability and reductions in bureaucratic costs encourage borrowing → **D shifts right.**
- **Tax Subsidies / Investment Incentives:**
When capital expenditures become more attractive through government incentives → **D shifts right.**
- **Non-Interest Financing Alternatives:**
If access to equity financing or government grants increases, the need for debt financing declines → **D shifts left.**

C) Government Borrowing and the “Crowding Out” Effect

- When the **budget deficit increases**, the government’s demand for funds rises → **D shifts right.**
- Since both the public and private sectors borrow from the same pool of loanable funds, the equilibrium interest rate increases.
- As a result, some private investment projects may be “crowded out” due to higher borrowing costs.

3) Short-Term vs. Long-Term Rates and the Yield Curve

Interest rates are not a single number — they vary by maturity, forming what is known as the **yield curve (term structure of interest rates)**.

Types of Yield Curves:

- **Normal (Upward-Sloping) Curve:**
Long-term interest rates are higher than short-term ones because:
 - **Inflation Premium:** Greater uncertainty about inflation in the long run.
 - **Liquidity Premium:** Long-term assets are less liquid, so investors demand extra return.

- **Inverted Curve:**
Short-term rates exceed long-term rates, often signaling **economic slowdown expectations** or **tight monetary policy**.
- **Flat Curve:**
Indicates market uncertainty — short- and long-term rates are roughly similar.

Theories Explaining the Term Structure (Summary)

1. **Expectations Hypothesis:**
Long-term interest rate $\approx$ average of expected future short-term rates.
2. **Liquidity Preference Theory:**
Investors require an additional “liquidity premium” for holding long-term securities $\rightarrow$ curve slopes upward.
3. **Market Segmentation Theory:**
Investors prefer specific maturity segments, and each segment’s rate is determined by its own supply and demand conditions.

4) The “Risk Structure” of Interest Rates — Why Rates Differ

Not all debt instruments with the same maturity carry the same interest rate.

Four main factors explain this differentiation:

1. **Default (Credit) Risk:**
 - The possibility that the borrower may fail to make payments.
 - Government bonds generally carry the lowest risk, while small or highly leveraged firms face higher risk.
 - Investors demand a **risk premium**, pushing the interest rate **upward**.
2. **Liquidity:**
 - The ease with which an asset can be converted into cash without significant loss in value.
 - Less liquid bonds require higher compensation $\rightarrow$ **interest rates increase**.
3. **Tax Treatment:**
 - Interest income exempt from taxation (e.g., municipal bonds in the U.S.) can offer **lower nominal yields** since investors focus on **after-tax returns**.

4) Term (Maturity) and Inflation Expectations

- Longer maturities increase **inflation uncertainty**, since future price levels are less predictable.
- As a result, investors demand both an **inflation premium** and a **liquidity premium** to compensate for higher risk and reduced flexibility.
 $\rightarrow$ Therefore, **long-term interest rates tend to be higher** than short-term rates.

5) Inflation and the Fisher Equation

The **Fisher Equation** explains the relationship between the **nominal interest rate** (the observed market rate) and the **real interest rate** (adjusted for inflation):

$$(1 + i) = (1 + r)(1 + \pi^e) \quad \Rightarrow \quad r \approx i - \pi^e$$

i: nominal interest rate, r: real interest rate, π^e : expected inflation

Interpretation:

- The nominal rate reflects both the true cost of borrowing and compensation for expected inflation.
- If inflation expectations rise, nominal interest rates increase even if real rates remain constant.

Numerical Example:

If the expected inflation is **8%** and the targeted real interest rate is **3%**, then the nominal interest rate will be approximately **11%**.

6) Monetary Policy, Liquidity, and Short-Term Interest Rates

The Central Bank (CBRT) manages money supply and liquidity through its short-term policy rate:

- **Expansionary Monetary Policy:**
Policy rate ↓, open market purchases ↑ → short-term interest rates fall, credit expands.
- **Contractionary (Tight) Monetary Policy:**
Policy rate ↑, liquidity is withdrawn → short-term interest rates rise, aggregate demand cools.

Expectations Channel:

The Central Bank's communication and forward guidance influence market expectations of future inflation and interest rates, which in turn affect **long-term yields**.

7) Fiscal Policy, Budget Deficit, and Interest Rates

- When the budget deficit increases, the government's borrowing demand rises → D curve shifts right.
- All else equal, the equilibrium interest rate increases (the crowding-out effect).
- However, during an economic recession, public investment may only partially crowd out private investment, since the economy operates below potential output (output gap exists).

8) Open Economy Dimension: Capital Flows and Interest Rates

In economies with free capital mobility, global interest rates and country risk premiums become key determinants of domestic interest rates.

Interest Rate Parity (Simplified Intuition):

Domestic Interest Rate $\approx$ Foreign Interest Rate + Expected Exchange Rate Change + Country Risk

- **Capital Inflows (Net Inflows):**
Increased demand for domestic assets → **supply of funds rises (S shifts right)** → interest rates may decline.

- **Capital Outflows:**

Reduced fund supply (S shifts left) → **interest rates increase**, assuming other factors remain constant.