

# **Monetary and Financial Institutions (MFS)**

## **For JAIBB**

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### Suggestion:

- *Read 4 star and 5 star marked chapter if you have time shortage to read all chapter.*
- *Must read short notes from all chapter.*
- *MetaMentor Center suggest to read whole note to find 100% common in exam. We cover everything in our note.*

Important	Details	Number of Question common in previous years
*****	Module-A: <i>Money and Monetary System</i>	23
*****	Module-B: <i>Payment System</i>	17
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***** All short note from all chapter and end of note *****		

## **Syllabus**

### **Module-A: Money and Monetary System**

- Concept and Functions of Money; Kinds of money; Demand for Money; Measures of money supply: narrow money and broad money; Constituents of Monetary System: Central Bank and Commercial Banks. Creation of Money by Commercial Banks.

### **Module-B: Payment System**

- Concept, Different payment options, Pros and Cons of different payment types (Cash, Cheques, Debit Card, Credit Card, Mobile payments, On-line payments, electronic fund transfers). Evolution and Growth of Bangladesh Payment System.

### **Module-C: Financial System**

- Concern of Finance, Modes of Finance (Direct and Indirect); Concept of Financial System, Relationship among Financial, Monetary and Payment Systems; Constituents of Financial System: Financial Institutions, Financial Instruments and Financial Markets. Financial Infrastructure and Superstructure. Financial System of Bangladesh.

### **Module-D: Financial Institutions**

- Types of Financial Institutions: Banking Financial Institutions (BFIs) and Non-bank Financial Institutions (NBFIs); Functions and Growth of BFIs and NBFIs in Bangladesh.

### **Module-E: Financial Markets**

- Functions of Financial Markets; Classifications: Money Market and Capital Market; Banking, Security and Insurance Market; Primary Market and Secondary Market including OTC market; Micro-finance and micro-credit market; International Financial Market.

### **Module-F: Islamic Financial System**

- Islamic Economics, Finance and Banking; Principles of Islamic Financial System (Prohibition of Interest, Risk Sharing, etc.); Relation between Religion and Finance in Islam; Source of Shariah Law; Islamic Financial Instruments.

### **Module-G: Regulatory Framework for Financial, Monetary and Payment System**

- Role of BB, BSEC, IDRA and MRA.

## Module-A: Money and Monetary System

**Q-.01. What is money? What are the Characteristics/ Function of money? BPE-98<sup>th</sup>.**

**Or, Define money. Explain how money functions as a standard of deferred payments? BPE-99<sup>th</sup>.**

**Money** is a medium of exchange that facilitates trade and commerce by eliminating the need for a barter system. It is widely accepted as a standard of value and means of payment for goods and services. Money can take various forms, including physical currency (coins and banknotes), digital currency, and other financial instruments like checks and promissory notes. It also serves as a unit of account, providing a common measure for valuing items, and as a store of value, allowing individuals to save and transfer purchasing power from the present to the future.

**Characteristics/Function of Money:**

1. **Medium of Exchange:** Money acts as a universally accepted medium for buying and selling goods and services, facilitating transactions.
2. **Unit of Account:** Money provides a common unit of measurement for pricing and comparing the value of goods, enabling efficient economic calculations.
3. **Store of Value:** Money serves as a reliable repository of wealth, allowing individuals to save their resources and retain their purchasing power over time.
4. **Standard of Deferred Payment:** Money allows for the settlement of debts and obligations in the future, providing a trusted medium for deferred payments.

**Q-02. What are the types or categories of money?**

Money can be categorized into various types or categories based on its form, function, and characteristics. Here are some of the main types of money:

1. **Commodity Money:** This type of money has intrinsic value, such as gold, silver, or other valuable commodities. It has worth beyond being a medium of exchange.
2. **Fiat Money:** Fiat money is not backed by a physical commodity but derives its value from the trust and confidence of the people using it. Most modern currencies, like the US dollar and Euro, fall into this category.
3. **Digital Money:** With the rise of technology, digital money has become prevalent. It includes digital currencies like Bitcoin and digital representations of traditional fiat currencies in digital form.
4. **Paper Money:** Physical paper currency issued by governments and central banks for use in everyday transactions.
5. **Bank Money:** This comprises deposits in checking and savings accounts that can be easily accessed and used for transactions through checks, debit cards, or electronic transfers.
6. **Cryptocurrencies:** These are decentralized digital currencies that use cryptography for security. Examples include Bitcoin, Ethereum, and Ripple.
7. **Local Currencies:** Some regions or communities issue their own localized currencies to promote local economic activity and strengthen community ties.

Each type of money serves different purposes and has unique characteristics, reflecting the evolving nature of our financial systems.

**Q-03. Define demand for money. Why do people hold money?**

**Or, Why general people will have demand for money? Which sort of demand for money is influenced by income and which by rate of interest.**

**Or, Why do people have a demand for money? Which motive of demand for money is influenced by income and which by rate of interest? BPE-97<sup>th</sup>.**

- I. **Transaction motive:** Money is held to facilitate daily transactions for goods and services. Individuals need a certain amount of money readily available to cover their immediate spending needs and engage in regular economic exchanges.
- II. **Precautionary motive:** Money is kept as a precautionary measure to handle unexpected expenses or emergencies. It serves as a financial buffer, providing individuals with a sense of security in case of unforeseen circumstances or unplanned events.
- III. **Speculative motive:** Some individuals hold money with the intention of taking advantage of potential investment opportunities. By maintaining a portion of their wealth in cash or liquid assets, they can be prepared to seize favorable investment prospects as they arise.

### Putting the Three Motives Together

The formula is:  $Md/P = f(i, Y)$

Where  $Md/P$  represents the real demand for money,  $i$  represents the nominal interest rate, and  $Y$  represents the level of real income. This formula shows that the real demand for money is influenced by the nominal interest rate and the level of real income.

### The demand for money influenced by

1. **Income** is the transactional demand. As income increases, people tend to engage in more transactions, leading to a higher demand for money to facilitate those transactions.
2. **Rate of interest** is the speculative demand. When interest rates are high, individuals may choose to hold less money as it becomes more attractive to invest in interest-bearing assets, reducing the demand for money.

Overall, the transactional demand is influenced by income, while the speculative demand is influenced by the rate of interest.

### Q-.04. Why is the unit-of-account function of money crucial to the operation of an economy?

The unit-of-account function of money is crucial to the operation of an economy because:

1. **Standardized Measure:** Money provides a standardized measure for valuing goods, services, and assets, enabling efficient resource allocation.
2. **Price Determination:** It establishes prices, reflecting the relative scarcity and demand, allowing for informed decision-making by businesses and consumers.
3. **Contractual Agreements:** Money's unit of account enables clear and enforceable contractual agreements, reducing ambiguity and disputes in transactions.
4. **Economic Analysis:** It facilitates the comparison of economic data over time, aiding policymakers and businesses in assessing performance and making informed decisions.
5. **Smooth Exchange:** Money's unit of account promotes smooth exchange by providing a widely accepted and trusted medium, enhancing liquidity and economic stability.

### Q-.05. Explain how money functions as a standard of deferred payments.

Money functions as a standard of deferred payments by providing a widely accepted medium of exchange that allows people to postpone settling their debts or obligations. When a transaction occurs where payment is delayed, money serves as a reliable unit of account to measure the value of the debt or obligation. For example, if someone borrows money from a bank to purchase a car, they agree to repay the loan over time. The amount borrowed and the repayment terms are denominated in the currency of the country, such as Bangladeshi Taka. The borrower and lender rely on the stability and acceptability of money as a standard to determine the future value of the repayment. Money as a standard of deferred payments provides certainty and facilitates economic transactions by allowing parties to honor their obligations at a later time using a universally recognized medium of exchange.

**Q-.06. a) Explain how money functions as a store of value. (b) Is money the only store of value? (c) What is the difference between money as a store of value and the other assets (d) Are long-term bonds a store of value?**

a) **Money functions as a store of value** by preserving the purchasing power of wealth over time. It provides individuals with a means to save and hold their wealth, protecting it from erosion due to inflation. By storing money, individuals can retain their ability to acquire goods, services, or assets in the future. Money's widespread acceptance and stability make it a reliable store of value. Additionally, money can be invested in various assets like stocks, bonds, or real estate to potentially grow its value further. Overall, money's function as a store of value ensures the preservation and accessibility of wealth for future use.

b) **No, money is not the only store of value.** While money is a widely accepted and commonly used store of value, there are other assets that can serve this purpose as well. Examples include real estate, stocks, bonds, precious metals, and other commodities. These assets can also preserve wealth and potentially appreciate in value over time, offering alternative options for individuals to store their wealth and maintain its value.

c)

Aspect	Money as a Store of Value	Other Assets
Liquidity	Highly liquid; easily used for transactions.	May require conversion to cash for use.
Stability	Value is relatively stable over time.	Value can fluctuate (e.g., stocks, gold).
Earning Potential	Does not generate income or returns.	Can earn returns (e.g., dividends, rent).
Risk	Low risk of loss in nominal terms.	Higher risk; value can decrease or vary.

d) **Yes, long-term bonds can serve as a store of value** by providing a stable and predictable stream of income over an extended period. They offer the potential to preserve wealth and maintain purchasing power, making them a reliable investment choice for individuals and institutions seeking capital preservation and income generation. However, factors like credit risk and market conditions should be considered when assessing their suitability.

**Q-07. Rank the following financial assets in terms of their liquidity: coins and paper currency, common stock, demand deposits, long-term government bonds, long term corporate bonds, saving deposits at deposit institutions, Treasury bills. Explain your ranking.**

- Coins and paper currency:** Physical cash is the most liquid form of money, readily acceptable for transactions.
- Demand deposits:** Funds held in checking or current accounts that can be withdrawn immediately without restrictions.
- Treasury bills:** Short-term government debt with maturities of less than one year, highly liquid and easily tradable in the secondary market.
- Saving deposits at deposit institutions:** Funds held in savings accounts at banks or other deposit institutions, generally accessible but may have withdrawal limits or notice requirements.
- Common stock:** Ownership shares in a company, relatively liquid but subject to market conditions and trading volumes.
- Long-term government bonds:** Bonds issued by governments with longer maturities, less liquid than shorter-term bonds but still tradable in secondary markets.

- 7. Long-term corporate bonds:** Bonds issued by corporations with longer maturities, less liquid than government bonds due to lower trading volumes and higher transaction costs.

**Q-08. What effect does inflation have on the use of money as a unit of account, a medium of exchange, a standard for deferred payment, and a store of value?**

- 1. Unit of account:** Inflation undermines money's role as a reliable unit of measurement, as rising prices make it challenging to accurately assess and compare economic values.
- 2. Medium of exchange:** Inflation reduces the purchasing power of money, leading to higher prices for goods and services. This can disrupt transactions and increase the need for larger amounts of money, impacting the efficiency of exchanges.
- 3. Standard for deferred payment:** Inflation erodes the value of money over time, creating uncertainty for loans and contracts with fixed monetary terms, disadvantaging lenders and borrowers alike.
- 4. Store of value:** Inflation diminishes money's ability to retain purchasing power, prompting individuals and businesses to seek alternative stores of value that offer better protection against rising prices, such as assets that historically outpace inflation.

**Q-09. Most of the time it is quite difficult to separate the functions of money. Money performs its functions at all times, but sometimes we can stress one in particular.**

**For each of the following situations, identify which function of money is emphasized.**

- A. Tabinda accepts money in exchange for performing her daily tasks at her office, since she knows she can use that money to buy goods and services.**
- B. Tashfi wants to calculate the relative value of oranges and apples, and therefore checks the price of each of these goods quoted in currency units.**
- C. Tonmoy is currently married, He expects his expenditures to increase in the future and decides to increase the balance in his savings (fixed deposits) account.**

**Ans:**

- 1. Medium of exchange.** Tabinda emphasizes the function of money as a medium of exchange when she accepts money for her daily tasks and plans to use it to purchase goods and services.
- 2. Unit of account.** Tashfi emphasizes the function of money as a unit of account when comparing the relative value of oranges and apples by checking their prices in currency units.
- 3. Store of value.** Tonmoy emphasizes the function of money as a store of value by increasing the balance in his savings (fixed deposits) account to accommodate future expected expenditures. He is utilizing money as a means to preserve his wealth and maintain its value over time.

**Q-10. If central bank sells Government Treasury Bond through auctions, what will be the impact of this auction on money supply? BPE-97<sup>th</sup>.**

When a central bank sells government treasury bonds through auctions, it reduces the money supply in the economy. Here's how it works:

- 1. Auction:** The central bank sells government bonds to investors and banks.
- 2. Payment:** These investors and banks pay for these bonds, using their cash.
- 3. Reduced Money in Circulation:** When this cash is used to buy the bonds, it moves from the investors' and banks' hands to the central bank. This means there's less money circulating among people and businesses.
- 4. Decreased Money Supply:** With less money available in the economy, the overall money supply decreases.

In summary, by selling these bonds, the central bank pulls money out of the economy, leading to a reduction in the total amount of money available for spending and investment.

**Q-11. Which of the Central Bank measures of the monetary aggregates – M1 or M2 is composed of the most liquid assets? Which is the larger measure?**

M1 is composed of the most liquid assets among the monetary aggregates. It represents the narrowest measure of money supply and consists of the most liquid forms of money that can be easily used for transactions. The components of M1 typically include physical currency (coins and paper money) held by the public and demand deposits, which are funds held in checking accounts that can be readily accessed.

**On the other hand, M2 is a broader measure of money supply** that includes all the components of M1 along with additional assets that are slightly less liquid. M2 includes savings deposits, time deposits, and money market mutual funds. While these assets are still considered relatively liquid, they may have certain restrictions or require more time to convert into cash compared to the components of M1.

In terms of size, M2 is typically larger than M1 since it encompasses a broader range of assets. M2 reflects a broader definition of money supply, incorporating not only the most liquid forms but also assets that are slightly less liquid but still considered part of the overall money supply.

**Q-12. What constitutes the monetary base? How does the central bank control the monetary base? BPE-96<sup>th</sup>.**

The monetary base, also known as the money base, consists of two main things:

1. **Currency in Circulation:** This is all the cash — like notes and coins — that is held by the public.
2. **Bank Reserves:** This is the money that banks keep in their accounts at the central bank. It's not in public circulation but is available for banks to use.

The central bank controls the monetary base in several ways:

- **Printing Money:** It can print more cash, increasing the currency in circulation.
- **Open Market Operations:** By buying or selling government bonds, the central bank can increase or decrease bank reserves.
- **Reserve Requirements:** Changing the amount of money banks must hold in reserve impacts how much they can lend out.

Through these methods, the central bank influences how much money is available in the economy, either increasing or decreasing it as needed.

**Q-13. Calculate the amount of the time deposits when narrow money of around BDT 450 crore is 30% of broad money as on 30 June 2023. Calculate the amount of currency outside banks if demand deposit is almost 60% of M1 on the same date. BPE-97<sup>th</sup>.**

Given that,

$$\text{Narrow Money} = \text{BDT } 450 \text{ Crores.}$$

$$\text{Narrow Money is } 30\% \text{ of Broad Money.}$$

$$\text{So, Broad Money is } = (450/30\%) = 1,500 \text{ Crores.}$$

$$\text{We know that, Broad Money (M}_2\text{)} = \text{Narrow Money (M}_1\text{)} + \text{Time Deposits}$$

$$\text{So, Time Deposits} = \text{BDT } (1,500 - 450) \text{ Crores}$$

$$= \text{BDT } 1,050 \text{ Crores.}$$

Further Given that,

$$\text{Demand deposits is } 60\% \text{ of M}_1 \text{ (Narrow Money)}$$

$$\text{So, Demand deposits} = 450 \text{ crores} * 60\%$$

$$= 270 \text{ crores,}$$

$$\text{We Know that, Narrow Money (M}_1\text{)} = \text{Demand Deposits} + \text{Currency Outside Banks}$$

$$\text{So, Currency outside banks} = 450 \text{ crores} - 270 \text{ crores}$$

$$= \text{BDT } 180 \text{ crores.}$$



**Q-14: If Narrow Money is 25% of Broad Money, which was around Tk. 440,528 crore as on June, 2011, then what was the amount of time deposits as on the same date? If demand deposit was almost 50% of M1, then what was the amount of currency outside banks?**

Given that,

Narrow Money = BDT 440,528 Crores.

Narrow Money is 25% of Broad Money.

So, Broad Money is =  $(440,528/25\%) = 1762,112$  Crores.

We know that, Broad Money ( $M_2$ ) = Narrow Money ( $M_1$ ) + Time Deposits

So, Time Deposits = BDT  $(1,762,112 - 440,528)$  Crores

= **BDT 1,321,584 Crores.**

Further Given that,

Demand deposits is 50 % of  $M_1$  (Narrow Money)

So, Demand deposits =  $440,528 \text{ crores} * 50\%$

= 220,264 crores,

We Know that, Narrow Money ( $M_1$ ) = Demand Deposits + Currency Outside Banks

So, Currency outside banks =  $440,528 \text{ crores} - 220,264 \text{ crores}$

= **BDT 220,264 crores.**

**Q-15. For each of the following assets, indicate which of the monetary aggregates (M1 and M2) includes them:**

- a) **Currency outside Banks**
- b) **Demand Deposits**
- c) **Time deposits**
- d) **Checkable deposits**

- a. **Currency outside Banks:** Both M1 and M2 include currency outside banks. It is a component of M1 as physical currency held by the public and also a component of M2, which encompasses a broader range of assets.
- b. **Demand Deposits:** Both M1 and M2 include demand deposits. Demand deposits are funds held in checking accounts that can be readily accessed for transactions. They are considered part of the money supply and are components of both M1 and M2.
- c. **Time Deposits:** Time deposits are included in M2 but not in M1. Time deposits refer to funds that are deposited in banks for a fixed period and cannot be withdrawn before maturity without penalty. They are less liquid than demand deposits and fall within the broader definition of money supply represented by M2.
- d. **Checkable Deposits:** Checkable deposits are a broader category that includes both demand deposits and NOW (Negotiable Order of Withdrawal) accounts. They are components of M1 as they represent funds that can be readily accessed through checks or other payment methods for transactions.

**Q- 16. How money supply is measured? Compare and contrast M1 and M2 money supply. BPE-96<sup>th</sup>.**

Money supply is measured using different categories, mainly M1 and M2:

1. **M1 Money Supply:** This is the most liquid form of money and includes:
  - Cash and coins in circulation (money held by the public).
  - Demand deposits in banks (like checking accounts).
  - Other deposits that are easily convertible to cash.

M1 focuses on money that is readily available for transactions.

2. **M2 Money Supply:** This includes everything in M1, plus:

- Savings deposits (like savings accounts).
- Time deposits under a certain limit (like certificates of deposit that are not huge in amount).
- Money market funds (which are like savings accounts but can be invested in short-term debt).

M2 is broader than M1. It includes not just money used for buying and selling (like in M1), but also money that can be converted to cash relatively easily for spending.

- **Similarity:** Both M1 and M2 are measures of the money supply in an economy, used to understand the amount of money available.
- **Differences:**
  - **Liquidity:** M1 is made up of the most liquid assets, meaning it's money that can be quickly and easily used for transactions. M2 includes M1 plus other types of money which are not as easily accessible for regular spending.
  - **Components:** M1 is strictly currency and checking accounts. M2 expands on this by including savings accounts, small time deposits, and non-institutional money market funds.
  - **Purpose:** M1 is often used to gauge the available liquid money for immediate spending in the economy, while M2 is used to assess money that can be easily converted to cash for spending, indicating the overall savings and investment potential in the economy.

**Q-17. Clarify 2 (two) determinants of money supply. Can monetary authority/central Bank directly control money supply? Explain. BPE-96<sup>th</sup>.**

Two key determinants of money supply are:

1. **Reserve Requirements:** This is the minimum amount of cash that banks must hold in reserve against their deposits. If the central bank raises the reserve requirement, banks have less money to lend out, reducing the money supply. Lowering the reserve requirement increases the money supply, as banks can lend more.
2. **Open Market Operations:** When the central bank buys government securities (like bonds), it injects money into the banking system, increasing the money supply. Conversely, when it sells these securities, it takes money out of circulation, decreasing the money supply.

Can the Central Bank Directly Control Money Supply?

**Yes and no.** The central bank can influence the money supply through tools like reserve requirements and open market operations. However, it can't control it directly because the money supply also depends on the behavior of banks and the public in borrowing, lending, and spending money.

**Q-18. What are the monetary aggregates? How narrow money (M1) is different from broad money (M2)? BPE-97<sup>th</sup>.**

Monetary aggregates are measures used to assess the amount of money in an economy. They help in understanding economic conditions like inflation, spending, and saving. The two main types are Narrow Money (M1) and Broad Money (M2).

1. **Narrow Money (M1):** This includes the most liquid forms of money, which means the money that is readily available for spending. M1 typically includes Currency Outside banks, Deposits of Financial Institutions with Bangladesh Bank (except DMBs), Demand Deposits with DMBs
2. **Broad Money (M2):** M2 includes all of M1 plus other forms of money that are less liquid. This means the money in M2 is not as readily available for immediate spending. It includes Time Deposits with DMBs.

The key difference between M1 and M2 is in their liquidity. M1 is immediately ready for transactions, while M2 contains forms of money that take more time or effort to convert to cash for spending.

**Q-19. We must note two things about any measure of money supply. State those two things.**

Two important things to note about any measure of money supply are:

1. **Definition and Composition:** It is essential to understand the specific definition and composition of the money supply measure being used. Different measures, such as M1 and M2, include different components and assets in their definition. Therefore, it is crucial to be aware of what assets are considered part of the money supply in a particular measure.
2. **Monetary Aggregates:** Money supply measures, such as M1 and M2, are categorized as monetary aggregates. These aggregates provide different levels of liquidity and reflect varying degrees of monetary assets' accessibility. It is important to recognize that different monetary aggregates serve different purposes and have different implications for the overall economy and monetary policy.

**Q-20. What constitutes non-legal tender money and why are they called so?**

**Non-legal tender money** refers to any form of currency or payment method that is not recognized as an official means of payment by the government or central bank. These forms of money are not legally mandated to be accepted for transactions and may lack the backing and support of the government. Examples of non-legal tender money include cryptocurrencies like Bitcoin, private or community-based currencies, and alternative payment systems.

They are called non-legal tender money because they do not hold the status of being an officially recognized medium of exchange by the government. Without legal tender status, these forms of money may have limited acceptance and may not enjoy the same level of trust and widespread usage as official currencies issued by the government.

**Q-21. What is a monetary standard?**

A **monetary standard** is the accepted laws, practices and customs that define money in an economy. That is, a monetary standard is what a country decides to use as money. It could be paper currency, gold, bricks, cows, or anything else accepted as medium of exchange.

A monetary standard refers to the established system or framework that defines the form and value of money within an economy. It encompasses the laws, regulations, practices, and customs that determine what is recognized and accepted as a medium of exchange. A monetary standard can take various forms, such as paper currency, precious metals like gold, or even non-traditional assets like cryptocurrencies. It provides a basis for determining the value, stability, and trustworthiness of the currency in circulation, and it serves as a foundation for economic transactions and financial systems within a country.

**Q-22. Why demand deposits are included in the M1 definition of money?**

**Demand deposits** are included in the M1 definition of money because they represent a highly liquid form of funds that can be readily accessed for transactions. M1 is a narrow measure of money supply that focuses on the most liquid and easily spendable forms of money. Demand deposits, also known as checking account balances, are funds held in banks that can be accessed by individuals on demand through various means like checks, debit cards, or electronic transfers. As such, they serve as a medium of exchange and fulfill the function of money in facilitating transactions. Including demand deposits in the M1 definition helps provide a comprehensive understanding of the readily available money supply for day-to-day transactions in the economy.

**Q-23. Does the money allow people to transfer purchasing power from the present to the future? Explain. BPE-97<sup>th</sup>.**

Yes, money allows people to transfer purchasing power from the present to the future. Here's a simple explanation:

1. **Saving Money:** When you save money, you're keeping it to use later. For example, if you don't spend your money today, you can spend it in the future.
2. **Value Over Time:** Money keeps its value over time. This means that the money you have today will still be valuable in the future, allowing you to buy things later.
3. **Interest:** When you save money in a bank, you often earn interest. This means the bank pays you extra money for saving with them. So, you'll have more money in the future than you saved initially.
4. **Planning and Security:** By saving money, you can plan for future expenses like education, a house, or emergencies. It gives you financial security for the future.

In conclusion, money acts like a bridge between the present and the future. It helps you keep your purchasing power safe until you need to use it later.

**Q-24. What do you mean by Money Supply? How do you classify them? Why interbank deposit is not included in the definition of money supply.**

**Or, what is money supply? Does money supply include interbank deposits? Why? BPE- 97<sup>th</sup>.**

The **supply of money** refers to the total stock of monetary assets available within an economy at a given time. It represents the quantity of money that individuals, businesses, and institutions have access to for transactions and economic activities.

Money supply is typically classified into different measures or aggregates, such as M1, M2, and M3. These classifications are based on the level of liquidity and the types of assets included in each measure.

M1 represents the narrowest measure of money supply and includes highly liquid forms of money, such as physical currency held by the public and demand deposits (checking account balances).

M2 is a broader measure that includes all components of M1 along with additional assets like savings deposits, time deposits, and money market mutual funds.

M3 is the broadest measure, encompassing M2 along with larger time deposits, institutional money market funds, and other financial instruments.

**Interbank deposits**, which are funds held by banks in accounts with other banks, are not included in the definition of money supply. They are considered more as interbank liabilities and serve as internal accounting entries within the banking system rather than directly accessible forms of money for the general public.

**Q-25. How banks/ Commercial Bank can create money? To what extent a single bank can create money? A banking system as a whole?**

When a customer deposits money into a bank, the bank is required to hold a fraction of that deposit as reserves, usually determined by the central bank's reserve requirements. The remainder of the deposit can be used by the bank for lending and other activities. This is where the money creation process begins.

Let's consider an example: If a customer deposits \$1,000 into a bank with a reserve requirement of 10%, the bank is required to hold \$100 as reserves. This means the bank can lend out \$900 to borrowers while still keeping \$100 in reserves.

Now, let's assume the borrower who receives the \$900 loan uses it to make a purchase. The recipient of that payment then deposits the \$900 into their own bank account. At this point, the second bank is required to hold

10% of the \$900 as reserves (\$90) and can lend out the remaining \$810. This process continues as the money keeps getting deposited, lent, and re-deposited, creating a multiplier effect.

The extent to which a **single bank can create money** is limited by the reserve requirement set by the central bank. The higher the reserve requirement, the lower the amount of money a bank can create through lending.

When considering the **banking system as a whole**, the money creation potential is significantly larger. As money is deposited and re-deposited across multiple banks, the cumulative effect of lending and deposit creation can lead to a substantial increase in the overall money supply.

**Q-26. Briefly discuss the commercial bank’s role in the process of the money supply. [Hint: T-account or formula and reserve requirement.] 96<sup>th</sup>.**

Commercial banks play a crucial role in the money supply process. Here's a simple explanation using the concept of a T-account and reserve requirement:

1. **Deposits:** When people deposit money in a bank, that money is recorded in the bank's T-account. A T-account is like a simplified ledger showing deposits (assets) on one side and loans (liabilities) on the other.
2. **Reserve Requirement:** Banks are required to keep a certain percentage of deposits as reserves. This is known as the reserve requirement. For example, if the reserve requirement is 10%, and you deposit \$100, the bank must keep \$10 and can lend out \$90.
3. **Creating Money:** When the bank lends out \$90, this money goes into the economy, increasing the money supply. The original \$100 remains in your account, and the \$90 becomes new money in someone else’s account.

So, through this process of taking deposits, meeting reserve requirements, and lending out the rest, commercial banks significantly influence the money supply in the economy.

**Q-27. Can crypto currency Bitcoin be an alternative to cash currency? Discuss. BPE-97<sup>th</sup>.**

Bitcoin, a type of cryptocurrency, could be an alternative to cash currency, but there are some key points to consider:

1. **Digital Nature:** Bitcoin is entirely digital and operates independently of a central bank. This makes transactions fast and borderless.
2. **Volatility:** Bitcoin’s value can change rapidly, unlike stable cash currencies. This makes it risky for everyday use like buying groceries.
3. **Limited Acceptance:** Not all businesses accept Bitcoin. Its use is more common in online transactions than in regular stores.
4. **Anonymity and Security:** Bitcoin offers more privacy in transactions, but it also raises concerns about illegal activities and less consumer protection.
5. **No Physical Form:** Unlike cash, Bitcoin doesn’t exist in a physical form, which might be a barrier for some users.

In summary, while Bitcoin has potential as an alternative to cash, its volatility, limited acceptance, and digital-only nature present challenges for widespread use.

**Q-28. How do you differentiate between Real and Nominal interest rate?**

**Or, Draw a relation between nominal rate of interest, real rate of interest and inflation. BPE-98<sup>th</sup>.**

**OR, Explain how inflation is related with nominal interest rate and real interest rate? BPE-99<sup>th</sup>.**

	Nominal Interest Rate	Real Interest Rate
<b>Definition</b>	The stated or published interest rate without considering inflation	The nominal interest rate adjusted for inflation
<b>Inflation</b>	Does not account for changes in the	Reflects changes in the purchasing power of

<b>Adjustment</b>	general price level over time.	money due to inflation
<b>Measure of Value</b>	Reflects the actual interest paid or earned on an investment	Reflects the actual purchasing power gained or lost on an investment or loan after accounting for inflation
<b>Economic Decision-making</b>	Influences borrowing costs, investment decisions, and inflation expectations	Guides economic decision-making by considering the true return or cost of borrowing in real terms
<b>Policy Implications</b>	Guides central banks' monetary policy decisions and interest rate adjustments	Helps policymakers gauge the impact of monetary policy on borrowing costs, economic growth, and inflation expectations

Relationship:

The relationship between the nominal rate of interest (NRI), real rate of interest (RRI), and inflation can be described as follows:

$$\text{NRI} = \text{RRI} + \text{Inflation}$$

Where:

- NRI represents the nominal rate of interest, which is the rate advertised by banks and financial institutions.
- RRI denotes the real rate of interest, which is the rate adjusted for inflation.
- Inflation refers to the rate at which the general level of prices for goods and services is rising.

When inflation is positive, the nominal rate of interest will be higher than the real rate of interest. Conversely, when inflation is negative (deflation), the nominal rate of interest will be lower than the real rate of interest. Therefore, the real rate of interest provides a more accurate measure of the true cost of borrowing or the return on investments after adjusting for the effects of inflation.

#### **Q-29. What policy tools Bangladesh Bank may use to tame inflation? BPE-99<sup>th</sup>.**

- 1. Increasing Policy Rates (Bank Rate):**
  - Raising the interest rates discourages borrowing and reduces money supply in the economy.
- 2. Open Market Operations (OMO):**
  - Selling government securities absorbs excess liquidity from the market.
- 3. Variable Reserve Requirements:**
  - Increasing cash reserve ratio (CRR) or statutory liquidity ratio (SLR) forces banks to hold more reserves, reducing their lending capacity.
- 4. Moral Suasion:**
  - Persuading banks to adopt tighter credit policies to control excess money flow.
- 5. Exchange Rate Management:**
  - Stabilizing currency value to manage imported inflation by controlling exchange rate fluctuations.

By using these tools, Bangladesh Bank can reduce excessive demand, stabilize prices, and maintain economic balance.

#### **Q-30. How to you define monetary system? What are the constituents of monetary system? How come it is different from financial system?**

**Or, What are the constituents of monetary system? BPE96<sup>th</sup>.**

A **monetary system** refers to the framework and institutions that govern the creation, distribution, and management of money within an economy. It encompasses the set of rules, policies, and mechanisms through which a country's currency is issued, circulated, and regulated.

The constituents of a monetary system include:

1. **Central Bank:** The central bank plays a pivotal role in overseeing and implementing monetary policies, controlling the money supply, maintaining price stability, and regulating financial institutions.
2. **Currency:** The physical notes and coins, as well as digital representations of money, form the currency component of the monetary system.
3. **Commercial Banks:** Banks provide essential functions such as accepting deposits, granting loans, facilitating payments, and creating credit, which contributes to the overall money supply.
4. **Monetary Policy:** Policies set by the central bank to influence interest rates, credit availability, and money supply in order to stabilize the economy and manage inflation.

On the other hand, **the financial system** is broader and encompasses all institutions, markets, and instruments involved in the intermediation of funds, investment, and risk management. While the monetary system focuses specifically on money and its regulation, the financial system extends to areas like capital markets, insurance, securities, and other financial instruments beyond the scope of money supply and central bank control. The financial system operates within the framework set by the monetary system but has a more comprehensive reach in facilitating financial transactions, allocating resources, and managing financial risks.

### Q-31. What are near monies?

Near monies, also known as quasi-money or liquid assets, are financial instruments that are highly liquid and can be easily converted into cash or used as a medium of exchange. While they are not considered actual money, they serve as close substitutes and hold a high degree of liquidity.

Examples of near monies include savings accounts, certificates of deposit (CDs), money market funds, Treasury bills, and other short-term financial instruments. These assets can be readily converted into cash or used for making payments, although they may not be as widely accepted as physical currency.

### Q-32. Use the information of the following table to calculate M1 and M2 money supply for each year and also its growth rates.

Particulars	Year		Taka in Crore
	2019-2020	2020-2021	2021-2022
Currency in Circulation	208094.1	226888.3	256182.3
Money in Vaults of DMBs	15979.6	17370.6	19733.8
Time Deposits of DMBs	1045471.1	1185066.6	1282217.5
Demand Deposits of DMBs	135528.4	165724.5	188859.4

#### Answer:

As per BB:  $M1 = \text{Currency outside Bank} + \text{Demand Deposits} + \text{Deposit with BB other than DMBs/ Deposit of Financial Institutions with Bangladesh Bank (Except DMBs)}$

Here, Currency outside Bank = Currency in circulation - Currency in tills of DMBs

And,

Currency in circulation = Bangladesh Bank (BB) Notes + Government Notes & Coins

**M1 Money Supply:**  $M1 = \text{Currency in Circulation} + \text{Demand Deposits of DMBs}$

- For 2019-2020:  $M1 = 208094.1 + 135528.4 = 343622.5$  crore Taka
- For 2020-2021:  $M1 = 226888.3 + 165724.5 = 392612.8$  crore Taka
- For 2021-2022:  $M1 = 256182.3 + 188859.4 = 445041.7$  crore Taka

**M2 Money Supply:**  $M2 = M1 + \text{Time Deposits of DMBs}$

- For 2019-2020:  $M2 = 343622.5 + 1045471.1 = 1389093.6$  crore Taka
- For 2020-2021:  $M2 = 392612.8 + 1185066.6 = 1577679.4$  crore Taka
- For 2021-2022:  $M2 = 445041.7 + 1282217.5 = 1727259.2$  crore Taka

**Growth Rates:**

Growth Rate of Money supply (%) = [(Current year money supply – Previous year money supply) / Previous year money supply] \* 100

- For M1:
  - Growth Rate from 2019-2020 to 2020-2021:  $[(392612.8 - 343622.5) / 343622.5] * 100 \approx 14.25\%$
  - Growth Rate from 2020-2021 to 2021-2022:  $[(445041.7 - 392612.8) / 392612.8] * 100 \approx 13.35\%$
- For M2:
  - Growth Rate from 2019-2020 to 2020-2021:  $[(1577679.4 - 1389093.6) / 1389093.6] * 100 \approx 13.56\%$
  - Growth Rate from 2020-2021 to 2021-2022:  $[(1727259.2 - 1577679.4) / 1577679.4] * 100 \approx 9.48\%$

These growth rates represent the percentage change in M1 and M2 money supply from one year to the next.

**Q-33. From the following list of items, indicate if they are in M1, M2 or neither: BPE-97<sup>th</sup>.**

Serial No.	Items	Amount (BDT)
1.	Line of credit with your bank	50,000
2.	Money in your pocket	10,000
3.	Money in your checking account	20,000
4.	An FDR issued from your bank	50,000
5.	Value of traveler's check in you have.	1,500
6.	A Sanchay Patra is purchased from Bangladesh bank	1,00,000

**Answer:**

SL NO	Items	M1	M2
01	Line of Credit with Your Bank	-	-
02	Money in Your Pocket	10,000.00	10,000.00
03	Money In your Checking Account	20,000.00	20,000.00
04	An FDR Issued from your bank	-	50,000.00
05	Value of Traveler's Check in you have	1,500.00	1,500.00
06	Sanchaypatra is purchased from Bangladesh Bank	-	-
	<b>Total</b>	<b>31,500.00</b>	<b>81,500.00</b>

**Q-34. From the following information, measure the monetary aggregates of M1 and M2: BPE-96<sup>th</sup>**

Items	Value as of December 2022 (Billion taka)
<b>Currency in circulation</b>	<b>2923.60</b>
<b>Currency in tills of DMBS</b>	<b>241.80</b>
<b>Demand deposits</b>	<b>1837.40</b>
<b>Other checkable deposits</b>	<b>6.20</b>
<b>Time deposits</b>	<b>13054.30</b>
<b>Money market mutual fund</b>	<b>10.50</b>

**Ans:**

As per BB: M1 = Currency outside Bank + Demand Deposits + Deposit with BB other than DMBS/ Deposit of Financial Institutions with Bangladesh Bank (Except DMBS)

Here, Currency outside Bank = Currency in circulation - Currency in tills of DMBS



And,

Currency in circulation = Bangladesh Bank (BB) Notes + Government Notes & Coins

- **M1:** Currency in Circulation - Currency in tills of DMBS + Demand Deposits + Other Checkable Deposits.
  - $M1 = 2923.60 - 241.80 + 1837.40 + 6.20 = 4,525.40$  billion taka.
- **M2:** M1 + Time Deposits + Money Market Mutual Funds.
  - $M2 = 4,525.40 + 13054.30 + 10.50 = 17,590.20$  billion taka.

**Q-35. From the following information measure the monetary aggregate of M1 & M2:**

Items	Value (in millions)
Currency	75
Demand Deposit	25
Checkable Deposits/Currency in Deposit money in Banks (DMBS)	25
Traveler's Checks	10
Saving deposits	125
Small-denomination time deposits	75
Non institutional money market mutual fund shares	50
Money market deposit accounts	25

Ans:

$$\begin{aligned}
 M1 &= \text{Currency} + \text{Demand Deposits} + \text{Checkable Deposits} + \text{Travelers Cheque} \\
 &= 75 + 25 + 25 + 10 \\
 &= 135
 \end{aligned}$$

$$\begin{aligned}
 M2 &= M1 + \text{Savings Deposits} + \text{Time Deposits} + \text{Non institutional money market mutual fund shares} + \text{Money market deposit accounts} \\
 &= 135 + 125 + 75 + 50 + 25 \\
 &= 410
 \end{aligned}$$

**Q-36. Measures of money supply.**

The money supply is measured mainly by two key indicators:

1. **M1 (Narrow Money):** This includes the most liquid forms of money, such as currency in circulation (notes and coins) and demand deposits (money in checking accounts). It represents money that is readily available for immediate spending.
2. **M2 (Broad Money):** M2 includes everything in M1, plus less liquid forms of money like savings accounts, time deposits (like fixed deposits), and other types of near-money that can be easily converted into cash. M2 gives a broader view of the money available in the economy that can be used for spending and saving.

These measures help the central bank and policymakers in Bangladesh to understand the amount of money in the economy and to make decisions related to monetary policy, inflation, and economic growth.

**Q-37. Does liquidity support from Bangladesh Bank to Commercial bank over a long period is good deed for stable banking industry? Discuss.BPE-98<sup>th</sup>.**

Providing long-term liquidity support from Bangladesh Bank to commercial banks can have both positive and negative impacts on the stability of the banking industry.

**Positive Aspects:**

- 1. Financial Stability:** It helps prevent bank failures and systemic crises by ensuring that banks have enough liquidity to meet their obligations during times of stress.
- 2. Maintaining Confidence:** By offering support, Bangladesh Bank instills confidence in depositors and investors, preventing bank runs and maintaining stability in the banking sector.
- 3. Economic Growth:** Access to long-term liquidity can enable banks to continue lending to businesses and individuals, supporting economic growth.

**Negative Aspects:**

- 1. Moral Hazard:** Banks may become overly reliant on central bank support, leading to riskier behavior and poor risk management practices.
- 2. Distorted Market Signals:** Long-term support may mask underlying weaknesses in the banking sector, delaying necessary reforms.

Overall, while providing liquidity support can help stabilize the banking industry in the short term, it's important to address underlying issues and ensure that banks operate prudently to maintain long-term stability.

**Q-38. Suppose the following table shows different forms of money of Bangladesh Economy:**

(Billions of Tk.)

	2020	2021	2022
<b>Currency Outside Bank</b>	<b>1840</b>	<b>1850</b>	<b>1865</b>
<b>Demand deposit</b>	<b>1944</b>	<b>1960</b>	<b>1986</b>
<b>Current deposit</b>	<b>1362</b>	<b>1358</b>	<b>1376</b>
<b>Savings deposit</b>	<b>57801</b>	<b>5968</b>	<b>6105</b>
<b>Time deposit</b>	<b>4212</b>	<b>4794</b>	<b>57901</b>

(i) Calculate M1, and M2, money supply for each year and growth rate of M1, and M2, from the previous year.

(ii) Why are the growth rates of M1, and M2, different? Explain.

Ans:

(Billion Tk.)

	2020	2021	2022
Currency Outside Bank	1840	1850	1865
Demand deposit	1944	1960	1986
Current deposit	1362	1358	1376
<b>M1</b>	<b>5146</b>	<b>5168</b>	<b>5227</b>
Savings deposit	5780	5968	6105
Time deposit	4212	4794	5790
<b>M2</b>	<b>15138</b>	<b>15930</b>	<b>17122</b>

Growth rate of Money supply =  $\frac{(\text{Current Year Money Supply} - \text{Previous year Money Supply})}{\text{Previous year Money Supply}} \times 100$

M1 growth for 2021 =  $\frac{5168 - 5146}{5146} * 100 = 0.427517\%$

$$M1 \text{ growth for 2022} = \frac{5227 - 5168}{5168} * 100 = 1.1416\%$$

$$M2 \text{ growth for 2021} = \frac{15930 - 15138}{15138} * 100 = 5.2318\%$$

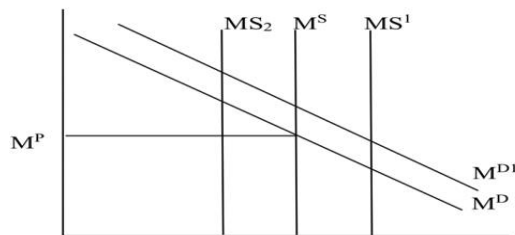
$$M2 \text{ growth for 2022} = \frac{17122 - 15930}{15930} * 100 = 7.4827\%$$

ii. M1 and M2 have different growth rate because M1 is a more liquid measure of money supply. M2 contains some components that are not so liquid.

**Q-39. What do you mean by Price of Money?**

**Or, What is the price of money and how it is determined? BPE-99<sup>th</sup>.**

Rate of interest is known as price of Money. In a market-oriented banking system, price of money or rate of interest is determined by intersection between demand for money ( $M^D$ ) and supply of money ( $M^S$ ) as shown below graphically:



To understand changes in interest rate, we must understand what causes the demand and supply curves for money to shift. Two factors cause the demand for money to shift: income and price level. According to John Mayard Keynes, there are two reasons why income would affect the demand for money. First, as an economy expands and income rises, wealth increases and people will want to hold more money as a store of value.

Second, as the economy expands and income rises, people will want to carry out more transactions using money as a medium of exchange, with the result that they will also want to hold more money. On the other hand, when price level rises, the same nominal quantity of money is no longer as valuable, it cannot be used to purchase as many real goods or services. To restore their holding of money in real terms to the former level, people will want to hold a greater nominal quantity of money.

In regard to supply of money, it is completely controlled by the central bank. Unlike usual upward sloping supply curve, the money supply curve is vertical, as central banks are not motivated by nominal profit, rather they are motivated by national interest. Therefore, an increase (decrease) in the money supply engineered by the central bank will shift the supply curve for money to the right (left).

**Q-40. Differentiate between money and credit. BPE-99<sup>th</sup>.**

Aspect	Money	Credit
Definition	A medium of exchange accepted for goods and services.	Borrowed funds that must be repaid with interest.
Nature	Tangible or digital (e.g., cash, coins, bank deposits).	Intangible; represents a promise to repay.
Ownership	Belongs to the holder without obligation.	Requires repayment to the lender.
Function	Facilitates transactions and acts as a store of value.	Expands purchasing power temporarily.

Example	Paying with cash for groceries.	Using a credit card to purchase groceries.
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**Q-41. Write down Keynesian money demand function and explain. BPE-98<sup>th</sup>.**

The Keynesian money demand function, proposed by economist John Maynard Keynes, is represented as:

$$M_d = k \cdot Y$$

Where:

- $M_d$  represents the demand for money.
- $k$  is the proportion of income held as money.
- $Y$  denotes income or output.

Keynes argued that people hold money for transactions and precautionary purposes, and the demand for money is positively related to income. As income rises, individuals and businesses tend to hold more money to facilitate transactions and cover unforeseen expenses. The parameter  $k$  reflects the proportion of income that individuals choose to hold as money. According to Keynes, changes in the money supply, which influence interest rates, have limited impact on money demand in the short run, as individuals adjust their spending and saving behavior gradually in response to changes in income.

**Q-42. Does slow growth of demand and time deposit indicates bad/good signal for economy? Explain. BPE-98<sup>th</sup>.**

A slow growth of demand and time deposits can indicate both positive and negative signals for the economy, depending on the underlying factors.

**Negative Signal:**

1. **Economic Weakness:** Slow growth may suggest subdued consumer and business confidence, reflecting weak economic activity and investment.
2. **Low Interest Rates:** Persistently low deposit growth may indicate low returns on savings, discouraging saving and potentially hindering investment and economic growth.

**Positive Signal:**

1. **Economic Stability:** Slow growth may reflect stable economic conditions, where consumers and businesses are confident in the future and have less need to hold onto liquid assets.
2. **Investment Opportunities:** It may suggest that individuals and businesses are investing more in productive assets rather than holding cash, potentially fueling long-term economic growth.

Overall, while slow deposit growth may initially raise concerns, a deeper analysis of economic conditions is necessary to determine its implications accurately.

**Q-43. Imagine that an economy has the following monetary aggregates at the end of 31-12-2023:**

Currency Outside Banks (COB)	$M_1$	$M_2$
Tk. 85,000	Tk. 2,35,000	Tk. 7,45,000

On 01-01-2024, the following transactions were executed:

- (i) Encashment of an FDR worth Tk. 1,00,000 of that Sanchayapatra worth Tk. 50,000 was purchased from BB and rest of the Tk. 50,000 was deposited in a current account.
- (ii) Withdrawal of Tk. 15,000 from a savings account and kept that in cash.
- (iii) Cash out transaction of Tk. 20,000 with an MFS agent [MFS maintains a trust and settlement account with schedule bank.]

Calculate COB,  $M_1$  and  $M_2$  monetary aggregates at the end of 01-01-2024. BPE-99<sup>th</sup>.

Ans:

Date	Currency Outside Banks	M1	M2
31/12/2023	85,000.00	2,35,000.00	7,45,000.00
1		+50,000.00	-1,00,000.00+50,000.00
2	+15,000.00	+15,000.00	-15,000.00+15,000.00
3	+20,000.00	-20,000.00+20,000.00	
01/01/2024	1,20,000.00	3,00,000.00	6,95,000.00

Buying a Sanchaypatra from Bangladesh Bank excludes from money supply measures

MFS maintains trust and settlement account with banks. It's nature is like a current account (Part of M1).

Alternative solution:

We know,  $M1 = COB + DD$  and  $M2 = M1 + T$

So,  $DD = M1 - COB = 2,35,000 - 85,000 = 1,50,000$

$TD = M2 - M1 = 7,45,000 - 2,35,000 = 5,10,000$

Now as of 01/01/2024,  $COB = 85,000 + 15,000 + 20,000 = 1,20,000$

$DD = 1,50,000 + 50,000 - 20,000 = 1,80,000$

$TD = 5,10,000 - 1,00,000 - 15,000 = 3,95,000$

Therefore,  $M1 = 1,20,000 + 1,80,000 = 3,00,000$

$M2 = 3,00,000 + 3,95,000 = 6,95,000$

#### Q-44. How do Central Banks contribute to the monetary system?

They are responsible for:

- 1. Issuing Money:** The Central Bank issues the currency, which forms the foundation of the monetary system.
- 2. Ensuring Stability:** They control inflation and deflation by adjusting the money supply.
- 3. Monetary Policy:** Implements policies to ensure price stability and economic growth.
- 4. Reserve Management:** Holds and manages the country's reserves, ensuring liquidity in the system.

Example: Bangladesh Bank ensures that the monetary system operates efficiently by controlling the flow of money.

#### Q-45: What role do Commercial Banks play in the monetary system?

Commercial Banks are integral to the functioning of the monetary system. Their roles include:

- 1. Money Circulation:** They accept deposits from the public and provide loans, ensuring the flow of money.
- 2. Credit Creation:** By lending more than their deposits, they expand the money supply in the economy.
- 3. Facilitating Transactions:** Provide banking services such as payments, transfers, and savings.
- 4. Economic Growth:** They fund businesses and consumers, driving growth and development.

Example: Banks like Sonali Bank and BRAC Bank help circulate money and support the monetary system in Bangladesh.