IIPA 2022

Chapter 10: Money Supply and Monetary Policy

Short Answers

CSM 05: Economic and Social Development- Sustainable Development, Poverty, Inclusion

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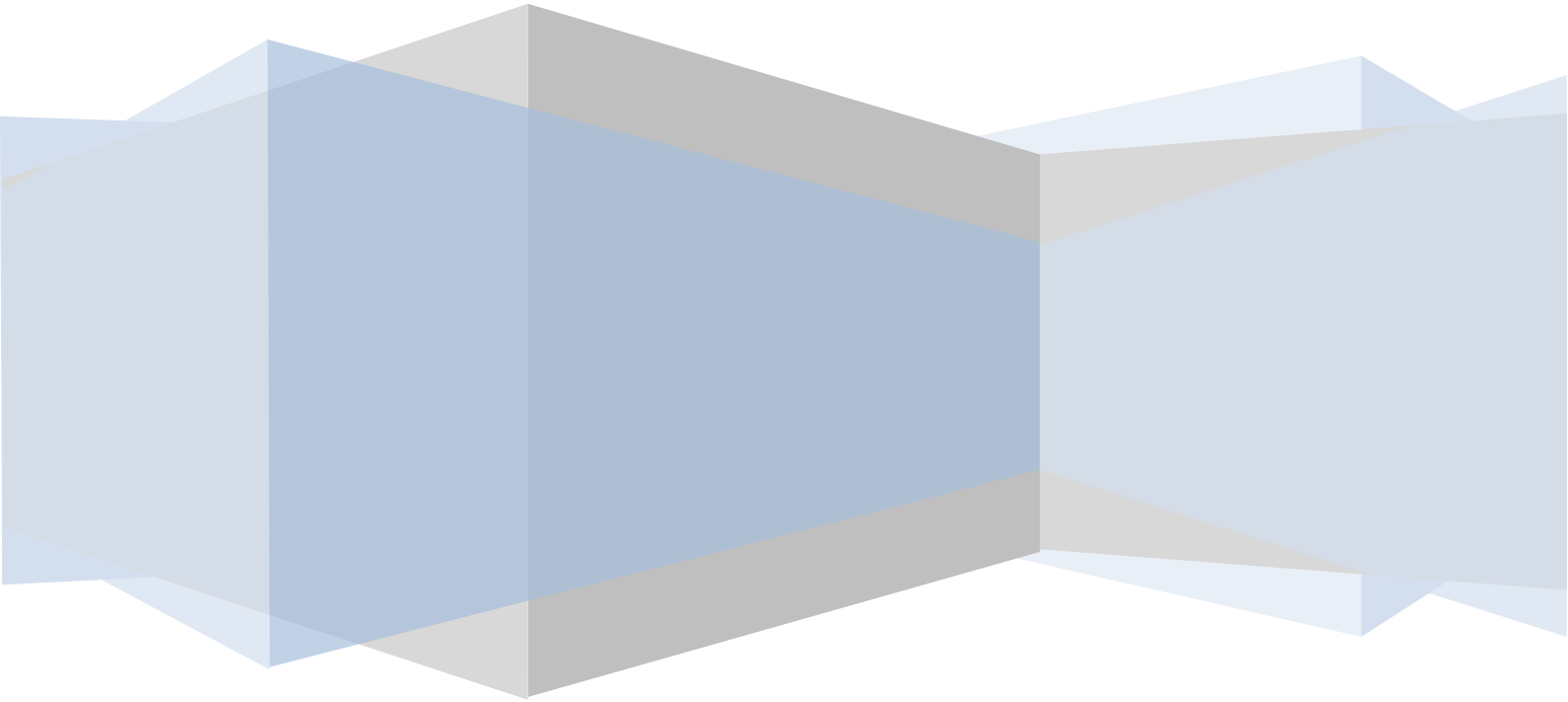

This chapter contains:

- Money
- Commodity Money
- Fiat Money
- Fiduciary Money
- Legal Tender Money
- Cryptocurrency
- Functions of Money
- Demand for Money
- Supply of Money
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1 Money

Money is a widely used and accepted **medium of exchange**. It is anything that can be accepted as payment for goods and services or as a means of debt settlement. Money is the **most liquid** (it is easy to sell in the market like gold, silver, and so on) of all assets in the sense that it is universally accepted and thus can be easily exchanged for other commodities. This topic is very important for the UPSC IAS Exam Economy subject.

1.1 Historical Background – How Concept of money Evolved

Barter System

- Money as a **medium of exchange** was not used in early human history since households were self-sufficient and there was little exchange of goods.
- Whatever exchange occurred between the households was done through barter or the exchange of goods for other goods.
- As there was no common unit of account and medium of exchange, the barter system did not allow for direct purchases of goods.
- The problem with a barter system is that in order to obtain a specific good or service from a supplier, one must also have a good or service of equal value that the supplier desires.
- In other words, in a barter system, the exchange can occur only if two transacting parties have a **double coincidence of wants**.
- The likelihood of a double coincidence of wants is quite low and making the exchange of goods and services rather difficult.
- To solve the problems of barter trade, early humans devised a payment and exchange system that allows the direct purchase of goods using any instrument that has the following characteristics:
    - Unit of account
    - High Liquidity
    - Possible to store
    - It must be desired by all (It should have high demand)
    - It is easily exchangeable (Medium of Exchange)

Commodity Money

- In the beginning, there were only a few commodities that were required by everyone.
- Commodities such as **arrows, bows, and seashells**, which are mostly used for hunting, became the first form of medium of exchange and thus acted as money.
- When early humans transitioned from hunting to agriculture in the second stage of evolution, animals such as **cattle, goats, and sheep** became a medium of exchange and acted as money.

- Since commodities have limitations such as a lack of a standard unit of account, limited supply, and natural factors, etc. their use was limited and was eventually replaced by other forms of money.

Metallic Money

- Commodity money evolved into metallic money as human civilization progressed.
- Metals such as **gold, silver, copper**, and others were used because they could be easily handled and quantified. It was the primary form of money for the majority of recorded history.
- With the passage of time and technological advancements, the hard form of gold and silver was replaced by a coinage system (gold and silver coins) that was widely used as money.

Paper Money

- It was discovered that transporting gold and silver coins was both inconvenient and dangerous. As a result, the invention of paper money marked a watershed moment in the evolution of money.
- The country's **central bank** regulates and controls paper money (RBI in India).
- At the moment, a large portion of the money is made up of **currency notes** or paper money issued by the central bank.

Credit Money

- The emergence of credit money occurred almost concurrently with the emergence of paper money.
- People keep a portion of their cash in bank deposits, which they can withdraw at their leisure via cheques.
- The cheque (also known as credit money or **bank money**) is not money in and of itself, but it serves the same functions as money.

Plastic Money

Plastic money, such as **credit and debit cards**, is the most recent type of money. They intend to do away with the need to carry cash when conducting transactions.

Mobile Payments

- Mobile payments are payments made for goods or services using a portable electronic device such as a cell phone, smartphone, or tablet.
- Money can also be sent to friends and family members using mobile payment technology.
- **Paytm, PhonePe, Google Pay,** and so on are increasingly competing for retailers to accept their platforms for point-of-sale payments.

Parameter	Barter System	Money
Perishable	Barter goods are perishable, so they cannot be stored for a long time. E.g. Potatoes, rice.	Money is not perishable so it can be stored. It will remain the same for a long time. E.g. Coins and paper currency
Double coincidence of wants	Barter needs double coincidence of wants to initiate a transaction.	Money doesn't need a double coincidence of wants to initiate a transaction.
Divisibility	Divisibility is difficult in barter goods.	Money has high divisibility, money can be divided into small increments that can be used in exchange
Storage cost	Since barter goods are perishable, it has high storage cost.	Comparatively low storage cost due to its compactness and non-perishable nature.
Universal acceptability	Not universally acceptable as needs must match.	Money acts as an acceptable medium of exchange universally.
Deferred payment	Barter transactions are immediate and differed payments are not possible.	Temporary postponements of payment are possible in the case of money.
Convertibility to other Commodities	Convertibility is a very difficult process in barter.	Easy to convert into other commodities or currencies or money types.
Exchangeability	The barter system has poor exchangeability	Money can be exchanged easily with each other and in different forms.
Liquidity	Poor liquidity as it can't be used immediately.	High Liquidity (Easily available and tradable in any market) as it can be used at need.
Unit of Account	Not act as a standard unit of account	Money acts as a standard unit of account.
Fungibility	Less fungible	High fungibility (replaceable by another identical item; mutually interchangeable)

1.2 Types of Money

Type	Description
Commodity Money	• Commodity money is a physical good with 'intrinsic value' – a use other than money. • Alcohol, cocoa beans, copper, gold, silver, salt, seashells, tea, and tobacco are all historical examples. • Commodity money has four main characteristics: durable, divisible, easily exchangeable, and rare. • Commodity money is distinct in that it is the only type of money

	with an underlying value. • Even though gold is no longer used as a form of money, it still has value as jewellery or gilding.
Fiat Money	• Fiat money is a currency issued by the government that is not backed by a commodity such as gold. • Since fiat money gives central banks control over how much money is to be printed, they have greater control over the economy. • The value of fiat money is determined by the relationship between supply and demand, as well as the stability of the issuing government, rather than by the value of the commodity backing it. • When fiat money is backed by a gold or silver standard, it is referred to as "representative money," and when the central bank promises "to pay the bearer the sum of this many rupees," currency is referred to as "anonymous bearer bond with zero interest."
Fiduciary Money	• Fiduciary money, also known as currency, refers to banknotes and coins that are in use in the economy. • This is the amount of money that economic actors have available to them in order to conduct transactions.
Legal Tender Money	• Any form of payment recognized by a government that is used to pay debts or financial obligations, such as tax payments, is considered legal tender. • Legal tender laws effectively prohibit the use of anything other than existing legal tender in the economy as money. • Legal tender performs the economic functions of money as well as a few other functions, such as making monetary policy and manipulation of currency possible. • Meanwhile, some currencies, most notably the US dollar, are considered legal tender in countries that do not issue their own currency. • For example, Ecuador, which does not have its own currency, has accepted the US dollar as legal tender since 2000.
Cryptocurrency	• A cryptocurrency is a type of digital asset that is based on a network that is distributed across many computers. • Because of their decentralized structure, they can exist independently of governments and central authorities. • Cryptocurrencies are not widely accepted as money, owing to their lack of legal tender status. • El Salvador, on the other hand, became the first country in the world to accept bitcoin as legal tender in June 2021.

1.3 Significance

- It serves as a **medium of exchange**; it can be used to purchase any commodity.
- It serves as a **measure of value** or account of a unit. Every commodity has a monetary value that can be expressed in terms of money.
- It acts as a **store of value**.
- It serves as a standard mode for **deferred payments**. It can be used to settle future monetary obligations. As an example, a loan obtained today is paid back in instalments.
- It is the most liquid of all assets because it is universally accepted and thus easily exchanged for other commodities.
- It also has an opportunity cost. Instead of keeping a specific cash balance, you can earn interest on it by putting it in a fixed deposit with a bank.
- Money provides consumers and businesses with some very basic and practical advantages.
- Money's main advantage is that it increases an economy's efficiency by **lowering transaction cost**s.
- When people can use money instead of bartering, the economy becomes more specialized and has a better division of labor.
- Money facilitates exchange and promotes trade.
- Money provides incentives to people to work hard and satisfy their wants.
- Money helps producers to warn profits and reinvest the profit to generate more income and employment.
- Money in the form of wages increases the productivity of labor in the economy.

1.4 Conclusion

Money has evolved significantly since the days of shells and skins, but its primary function has remained unchanged. Money, in whatever form it takes, provides a medium of exchange for goods and services and allows the economy to grow by allowing transactions to be completed at faster rates.

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2 Commodity Money

In an economy, **money** is a type of asset that is used to purchase goods and services from other people. A commodity is a physical item that can be easily exchanged for another of the same type. **Commodity money** is money that is backed by a commodity that has **intrinsic value**. Intrinsic value denotes the value of a commodity even if it is not used as money. People sometimes turn to commodity money instead of the money authorized by their governments during times of economic turmoil, such as severe economic depressions or hyperinflation.

2.1 What is Commodity Money?

- Commodity money is money whose value is derived from the commodity from which it is derived.
- Commodity money is a physical good with **'intrinsic value'** – a use other than money.
- Alcohol, cocoa beans, copper, gold, silver, salt, seashells, tea, and tobacco are all historical examples.
- Commodity money has four main characteristics: **durable, divisible, easily exchangeable, and rare**.
- Commodity money is distinct in that it is the only type of money with an underlying value.
- Even though gold is no longer used as a form of money, it still has value as jewelry or gilding.

2.2 Historical Background

- Commodity money has a long history that spans centuries and millennia. In fact, determining its exact origins is nearly impossible.
- Nonetheless, there are records that show activity between 700 and 500 BC, when gold became a common form of money.
- **Lydian merchants** created electrum, a gold coin mixed with silver, during this time period. Their goal was to help improve the efficiency of international trade.
- It was a useful store of value, it was long-lasting, and it was widely accepted across borders.
- Later, in 550 B.C., by order of **King Croesus of Lydia**, it was fully circulated.

2.3 Features

Durable

- Commodity such as meat would be ineffective because it spoils over time.
- Similarly, metals such as iron will not suffice because they rust easily.
- If the commodity is unable to retain its intrinsic value, trust in it will be short-lived.

Divisible / Measurable

- We must have a standard method of calculating money. The development of measurement units such as ounces and pounds paved the way for this.
- As a result, we are able to purchase a variety of goods at varying prices.
- If we can't measure money then we will not know how much to pay. If there was only a 50 bill in circulation, it would be extremely difficult to buy something for ₹1.

Easily Exchangeable

- Nobody wants to deal with the hassle of taking a cow to market. It is far more convenient to use gold coins because they are lighter and easier to transport.
- All of the commodities that have historically taken off are easy to trade and convenient.

Rarity

- Commodity money must be rare because the supply is limited. Without it, money can become almost limitless, resulting in massive inflation.
- Nonetheless, the money supply must be able to respond to rising economic output.
- That is, the commodity supply must be able to respond to rising demand.
- As a result, when the economy begins to grow, the commodity must be able to supply and represent new goods on the market.

2.4 Significance

- Commodity money has many supporters who believe it is the best form of money and that we should return to it.
- There are several advantages to using commodity money over fiat money.
- For example, it provides more flexibility for the money holder, more opportunities to get rich quickly, and more protection from economic inflation.
- The ability of commodity money to serve multiple functions is its primary advantage.
- Gold, for example, can be used to make jewelry and is also used in computer wiring.
- A commodity money holder has several advantages; it can be used or spent.

2.5 Limitations

- **Face Value** was not consistent across the region.
- In general, the commodities used were **perishable.**
- Commodities are typically **heavy to transport**.
- There is no **fungibility** (replacement by another identical item; mutual interchangeability)**.**

2.6 Conclusion

Commodities such as cattle, grains, leather, skins, utensils, and weapons are examples of commodity money. However, commodity money is no longer preferred because it lacks

important monetary characteristics such as uniformity, homogeneity, standard size and weight, portability, and divisibility.

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3 Fiat Money

Fiat money only has value because people trust it. Governments establish trust by declaring it **legal tender**, allowing all people and businesses to accept it as payment. Governments then outlaw all other forms of money, further cementing trust. The majority of modern economies are based ona fiat money system. **Coins and bills** are examples of fiat money.

3.1 What is Fiat Money?

- Fiat money is a currency issued by the government that is not backed by a commodity such as gold.
- Since fiat money gives central banks control over how much money is to be printed, they have greater control over the economy.
- The value of fiat money is determined by the relationship between supply and demand, as well as the stability of the issuing government, rather than by the value of the commodity backing it.
- When fiat money is backed by a gold or silver standard, it is referred to as **"representative money,"** and when the central bank promises "to pay the bearer the sum of this many rupees," currency is referred to as **"anonymous bearer bond with zero interest."**
- The majority of modern paper currencies, including the US dollar, the euro, and other major global currencies, are fiat currencies.

3.2 Historical Background

- **The term "fiat" is a Latin word that means "it shall be" or "let it be done."**
- The origins of fiat money can be traced back to the 11th century **Chinese Tang dynasty**.
- **By the 12th century, fiat money had spread throughout the country. It was known by several names, including jiaozi, huizi, and guanzi.**
- In his book **The Travels of Marco Polo**, Marco Polo described the Yuan Dynasty's fiat money in the 13th century:
    - "All these pieces of paper are issued with as much solemnity and authority as if they were of pure gold or silver; and on every piece, a variety of officials, whose duty it is, have to write their names and put their seals."

3.3 Significance

- Fiat money has the potential to be more stable than commodities as a form of money. This is due to a consistent supply provided by the central bank or government – whoever is in charge.
- Since fiat money is not a scarce or fixed resource like gold, central banks have far greater control over its supply, allowing them to manage economic variables like **credit supply, liquidity, interest rates, and money velocity**.

- Fiat money is a good currency if it can perform the functions that a country's economy requires of its monetary unit, such as **storing value**, providing a numerical account, and facilitating exchange.
- It is less expensive to produce than a currency that is directly linked to a commodity.
- Fiat money gives governments more leeway in managing their own currency, setting monetary policy, and stabilizing global markets.
- It also permits **fractional reserve banking**, which allows commercial banks to multiply the amount of money on hand to meet borrowers' demands.

3.4 Limitations

- **Monetary policies** that reduce the value of money result in overprinting of currency, which may result in **hyperinflation**.
- It is still bulky to carry, reducing its movability.
- Theft risk and vulnerability to counterfeit (duplicate/fake currency)
- Money cannot be easily divided into small increments to more precisely match commodity values, which leads to the rounding-off problem.
- For example, due to a change problem, petrol pumps are not returning 60 paise per customer.
- Hyperinflation occurs when inflation rises at an extremely rapid rate. Inflation rates can rise from 50 to 300 times.
- If people lose faith in a country's currency, the money loses its value. This is not the same as a gold-backed currency.
- The **2007 mortgage crisis and subsequent financial meltdown**, on the other hand, tempered the belief that central banks could always prevent depressions or severe recessions by regulating the money supply.
- Due toits unlimited supply, fiat money provides more opportunities for the **creation of bubbles**.

3.5 Conclusion

Fiat currencies have value only because the government maintains it; there is no utility to fiat money in and of itself. Since there is no underlying commodity backing fiat money, it is inconvertible and cannot be redeemed.

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4 Fiduciary Money

The value of **fiduciary money** is determined by the expectation that it will be widely accepted as a **medium of exchange**. It is **not declared legal tender** by the government, unlike fiat money, which means that people are not required by law to accept it as a form of payment. Instead, the issuer of fiduciary money agrees to exchange it for a commodity or fiat money if the **bearer requests it**. People can use fiduciary money just like regular fiat or commodity money as long as they are confident that the promise will not be broken. **Cheques, banknotes, and drafts** are examples of fiduciary money.

4.1 What is Fiduciary Money?

- **Fiduciary money** is money that is accepted as a medium of exchange due to the **trust that exists between the payer and the payee**.
- The current monetary system is highly fiduciary. When a bank promises to pay its customers in different types of money and the customer can sell or transfer the promise to someone else, it is referred to as fiduciary money.
- Generally, fiduciary money is paid in gold, silver, or paper money.
- Cheques and bank notes are examples of fiduciary money because they are both tokens that are used as money and have the same value.
- Fiduciary money's value is determined by the expectation that it will be widely accepted as a medium of exchange.
- It is **not declared legal tender by the government**, unlike fiat money, which means that people are **not required by law to accept it as a form of payment**.
- Instead, the issuer of fiduciary money agrees to exchange it for a commodity or fiat money if the bearer requests it.
- People can use fiduciary money just like regular fiat or commodity money as long as they are confident that the promise will not be broken.

4.2 Conclusion

Fiduciary money is accepted on the basis of the trust that its issuer (the bank) commands. Fiat money is the foundation of the majority of modern monetary systems. For the majority of history, however, almost all money was commodity money, such as gold and silver coins.

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5 Legal Tender Money

Legal Tender Money is anything recognised by law as a means to settle a public or private debt or meet a financial obligation, including tax payments, contracts, and legal fines or damages, is considered legal tender. In almost every country, the **national currency is legal tender**. A creditor is required by law to accept legal tender as payment for a debt.

5.1 What is Legal Tender Money?

- Any form of payment recognised by a government that is used to pay debts or financial obligations, such as tax payments, is considered legal tender.
- Legal tender laws effectively prohibit the use of anything other than existing legal tender in the economy as money.
- By law, the legal denomination of a country's currency must be accepted as a medium of exchange and payment for a money debt.
- While all denominations of circulating paper money are usually legal tender, the denomination and amount of coins acceptable as legal tender vary by country.
- The **RBI Act of 1934,** which grants the Central Bank the sole authority to issue banknotes, states that **"every banknote shall be legal tender in payment for the amount expressed therein in any place in India."**
- The acceptance or rejection of legal tender status is significant because paper money derives all of its value from the government's acceptance of it.
- **The RBI and the government issue legal tender money in the form of currency notes or coins. When this legal tender status is withdrawn, the process is known as demonetization.**
- Legal tender performs the economic functions of money as well as a few other functions, such as making monetary policy and manipulation of currency possible.
- Meanwhile, some currencies, most notably the US dollar, are considered legal tender in countries that do not issue their own currency.
- For example, **Ecuador**, which does not have its own currency, has accepted the US dollar as legal tender since 2000.

5.2 Types

Limited Legal Tender Money

- This is a type of money that can be used to pay off a debt up to a certain amount, after which a person can refuse to accept the payment and no legal action can be taken against them.
- In India, **coins** are only legal tender in limited quantities.

Unlimited Legal Tender Money

- In this form of money, it is possible to pay off any amount of debt.
- A person who refuses to accept this money may face legal action.

- In India, **paper notes/currency** are unlimited legal tender.

5.3 Significance

- Market participants use it to perform the following functions of money in the economy: **a medium of indirect exchange, a unit of account, a store of value, and a deferred payment standard**.
- Having a legal tender allows for flexibility in the money supply, and using a single currency eliminates the transaction costs associated with using multiple competing currencies.
    - Imposing legal tender is one method of achieving a **single currency**.
- **Monetary policy** is also made possible by legal tender.
- From the standpoint of the issuer, legal tender allows the issuer to manipulate, debase, and devalue the currency in order to obtain **seigniorage** and facilitates the issuance of fiduciary media by the banking system to meet trade needs.
- The revocation of legal tender status is significant because paper money derives all of its value from the government's acceptance of it.

5.4 Limitations

- The loss of a currency's legal tender status can have an impact on citizens' personal finances as well.
- In the short term, it may also disrupt the smooth flow of day-to-day business.
- With many large economies bracing for a full-fledged war on tax evasion, many countries are considering withdrawing legal tender status from their high-value notes.
    - All of this strengthens our case for going cashless and switching to plastic/electronic banking.

5.5 Present Legal Tender in India

- **Currency notes** in the Mahatma Gandhi series in denominations of **Rs.5, Rs.10, Rs.20, Rs.50, Rs.100, Rs.500, and Rs.2, 000** are currently in circulation.
- Furthermore, **coins** with denominations **of 50 paise, Rs 1, Rs 2, Rs 5, and Rs 10** in a variety of sizes, themes, and designs are in circulation.

5.6 Conclusion

In their daily lives, a country or its citizens may use a variety of modes of exchange. According to history, ancient humans used salt and spices as currency. However, 'Legal tender' is money that is recognised by the law of the land as valid for debt payment. It must be accepted in order for the debt to be discharged.

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6 Cryptocurrency

A **cryptocurrency** is an internet-based medium of exchange that conducts financial transactions using cryptographic functions. It makes use of **blockchain technology** to achieve **decentralization, transparency, and immutability** (the ability of a block chain ledger to remain unchanged, unaltered, and indelible).

The most important characteristic of a cryptocurrency is that it is not controlled by any central authority – the **decentralized nature** of the blockchain renders cryptocurrencies theoretically immune to traditional methods of government control and interference.

6.1 What is Cryptocurrency?

- A cryptocurrency is a type of **digital asset** that is based on a network that is distributed across many computers.
- Because of their **decentralized structure**, they can exist independently of governments and central authorities.
- **Blockchain and related technology**, according to experts, will disrupt many industries, including finance and law.
- The **benefits** of cryptocurrencies include cheaper and faster money transfers, as well as decentralized systems that do not fail at a single point.
- Cryptocurrency **disadvantages** include price volatility, high energy consumption for mining activities, and use in criminal activities.
- **Cryptocurrencies are not widely accepted as money, owing to their lack of legal tender status.**
- **El Salvador**, on the other hand, became the first country in the world to accept bitcoin as legal tender in June 2021.

6.2 Evolution

- **Bitcoin**, the first decentralized cryptocurrency, was created in 2009 by a presumably anonymous developer named **Satoshi Nakamoto**.
- Subprime mortgage crisis and recession in 2008-2009 resulted in **Quantitative Easing** (the introduction of new money into the money supply by a central bank) of the dollar in the United States, which increased dollar supply and eroded dollar purchasing power.
- Banks charge fees for online transfers, credit card transactions, and ATM withdrawals.
- From the creation of **Bitcoin in 2009** to the present day, cryptocurrencies have grown in popularity all over the world.
- The gains made by this sector since the onset of the Covid-19 pandemic in January 2020 have been astounding; the **"crypto market"** has grown by more than **500%.**

6.3 Bitcoin

- It is an electronic or digital currency that operates on a peer-to-peer basis. It is decentralized, with no centralized authority in charge.
- Bitcoins can be digitally sent to anyone with a bitcoin address anywhere in the world. One person may have multiple addresses for various purposes such as personal, business, and so on.
- Satoshi Nakamoto proposed bitcoin, a mathematically-proofed electronic payment system.
- A bitcoin is not printed currency, but rather a **non-reputable** (assurance that no one can deny the legitimacy of something) record of every transaction that it has been through. All of this is part of a massive ledger known as the blockchain.
- Since no authority controls or tracks the generation of the coins, the system is designed in such a way that the network keeps a foolproof record of every transaction as well as tracking the issuance of the currency sent without either side knowing the identity of the other Bitcoins is 'mined' using computing power in a distributed network.
- It is the first example of a new type of currency known as **cryptocurrency.**

6.4 Concept

- Cryptocurrencies are digital or virtual currencies that rely on cryptographic systems to function.
- They make it possible to make secure online payments without the use of third-party intermediaries.
- The term **"crypto"** refers to the encryption algorithms and cryptographic techniques used to protect these entries, such as elliptical curve encryption, public-private key pairs, and hashing functions.
- Cryptocurrencies can be mined or bought on cryptocurrency exchanges.
- They are also used for cross-border transfers to a limited extent.

6.5 Types

- Bitcoin is still the most traded and covered cryptocurrency.
- Many other cryptocurrencies, known as **"altcoins,"** have been launched in the aftermath of Bitcoin's success. Some of the well-known altcoins are:
    - **Solana**
    - **Litecoin**
    - **Ethereum**
    - **Cardano**
    - **Peercoin**
    - **Namecoin**
- By November 2021, the total value of all cryptocurrencies in existence had surpassed $2.1 trillion, with Bitcoin accounting for approximately 41% of the total value.

6.6 Legality

- Cryptocurrencies are not backed by any government or private organization. As a result, making a case for their legal status in various financial jurisdictions around the world has been difficult.
- It doesn't help that cryptocurrency has mostly operated outside of most existing financial infrastructure.
- Cryptocurrency's legal status has implications for its use in daily transactions and trading.
- The **Financial Action Task Force (FATF)** recommended in June 2019 that cryptocurrency wire transfers be subject to the requirements of the Travel Rule, which requires AML compliance.
- **El Salvador** is the only country in the world to accept Bitcoin as legal tender for monetary transactions as of December 2021.
- The **Payment Services Act of Japan** declares Bitcoin to be legal property.
- **China** has prohibited cryptocurrency exchanges and mining within its borders.
- In the **European Union**, cryptocurrencies are legal.

6.7 Significance

- Cryptocurrencies represent a new, **decentralized money paradigm**.
- Centralized intermediaries, such as banks and monetary institutions, are not required in this system to enforce trust and police transactions between two parties.
- Thus, a cryptocurrency-based system eliminates the possibility of a single point of failure, such as a large bank, triggering a global crisis, such as the one triggered in 2008 by the failure of institutions in the United States.
- Cryptocurrencies promise to make it **easier to transfer funds** between two parties without the need for a trusted third party such as a bank or credit card company.
- Cryptocurrency transfers between two transacting parties are faster than traditional money transfers because they do not use third-party intermediaries.
- **Profits** can be made from cryptocurrency investments. The value of cryptocurrency markets has skyrocketed.
- It is a **less expensive** option when compared to other online transactions.
- The transfer of funds is completed with **minimal processing fees**.

6.8 Limitations

- Cryptocurrencies, while claiming to be an anonymous form of transaction, are actually pseudonymous. They leave a **digital trail** that agencies can decipher.
- Cryptocurrencies have grown in popularity among criminals as a tool for nefarious activities such as **money laundering and illegal purchases**.
- Cryptocurrencies have also become popular among hackers, who use them to carry out **ransomware attacks**.
- **In theory, cryptocurrencies are supposed to be decentralized, with their wealth distributed among many parties via a blockchain. In practice, ownership is extremely concentrated.**

- One of the conceits of cryptocurrencies is that anyone with a computer and an internet connection can mine them.
    - Mining popular cryptocurrencies, on the other hand, necessitates a significant amount of energy, sometimes equivalent to that consumed by entire countries.
- While **cryptocurrency blockchains** are extremely secure, other crypto repositories, such as exchanges and wallets, are vulnerable to hacking.
- **Price volatility** affects cryptocurrencies traded on public markets. Bitcoin's value has gone through rapid ups and downs.
- Some economists believe that cryptocurrencies are a passing fad or **speculative bubble**.

6.9 Cryptocurrency in India

- The RBI issued a circular in 2018 prohibiting all banks from dealing in cryptocurrencies. In May 2020, the Supreme Court ruled that this circular was unconstitutional.
- The government recently announced the introduction of a bill, **Cryptocurrency, and Regulation of Official Digital Currency Bill, 2021,** to create a sovereign digital currency while simultaneously prohibiting all private cryptocurrencies.
- The funds invested in Indian blockchain start-ups account for less than 0.2 percent of the total amount raised by the sector globally.
- The current cryptocurrency approach makes it nearly impossible for blockchain entrepreneurs and investors to gain significant economic benefits.

6.10 Way Forward

- **Regulation** is required to prevent serious problems, to ensure that cryptocurrencies are not misused, and to protect unsuspecting investors from excessive market volatility and potential scams.
- The regulation must be clear, **transparent, and coherent**, and it must be animated by a vision of what it seeks to achieve.
- A legal **and regulatory framework** must define crypto-currencies as securities or other financial instruments under applicable national laws and identify the regulatory authority in charge.
- Rather than outright prohibiting cryptocurrencies, the government should regulate their trading by instituting **stringent KYC norms**, reporting, and taxation.
- To address concerns about transparency, information availability, and consumer protection, steps such as record keeping, inspections, **independent audits, investor grievance redressal,** and dispute resolution may be considered.
- Cryptocurrencies and Blockchain technology have the potential to **rekindle the entrepreneurial spirit in India's startup ecosystem** by creating job opportunities at all levels, from blockchain developers to designers, project managers, business analysts, promoters, and marketers.

6.11 Conclusion

- India is on the verge of the next phase of the **digital revolution**, with the potential to channel its human capital, expertise, and resources into this revolution and emerge as one of its winners.
- All that is required is for policymaking to be done correctly.
- Blockchain and crypto assets will be essential components of the Fourth Industrial Revolution and Indians should not be forced to ignore them.

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7 Functions of Money

Economists consider the following as main **functions of money** -**a medium of exchange, a measure of value, a standard of deferred payment, a store of value, and transfer of value.**

Money is the most widely used medium of exchange. There can be no exchange of commodities and thus no role for money in an economy consisting of only one individual. Even if there are multiple people but none of them participate in market transactions, such as a family living on an isolated island, money serves no purpose for them. However, when more than one economic agent participates in market transactions, money becomes an important instrument for facilitating these exchanges.

7.1 Functions of Money

The functions of money are divided into two categories:

Primary Functions:

It refers to the fundamental or primary functions of money which include:

Medium of Exchange

- It refers to a monetary function in which money is viewed as a means of exchanging goods.
- The medium of exchange function is regarded as the **primary and unique function of money** because it solved the primary problem of the barter system of double coincident wants.
- The condition of **double coincidence of wants** describes the situation in which one person receives the commodity provided by the other person in exchange.
    - **A butcher, for example, would not get the cloth unless the weaver did not require meat.**
- In this case, it is critical that both parties require the goods that they are receiving from the other. As a result, obtaining the necessary goods was difficult.
- With the introduction of money, however, goods are easily made available without reliance on any other good. This is because money is generally accepted throughout an economy.
- Aside from that, money is regarded as a medium of exchange because it is **easily portable and divisible**, as well as government-authenticated.

Measure of Value

- It refers to a monetary function that aids in determining the value of goods and services. Thevalue of all goods and services is expressed in terms of money.
- When calculating the monetary value of goods and services, money is used as the **common denominator**.
- Money as a measure of value has the following advantages:

- Aids in the **comparison and calculation of exchange rates** between two goods.
- Makes accounting systems more meaningful.
- Aids in calculating and **comparing national incomes** of various countries.
- Aids in comparing the costs of **production and distribution to the revenue** generated by the consumption of goods and services.

Secondary Functions

It refers to important monetary functions derived from primary functions.

Store of Value

- It refers to a secondary function derived from money's medium of exchange function.
- Individuals typically **keep their wealth in the form of money**. As a result, money functions as an asset that retains its value over time.
- There was only one transaction in the barter system, which was a simultaneous sale and purchase of goods and services.
- In the money economy, however, the sale and purchase are considered two distinct functions.
- It is possible when money serves as **both a medium of exchange and a store of value.**
- For example, an individual's salary is not spent all at once; rather, it is consumed gradually for the purchase of various goods and services.

Standard of Deferred Payments

- It refers to one of money's most important functions. **Loans, salaries, pensions, insurance premiums, interest, and rents** are examples of deferred payments.
- The amount of repaid money must be the same as it was at the time of purchase, which is a necessary condition for deferred payment.
- It was impossible to determine whether the amount returned in the form of a commodity was the same as it was at the time of purchase in the barter system.
- **For example, the price of a quintal of rice today would not be the same after a year.**
- However, the standard of deferred payment function of money is **not without limitations**, as the value of money has always fluctuated due to **inflation.**

Transfer of Value

- Money's utility extends to the transfer of value because it can be used to purchase goods not only within the country but also beyond its borders.
- Money as a standard tool can be used to sell or buy goods in the domestic or international market.

7.2 Conclusion

Money availability in the market has contributed to market stability and liquidity, as well as helping to form essential functions of money markets. Money facilitates transactions by serving as a widely accepted medium of exchange.

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8 Demand for Money and Supply of Money

Money is an asset and thus the **demand for money** exists because the public wants to own it. Of course, the reason for holding money and the time period for which it is held differs from person to person. The total amount of money demanded in an economy is thus the total amount of money demanded by all individuals/households in that economy.

The **supply of money** in an economy at any point in time refers to the amount of money held by households and businesses for transactions and debt settlement. We exclude money held by the government and money held by the commercial banking sector from commonly accepted measures of money supply.

8.1 Demand for Money

- In economics, demand for money is commonly associated with cash or bank demand deposits. In general, the nominal demand for money increases withthe level of nominal output and decreases with the nominal interest rate.
- The demand for money is influenced by a variety of factors, including **income level, interest rates, inflation, and future uncertainty.**
- **The impact of these factors on money demand is typically explained in terms of the three motives for demanding money:**
    - **Transaction motive –** It refers to the demand for money to meet the current needs of individuals and businesses.
    - **Precautionary motive –** It refers to people's desire to save money for various contingencies that may arise in the future.
    - **Speculative motive –** It refers to the motivation of individuals to hold cash in order to profit from market movements regarding future changes in theinterest rate.
- **Monetary policy** can help to stabilise an economy when the demand for money is stable. When the demand for money is not stable, real and nominal interest rates change, and economic fluctuations occur.
- The demand for money explains people's desire for a specific amount of money.
- Money is required to manage transactions, and the value of the transactions determines how much money people wish to keep.
    - The greater the number of transactions, the greater the amount of money demanded.
- Since the quantity of transactions is determined by earnings, it should be obvious that an increase in earnings leads to an increase in the demand for money.
- When people save their money rather than putting it in a bank where it earns interest, the money they save is also subject to the rate of interest.
- People become less focused on stockpiling money when interest rates rise, because holding money leads to holding less interest-earning deposits. As a result, at high interest rates, the amount of money demanded decreases.

8.2 Supply of Money

- Money supply is a **stock variable**, just like money demand. Money supply refers to the total stock of money in circulation among the general public at any given time.
- The RBI publishes figures for four different measures of money supply, namely **M1, M2, M3, and M4**. They are defined as below:
    - M1 = CU + DD
    - M2 = M1 + Savings deposits with Post Office savings banks
    - M3 = M1 + Net time deposits of commercial banks
    - M4 = M3 + Total deposits with Post Office savings organisations (excluding National Savings Certificates)
- Where, **CU** is public currency (notes and coins) and **DD** is **net demand deposits** held by commercial banks. The term **'net'** implies that only public deposits held by banks are to be included in the money supply.
- Interbank deposits held by a commercial bank in other commercial banks are not considered part of the money supply.
- **M1 and M2** are referred to as **narrow money**. **M3 and M4** are referred to as **broad money.**
- The gradations are listed in decreasing order of liquidity. **M1** is the most liquid and easiest to transact with, whereas **M4** is the least liquid.
- **M3** is the most commonly used money supply measure. It's also referred to as **aggregate monetary resources**.
- **Credit control policies** imposed by a country are banking system aid in determining the total supply of money.
- The money supply is solely determined by the **central bank** and is unaffected by interest rates. As a result, the **money supply curve is vertical** at the quantity of money supply, rather than upward or downward sloping.
- Since the central bank has control over the money supply, it can take actions to increase or decrease the money supply. Changes in the money supply cause interest rates to fluctuate.
- The **monetary base** and the **money multiplier** ultimately determine the money supply.
    - In most countries, the size of the monetary base is determined by the central bank.
    - The monetary base includes vault reserves as well as currency in circulation outside of banks.
    - Central banksmay alter reserve requirements in order to alter the monetary base.
- **Monetary policy** has an effect on the money supply as well.
    - **Expansionary policy** raises the total supply of money in the economy faster than usual, while **contractionary policy** raises the total supply of money more slowly than usual.
    - Expansionary policies are used to combat unemployment, whereas contractionary policies are used to slow inflation.

8.3 Conclusion

- The demand for money is the amount of money that is held under various motives.
- It should be remembered that in economics, demand for money refers to the demand for the existing stock of money that is available to be held. It is a stock of money, not a flow of it over time.
- The supply of money in a country is largely determined by the credit control policies pursued by the country's banking system.

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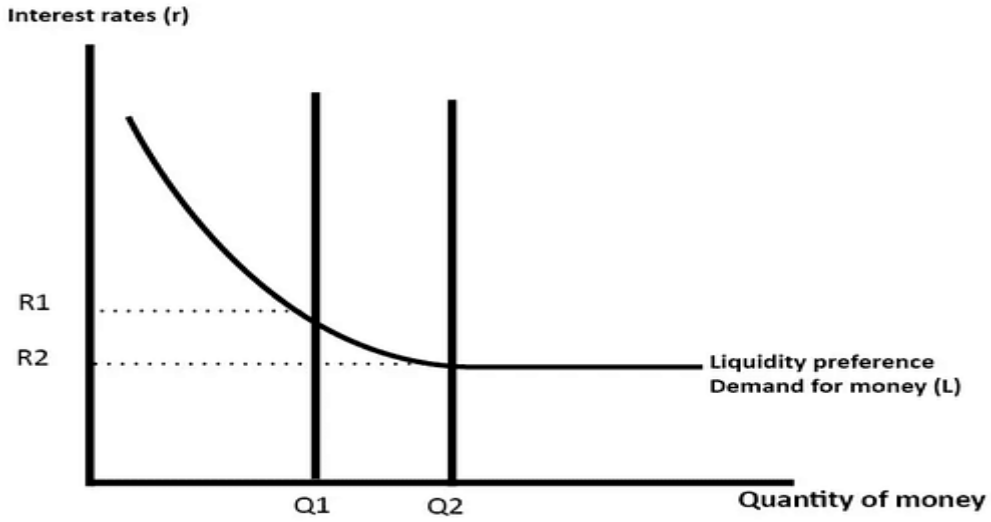
9 Demand for Money

According to Keynes, the **demand for money**, or **liquidity preference** as he referred to it, refers to the desire to hold money. In general, the nominal demand for money increases with the level of the nominal output and decreases with the nominal interest rate. The late **Lord Keynes**, the famous English economist who gave birth to what is now known as **Keynesian Economics**, proposed the modern concept of demand for money.

9.1 What is Demand for Money?

- In economics, demand for money is commonly associated with cash or bank demand deposits. In general, the nominal demand for money increases with the level of the nominal output and decreases with the nominal interest rate.
- The demand for money is influenced by a variety of factors, including **income level, interest rates, inflation, and future uncertainty.**
- **Monetary policy** can help to stabilize an economy when the demand for money is stable. When the demand for money is not stable, real and nominal interest rates change, and economic fluctuations occur.
- The demand for money explains people's desire for a specific amount of money.
- Money is required to manage transactions, and the value of the transactions determines how much money people wish to keep.
    - The greater the number of transactions, the greater the amount of money demanded.
- Since the quantity of transactions is determined by earnings, it should be obvious that an increase in earnings leads to an increase in the demand for money.
- When people save their money rather than putting it in a bank where it earns interest, the money they save is also subject to the rate of interest.
- People become less focused on stockpiling money when interest rates rise because holding money leads to holding less interest-earning deposits. As a result, at high-interest rates, the amount of money demanded decreases.



9.2 Motives for Demanding Money

Transaction Motive

- **It refers to the demand for money to meet the current needs of individuals and businesses.**
- Individuals require money to meet their immediate needs, which are referred to as the **income motive**.
- **Businesses, on the other hand, require money to carry out their operations, which is known as the business motive.**

Income Motive

- It refers to the motivation of individuals who seek money in order to **meet their own and their family's needs.** In general, people keep cash to bridge the gap between their income and their expenses.
- The income is received once a month, but the expenses are incurred on a daily basis. As a result, some income must be held in order to make current payments.
- The holding amount is determined by an **individual's income** and the frequency with which he or she receives income.

Business Motive

- It refers to the need for **money in liquid form by businesses** to meet their current needs.
- Businesses require funds to purchase raw materials and pay transportation costs, as well as wages, salaries, and other expenses.
- The amount of money demanded by businesses is determined by their **turnover**. The higher the turnover, the greater the need for additional funds to cover expenses.

Precautionary Motive

- It refers to people's desire to **save money for various contingencies** that may arise in the future.
- **Unemployment, sickness, and accidents** are examples of contingencies.
- The amount of money required for the precautionary motive is determined by a person's nature and living conditions.

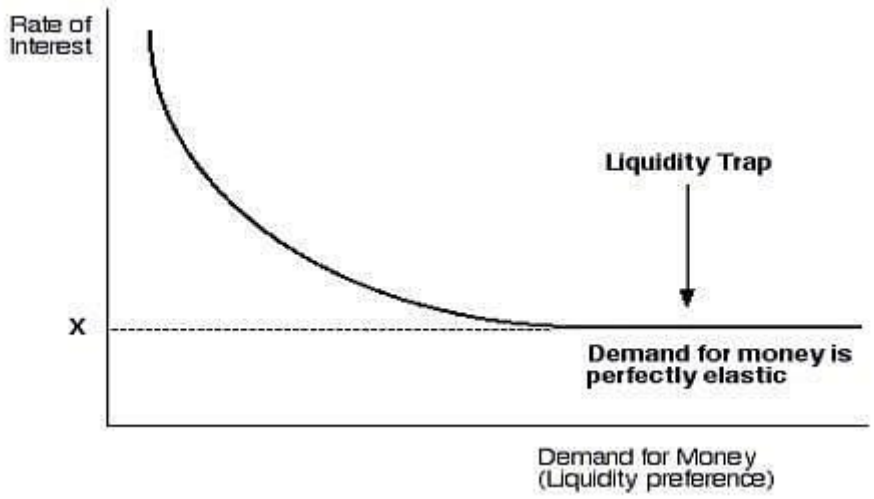
Speculative Motive

- The speculative motive for demanding money arises when **holding money is perceived to be less risky** than lending the money or investing it in another asset.
- It refers to the motivation of individuals to hold cash in order to profit from market movements regarding changes in future interest rates.
- For example, if a stock market crash appeared to be imminent, the speculative motive for demanding money would come into play; those anticipating a crash would sell their stocks and keep the proceeds as money.

- The precautionary and speculative motives serve as a store of value for various purposes.

Liquidity Trap

- The demand for money is a decreasing function of the rate of interest.
- Higher the rate of interest, lower the demand for money for speculative motives and less money would be kept as an inactive balance and vice versa.
- Money demand is perfectly elastic in a **liquidity trap.**
- Increasing the money supply has no effect on interest rates, and it has no effect on increasing demand.
- At a low rate of interest, people will hold money as an inactive balance which is called a liquidity trap.
- The expansion of the money supply gets trapped and cannot affect rate of interest and the level of investment.
- However, the demand for money does not depend so much upon the current rate of interest as on expectations about changes in the rate of interest.



9.3 Factors Affecting Demand for Money

Interest Rates

- The amount of money people keep in reserve to pay for transactions and to meet precautionary and speculative demand is likely to vary with the interest rates they can earn on alternative assets such as bonds.
- People hold less money when interest rates rise relative to the rates available on money deposits.
- People hold more money when interest rates fall.
- The logic of these conclusions about money and interest rates is dependent on people's motivations for holding money.

Technological Changes

- Technological changes such as debit cards make the importance of holding cashless important.
- People who have easy access to current accounts may be able to keep less cash on hand.
- The transaction motive drives the demand for money (we want money so we can buy things).
- We keep less money on hand when new technologies make it easier to convert wealth into money.

Availability of Credit

If credit becomes more widely available, precautionary demand for money will fall as people believe they can borrow – even if they face short-term difficulties.

Irrational Behavior of Asset Prices

- Markets can go through booms and busts as a result of psychological factors such as over-exuberance.
- During these bubble periods, demand for assets rises while demand for holding money falls.

Changes in National Income

- When real GDP rises, more goods and services are available for purchase. They will cost more money to purchase.
- A fall in real GDP, on the other hand, will cause the money demand curve to fall.

Changes in the Price Level (inflation or deflation)

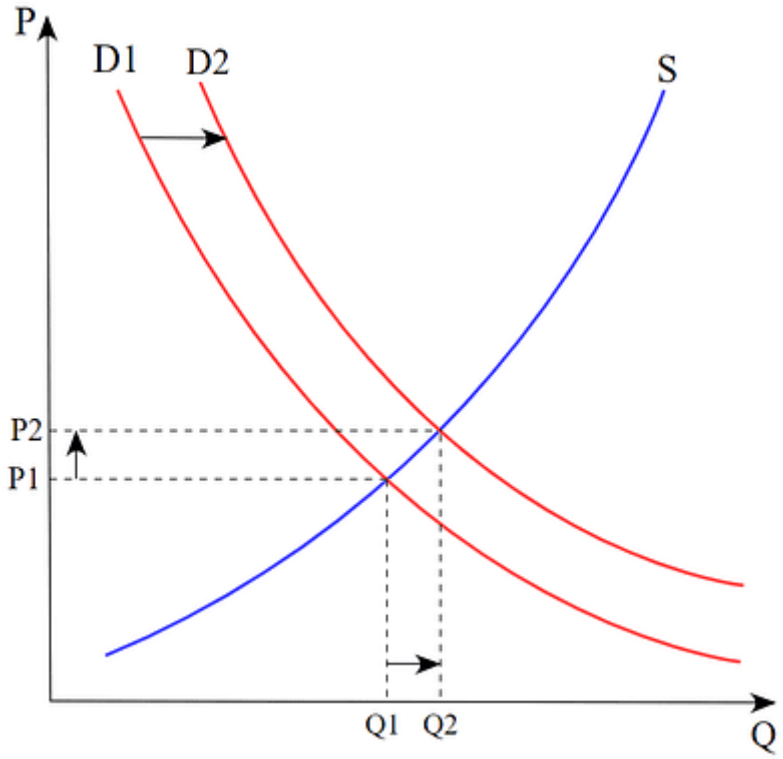
- If the price of everything increases by 20%, you will need 20% more money to buy things. When the price level rises, the demand for money rises as well.
- In contrast, when the price level falls, so does the demand for money.

9.4 Demand Curve for Money

- The money demand curve depicts the amount of money demanded at each interest rate, while all other variables remain constant.
- A rise in interest rates reduces the amount of money demanded. A decrease in interest rates raises the amount of money demanded.
- A shift in the money demand curve occurs when any non-price determinant of demand changes, resulting in a new demand curve.

9.5 Factors Causing a Shift in Demand

- The vertical axis (y) of a demand curve is the price, and the horizontal axis is the quantity (x).
- When any non-price determinant of demand changes, the money demand curve shifts, resulting in a new demand curve.
- Changes in non-price determinants cause demand to change even if prices remain constant. **Prices are influenced by a variety of factors, such as:**
    - Variations in **disposable income**
    - Variations in taste and preference
    - Variations in expectations
    - Variations in the price of related goods
    - Size of the population
- **Factors influencing demand include:**
    - Price reduction for a substitute
    - Increase in the price of a supplement
    - Reduce in consumer income if the good is a standard good
    - Increase in consumer income if the goods are of poor quality.
- When the nominal level of output rises, so does the demand for money. It moves in tandem with the nominal interest rate.



Shift of the Demand Curve: *The graph shows both the supply and demand curve, with quantity of money on the x-axis (Q) and the price of money as interest rates on the y-axis (P). When the quantity of money demanded increase, the price of money (interest rates) also increases, and causes the demand curve to increase and shift to the right. A decrease in demand would shift the curve to the left.*

9.6 Implications of Demand Curve Shift

- Money demand results from the trade-off between the liquidity advantage of holding money and the interest advantage of holding other assets.
- Money demand determines how a person's wealth should be held.
- When the demand curve shifts to the right and rises, the demand for money rises, and people are more likely to save money. The level of nominal output has risen, and there is a liquidity benefit to holding money.
- Similarly, a shift to the left in the demand curve indicates a decrease in the demand for money.
- As the nominal interest rate falls, there is a greater interest advantage in holding other assets rather than money.

9.7 Conclusion

The demand for money is affected by the price level, interest rate, and real GDP. These three factors combine to determine how much of a person's wealth is held in cash and how much is held in interest-bearing assets.

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10 Supply of Money

The total amount of money (in any form) held by a community in a given period of time is referred to as the **supply of money**. It is a **stock and share concept** that is usually perceived in terms of the cumulative effect of the amount of currency that citizens have and the demand deposits available with a country's banks.

Money supply data is collected and published because it influences the **price level, inflation, the exchange rate, and the business cycle.**

Understanding the fundamentals of money supply and money demand can help you gain a better understanding of the country's financial situation and the currency's volatility.

10.1 What is Supply of Money?

- The total stock of money circulating in an economy is referred to as the **supply of money.**
- In layman's terms, it is defined as **currency in circulation plus deposits in commercial banks**.
- The supply of Money consists of the following:
    - The total currency circulating in the public
    - **Non-bank deposits** with a commercial bank
- **Currency in circulation is** the total value of all currency (coins and paper currency) issued by the Reserve Bank of India minus the amount withdrawn by it. It is a significant **liability on a central bank's balance sheet**.
- Currency in circulation (currency with the public) includes the following:
    - Currency notes and coins with the public
    - Cash in hands with banks
- Money supply plays a crucial role in the determination of price level and interest rates.
- The growth of the money supply helps in the acceleration of economic development and price stability.
- **Credit control policies** imposed by a country are banking system aid in determining the total supply of money.
- The **monetary base** and the **money multiplier** ultimately determine the money supply.
- **Monetary policy** has an effect on the money supply as well.
    - **The expansionary policy** raises the total supply of money in the economy faster than usual, while **contractionary policy** raises the total supply of money more slowly than usual.
    - Expansionary policies are used to combat unemployment, whereas contractionary policies are used to slow inflation.

10.2 Effects of Money Supply on Economy

- The money supply, or total cash present in a country's economy, is bound to have an impact on market economics. As a result, any change in the demand and supply of money will cause a change in the market.
- A rise in the money supply will be reflected in lower interest rates and prices of commodities and service.
- A decrease in the money supply will result in higher interest rates and prices, with a corresponding increase in bank reserves.
- A similar effect occurs in the business. As the price level falls due to increased money supply, the business output will rise to accommodate people's increased spending.
- As a result, the money supply and money demand have a direct impact on the macroeconomics of a country's market.

10.3 Components

Currency

- Currency is a significant component of a country's money supply. As previously stated, the government issues currency in two forms: **coins and paper currency**. As a result, the money supply via currency can also be divided into:
    - **Paper Currency/Notes** - The government and the Reserve Bank of India have control over the production of currency notes. The government produces only one-rupee paper currency in the country, while the RBI produces all other currency notes.
    - **Coins** - Coins, India's second form of currency, are produced in two varieties: token coins and standard coins, also known as **full-bodied coins**. Under the current currency system, full-bodied currency coins have little value. The token coins have a face value of 50 paise and25 paise.

Demand Deposits

- **Demand deposits are a type of commercial bank deposit that serves as a non-confidential fund.**
- When a country's economy includes these accounts, they are considered money.
- The working mechanism of such deposits is similar to that of a checking account, where withdrawals from the fund can be made without notice.

10.4 Measures

- The RBI publishes figures for four different measures of money supply, namely **M1, M2, M3, and M4**. They are defined as below:
    - M1 = CU + DD
    - M2 = M1 + Savings deposits with Post Office savings banks
    - M3 = M1 + Net time deposits of commercial banks
    - M4 = M3 + Total deposits with Post Office savings organizations (excluding National Savings Certificates)

- where **CU** is public currency (notes and coins) and **DD** is **net demand deposits** held by commercial banks. The term **'net'** implies that only public deposits held by banks are to be included in the money supply.
- **M1 and M2** are referred to as **narrow money**.
- **M3 and M4** are referred to as **broad money.**
- **M1** is the most liquid and easiest to transact with, whereas **M4** is the least liquid.
- **M3** is the most commonly used money supply measure. It's also referred to as **aggregate monetary resources**.

10.5 Reserve Money (M0)

- Reserve money is also referred to as **central bank money, monetary base money, base money, or high-powered money.**
- Reserve money is all of the cash in the economy and is denoted by **M0**.
- It includes the following components:
    - Currency with the public
    - Other Deposits with the RBI
    - Banks' cash reserves held with themselves
    - Banks' cash reserves held with the RBI
- Cash Reserves are classified into two types: **Required Reserves (RR)** and **Excess Reserves (ER)**.
    - RR is the reserves that banks are legally required to keep with the RBI.
    - Excess Reserves are all reserves in excess of RR.
    - ER is held by banks, whereas RR is held by the RBI.
    - Banks hold the ER to cover currency drains, i.e., currency withdrawals by depositors.

10.6 Factors Affecting Money supply

Monetary Base

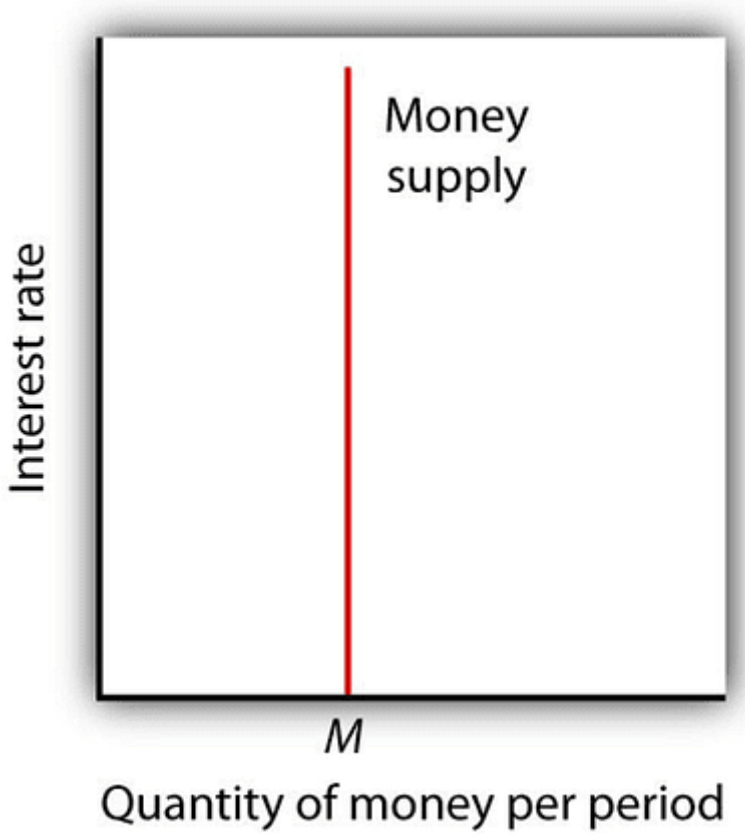
- When the **reserve moneychangers, the money supply changes** in the same direction. This means that as more reserve money enters the system, the money supply expands and vice versa.
- In most countries, the **size of the monetary base** is determined by the central bank.
- The monetary base includes **vault reserves** as well as currency in circulation outside of banks.
- Central banks may alter reserve requirements in order to alter the monetary base.

Money Multiplier

- A money multiplier is a method of demonstrating the maximum amount of broad money that commercial banks could create for a given fixed amount of base money and reserve ratio.
- The **Money Multiplier is the ratio of Narrow Money (M1) or Broad Money (M3) to Reserve Money.**

10.7 Supply Curve of Money

- The money supply curve depicts the relationship between the **quantity of money supplied** and the **market interest rate**, with all other supply determinants remaining constant.
- The money supply is solely determined by the **central bank** and is unaffected by interest rates.
- As a result, the **money supply curve is vertical** at the quantity of money supply, rather than upward or downward sloping.
- Since the central bank has control over the money supply, it can take actions to increase or decrease the money supply. Changes in the money supply cause interest rates to fluctuate.



10.8 Conclusion

Money supply has a significant impact on a country's economy. The inflation of commodity prices, as well as their demand and supply, alter the supply of money. In economics, the money supply influences interest rates and cash flow throughout the country.

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11 Money Creation by Banking System

Banks and money are inextricably linked. In our economy, the majority of the **money creation by banking system** is done in the form of **bank deposits**. It's not just that the majority of money is held in bank accounts. Through the **process of making loans**, the banking system can literally create money. Every new loan made by a bank generates new money. While this is often difficult to believe at first, it is common knowledge among those in charge of the banking system.

11.1 What is Money Creation by Banking System?

- Banks can lend money because they do not expect all investors and depositors to withdraw their funds at the same time.
- When a bank lends money to someone, a new deposit is opened in that person's name. As a result, the money supply expands to include both old and new deposits (plus currency).
- Let's look at an example. Assume there is only one bank in the country. Let's create a fictitious balance sheet for this bank only. The balance sheet is a record of an enterprise's assets and liabilities.
- Traditionally, assets are recorded on the left side of the balance sheet, while liabilities are recorded on the right.
- Accounting rules require that both sides of the balance sheet be equal and tally, or that total assets equal total liabilities.
- **Assets** are items that a company owns or has the right to claim from others. A bank's assets, aside from buildings and furniture, are the loans it makes to the public. When a bank makes a 1,000 loan to a person, this is the bank's claim on that person for 1,000.
- **Reserves** are another type of asset that a bank has. Reserves are commercial banks' deposits with the Central Bank, the **Reserve Bank of India (RBI),** and its cash.
    - These reserves are kept partly in cash and partly in the form of **financial instruments** issued by the RBI, such as **bonds** and **treasury bills.**
- Reserves are similar to the deposits we make at banks. We keep deposits, and these deposits are our assets, which we can withdraw. Similarly, commercial banks such as the State Bank of India (SBI) maintain their deposits with RBI which are called reserves.

Assets = Reserves + Loans

- Any business's liabilities are its debts or what it owes to others. The main liability of a bank is the deposits that people keep with it.

Liabilities = Deposits

- According to the accounting rule, both sides of the account must balance. As a result, if assets exceed liabilities, they are recorded on the right-hand side as **Net Worth**.

Net Worth = Assets - Liabilities

11.2 Financial Intermediation

- The ability of banks to create money distinguishes them from other financial intermediaries.
- Financial markets play an important role in transferring surplus reserves from households that save some of their income for the future to households and firms that want to borrow to buy investment (capital) goods for future production.
- **Financial intermediation** refers to the process of transferring funds from savers to borrowers.
- Only banks have the legal authority to create assets that are part of the money supply, such as deposits withdrawable by cheque, among all financial intermediaries, including the stock market, bond market, investment companies, and mutual funds.
- This means that banks are the only financial institutions that have a direct impact on the money supply.

11.3 Money Creation vs Wealth Creation

- Without a doubt, the **fractional-reserve banking system** generates money. However, it does not generate wealth.
- When a bank lends a portion of its excess reserves, it provides borrowers with the ability to conduct transactions and, as a result, increases the country's money supply.
- However, because the borrowers also have a debt obligation to the bank, the loan does not make them richer.
- This simply means that the banking system's creation of money **increases the economy's liquidity rather than its wealth.**

11.4 Determinants of Money Creation

Excess Reserves

- The total amount of excess reserve held by the banking system as a whole per period determines banks' credit-creating capacity.
- The amount of deposit created is proportional to the amount of excess reserve.

Reserve Ratio

- The maximum amount of credit that banks can create is also determined by the reserve ratio maintained by the banking system as a whole.
- If the central bank raises the minimum-reserve ratio, the total amount of deposits created by the banking system falls. The opposite is also true.

Banking Habits of People

- The credit-creating capacity of commercial banks is also affected by people's banking habits.
- People's banking habits are well-developed in industrialised countries, and the majority of transactions are settled with cheques.
- Obviously, commercial banks' credit-creating capacity is greater in such countries.
- The opposite is true in developing countries such as India. Banking services are not available in the majority of rural areas, where 70% of the population lives. Furthermore, thebanking habits are alsounderdeveloped in such countries.
- In fact, the prevalence of the barter system and a lack of monetisation in the majority of developing Asian, Latin American, and African countries obstructs multiple credit expansion by the banking system.

Availability of Collateral Securities

- Banks typically require securities in exchange for making loans.
- If borrowers do not have enough acceptable securities to offer, the total amount of deposits created by the banking system will be small.
- Even if banks are eager to lend, they are unable to increase their loan volume.

Existing Business Conditions

- The amount of credit that the banking system as a whole can create is determined by the state of the economy or, more specifically, by current business conditions.
- When the economy grows, there is more demand for goods and services. Profit prospects will be favourable as a result.
- As a result, business people will be eager to produce more so that they can sell more. As a result, they will take out more loans, increasing the demand for bank loans. This will make it profitable for banks to increase their credit volume.
- Banks, on the other hand, cannot create much credit if the economy is in a slump. It is because there will be little demand for bank loans during these times.

Expansion of Banking System

- The total amount of credit that banks can create is determined by the country's banking system's expansion.
- The credit-creating capacity of banks will be high if the banking system is well-developed and there are many banks in the country.
- It is because the total amount of credit that the banking system as a whole can create is a multiple of the banking system's total excess reserves.
- However, in the system, a single (monopoly) bank cannot create credit (deposits) that exceeds its own excess reserve.

Legal Reserves

- If the legal reserve is 10% but commercial banks keep 20% reserve, the deposit (credit) multiplier is 5, not 10.
- Thus, if a bank's cash deposit increases by, say, Rs. 1,000, the total increase in bank deposit at the end will be only Rs. 5,000, not Rs. 10,000.

Cash Leakage

- Banks will have less cash if depositors withdraw a certain amount of money for spending (transactions).
- As a result, as people's transaction demand for money rises, so will the amount of cash held by the non-bank public.
- This will reduce commercial banks' credit-creation capacity.

11.5 Credit Creation by Commercial Banks

- By making new loans, **commercial banks** generate money in the form of bank deposits.
- When a bank makes a loan, such as to someone taking out a mortgage to buy a house, it does not usually do so by handing over thousands of rupees in banknotes.
- Instead, it credits their bank account with a bank deposit equal to the mortgage amount. New money is created at that point.
- Commercial banks' ability to create credit is determined not only by their own cash requirements, but also by the cash requirements of the public or non-banking system.
- Their own cash requirement is primarily determined by the central bank's monetary (credit) policy.
- In order to slow the economy and control inflation, the central bank frequently limits money supply growth.
- However, the public's cash requirement is determined by transaction demand for money, i.e., the amount of money people require for spending.

11.6 Conditions Essential for Credit Creation

The following conditions must be met in order for credit to be created in an economy.

- **Public willingness** to deposit money in commercial banks.
- **Commercial banks' willingness** to lend money to individuals or businesses in the form of credit.
- **Individuals' or businesses' willingness** to seek money from commercial banks in the form of credit.

11.7 Flipside

- The flip side of this money creation is that with each new loan comes a new debt.

- This is where our mountain of personal debt stems from: not borrowing from someone else's life savings, but money created out of thin air by banks.

11.8 Conclusion

Money can be created because there are multiple banks in the financial system; they are only required to hold a fraction of their deposits, and loans end up deposited in other banks, increasing deposits and, thus, the money supply.

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12 Monetary Policy

Monetary policy is a process implemented by the **central bank** to manage the **money supply** in order to achieve specific goals such as **limiting inflation, maintaining an appropriate exchange rate, creating jobs, and promoting economic growth**. Monetary policy entails changing interest rates, either directly or indirectly, through open market operations, reserve requirements, or foreign exchange trading.

Credit policy is a subset of monetary policy because it governs how much and at what interest rate banks extend credit.

Historically, in India, monetary policy was announced twice a year, once during the **slack season (April-September)** and once during the **busy season (October-March),** in accordance with agricultural cycles. However, because monetary policy has become more dynamic, the **Reserve Bank of India** decided to issue **bi-monthly Monetary Policy Statements**—once every two months—beginning in 2014, as recommended by the **Urjit Patel Committee**.

12.1 Types of Monetary Policy

Monetary policy is of the following two types:

- **Expansionary policy** – It increases the total supply of money in the economy by easing its availability by lowering interest rates. It is used to stimulate economic growth.
- **Contractionary policy** – It decreases the total supply of money in the economy by raising interest rates. It is used to reduce prices caused by an excess of money supply.

12.2 Objective of Monetary Policy

- Monetary policy is concerned with making money available to the market at reasonable rates and in sufficient quantities at the appropriate time in order to achieve:
    - **Price stability**
    - **Accelerating growth of economy**
    - **Exchange rate stabilization**
    - **Balancing savings and investment**
    - **Generating employment**
    - **Financial stability**
- The primary goal of monetary policy is to maintain price stability while keeping growth in mind. Price stability is a prerequisite for long-term growth.
- In order to maintain price stability, inflation must be kept under control.
- Every five years, the Indian government sets an inflation target. The Reserve Bank of India (RBI) plays an important role in the consultation process for inflation targeting. The current **inflation-targeting framework** in India is flexible.

12.3 How does the RBI get its Mandate to conduct Monetary Policy?

- The Reserve Bank of India (RBI) is charged with implementing monetary policy. The **Reserve Bank of India Act of 1934** expressly mandates this responsibility.
- **There have recently been many changes in the way India's monetary policy is formed, with the introduction of the Monetary Policy Framework (MPF), Monetary Policy Committee (MPC), and Monetary Policy Process (MPP).**

12.4 Monetary Policy Framework (MPF)

- While the Government of India establishes the **Flexible Inflation Targeting Framework in India,** the Reserve Bank of India (RBI) is in charge of the country's Monetary Policy Framework.
- The amended RBI Act explicitly gives the Reserve Bank the **legislative mandate** to run the country's monetary policy framework.
- The framework aims to set the **policy (repo) rate** based on an assessment of the current and evolving macroeconomic situation, as well as to modulate liquidity conditions in order to anchor money market rates at or near the repo rate.
- Changes in repo rates are transmitted through the money market to the entire financial system, influencing aggregate demand – a key determinant of inflation and growth.
- Once the repo rate is announced, the Reserve Bank's operating framework envisions day-to-day liquidity management through appropriate actions aimed at anchoring the operating target - the **weighted average call rate (WACR)** – around the repo rate.

12.5 Monetary Policy Committee (MPC)

- The **Monetary Policy Committee** now determines the policy interest rate required to achieve the inflation target in India.
- The MPC is a six-person committee appointed by the Central Government (**Section 45ZB of the amended RBI Act, 1934**).
- The MPC must meet at least **four times per year**. The MPC meeting requires a quorum of four members. Each MPC member has one vote, and in the event of a tie, the **Governor** has a **second or casting vote**.
- Following the conclusion of each MPC meeting, the resolution adopted by the MPC is published.
- The Reserve Bank is required to publish a document called the **Monetary Policy Report** once every six months to explain:
    - the sources of inflation; and
    - the forecast of inflation for the next 6-18 months.

12.6 Monetary Policy Instruments

Monetary policy is implemented using a variety of direct and indirect instruments.

Repo Rate

The (fixed) interest rate at which the Reserve Bank provides overnight liquidity to banks in exchange for the government and other approved securities as collateral under the liquidity adjustment facility (LAF).

Reverse Repo Rate

The (fixed) interest rate at which the Reserve Bank absorbs liquidity from banks on an overnight basis in exchange for eligible government securities under the LAF.

Liquidity Adjustment Facility (LAF)

- The LAF is made up of both overnight and term repo auctions.
- The Reserve Bank has gradually increased the proportion of liquidity injected through fine-tuning variable rate repo auctions of various tenors.
- The goal of the term repo is to help develop the inter-bank term money market, which in turn can set market-based benchmarks for loan and deposit pricing and thus improve monetary policy transmission.
- The Reserve Bank also conducts variable interest rate reverse repo auctions as market conditions dictate.

Marginal Standing Facility (MSF)

- A facility through which scheduled commercial banks can borrow an additional amount of overnight money from the Reserve Bank by dipping into their **Statutory Liquidity Ratio (SLR)** portfolio up to a certain limit at a penal rate of interest.
- This acts as a safety valve for the banking system in the event of unexpected liquidity shocks.

Corridor

The corridor for the daily movement in the weighted average call money rate is determined by the MSF rate and the reverse repo rate.

Bank Rate

- It is the rate at which the Reserve Bank is willing to purchase or rediscount bills of exchange or other commercial papers.
- Section 49 of the **Reserve Bank of India Act, 1934** mandates the publication of the Bank Rate.
- This rate has been aligned with the MSF rate and, as a result, changes automatically when the MSF rate and the policy repo rate change.

Cash Reserve Ratio (CRR)

The average daily balance that a bank is required to maintain with the Reserve Bank as a share of such percentage of its **Net demand and time liabilities (NDTL)** as specified by the Reserve Bank in the Gazette of India from time to time.

Statutory Liquidity Ratio (SLR)

- The percentage of NDTL that a bank must keep in safe and liquid assets such as unencumbered government securities, cash, and gold.
- SLR changes frequently have an impact on the availability of resources in the banking system for lending to the private sector.

Open Market Operations (OMOs)

These include the outright purchase and sale of government securities for the purpose of injecting and absorbing long-term liquidity, respectively.

Market Stabilisation Scheme (MSS)

- This monetary management tool was introduced in 2004.
- Short-term government securities and treasury bills are sold to absorb longer-term surplus liquidity resulting from large capital inflows.
- The money raised in this manner is kept in a separate government account of the Reserve Bank.

12.7 Conclusion

Monetary policy refers to the use of monetary instruments controlled by the central bank to regulate magnitudes such as interest rates, money supply, and credit availability in order to achieve the ultimate goal of economic policy.

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13 Goals of Monetary Policy

It is stated in the Preamble of the **Reserve Bank of India Act 1934** that, the primary **goal of the monetary policy** is to **maintain price stability** while keeping in mind the **objective of growth**. Price stability in other words can be called **inflation targeting**. Monetary policy is an important topic for UPSC IAS Exam Prelims and General Studies Paper 3.

13.1 What is Monetary Policy?

- Monetary policy refers to a collection of activities that a country's central bank can take to control the entire money supply and achieve long-term economic growth.
- Monetary policy can be broadly categorised into - **Expansionary or contractionary monetary policy.**
- Interest rates can be raised or lowered, cash can be directly lent to banks, and bank reserve requirements can be changed.

13.2 Goals of Monetary Policy

- The primary goal of monetary policy is to **maintain price stability while still pursuing the goal of economic growth**. Price stability is a critical prerequisite for long-term growth.
- The Reserve Bank of India (RBI) Act, 1934 was revised in May 2016 to give a **legal basis for the flexible inflation targeting framework's implementation.**
- The amended RBI Act also mandates that the government of India, in collaboration with the Reserve Bank, **determine the inflation target once every five years.**
- As a result, the Central Government published a notice in the Official Gazette setting a **target of 4% Consumer Price Index (CPI) inflation** for the period August 5, 2016 to March 31, 2021, **with a 6% upper tolerance limit and a 2% lower tolerance limit.**
- The Central Government retained the inflation target and tolerance band for the following 5-year period – **April 1, 2021 to March 31, 2026** – on March 31, 2021.
- The following issues have been identified by the central government as contributing to the inability to meet the inflation target:
    1. For any three consecutive quarters, average inflation exceeds the inflation target's upper tolerance level; or
    2. For any three consecutive quarters, average inflation falls below the lower tolerance level.
- Prior to the May 2016 change to the RBI Act, the flexible inflation targeting framework was controlled by a February 20, 2015 Monetary Policy Framework Agreement between the Government and the Reserve Bank of India.

13.3 Other Goals of Monetary Policy

- **Promotion of saving and investment:** A higher rate of interest means more opportunities for investment and savings, ensuring a healthy cash flow in the economy.

- **Managing business cycles:** A business cycle has two primary stages: **boom and depression.** By regulating credit to manage the availability of money, monetary policy is the most effective weapon for controlling the boom and bust of business cycles.
- **Controlling imports and exports:** Monetary policy assists export-oriented units in substituting imports and increasing exports by assisting them in obtaining a loan at a lower interest rate. As a result, the state of the balance of payments improves.
- **Aggregate demand regulation:** When credit is expanded and interest rates are lowered, more people are able to get loans for the purchase of goods and services.
- **Employment Generation:** Small and medium companies (SMEs) can readily obtain a loan for business expansion because to the monetary policy's ability to cut interest rates. This could result in more job chances.
- **Helping infrastructure development:** The monetary policy allows for concessional funding for infrastructure development within the country.

13.4 Tools to achieve the goals of Monetary Policy

- The Reserve Bank of India in its **Bi-monthly Monetary Policy Review meeting** changes the monetary policy tools according to the prevailing inflation and economic situation.
- For instance, **due to the COVID-19 situation** present in the country in March 2020, the RBI took an accommodative stance and **reduced Repo Rate by 75 basis points from 5.15% to 4.40%**.
    - It also **reduced reverse repo rate from 4.9% to 4.00%** and **Marginal Standing Facility rate from 5.40% to 4.65%** to boost consumption.
- Some important tools are:
    - Liquidity Adjustment Facility
        - Repo Rate
        - Reverse Repo Rate
    - Marginal Standing Facility Rate (MSF) or Bank Rate
    - Cash Reserve Ratio (CRR)
    - Statutory Liquidity Ratio (SLR)

13.5 Conclusion

The Reserve Bank of India has successfully maintained its primary goal of inflation targeting in the first five years of the statutory agreement with the government by altering the instruments of monetary policy accordingly.

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