

Monetary Policy

G.E. Public Finance, B. Com (H) 4th Sem

Part-A-Unit – 4- Working of Monetary and Fiscal Policies

Readings: - Case and Fair, Principles of Economics, 10th Edition, Chapter 25 (pp 501-502, 505-510, 515-519)

Money serves four basic functions in an economic system. It acts as (1) a medium of exchange, (2) a unit of measure, (3) a store of value, and (4) a standard of deferred payment. As a medium of exchange, money must be universally accepted in exchange. It must be something always accepted in trade. In prisoner-of-war camps, cigarettes have served as a medium of exchange, and in the northern reaches of the earth, furs have circulated as a medium of exchange. Livestock and precious metals have a long history of service as mediums of exchange.

Money as a fiction, a myth that is so powerful that the whole world is ruled by it. Unlike religion, nation money is not rigid. You can convert into any other currency while trading. A myth that created a space for exchange easily that we know as market. An imagination that reduced the burden and limitation of barter exchange. A fiction that can stabilise and destabilise a system. Money is that collective faith that enabled the civilisation to grow. Today money is everything you buy and sell with a thing which has no value in itself. And that's the power of money.

Under a monetary system, money is exchanged for goods or services when people buy things; goods or services are exchanged for money when people sell things. No one ever has to trade goods for other goods directly. Money is a lubricant in the functioning of a market economy. Money as a **unit of measure**

The alternative to a monetary economy is **barter**, people exchanging goods and services for other goods and services directly instead of exchanging via the medium of money. A barter system requires a double coincidence of wants for trade to take place. That is, to effect a trade, you have to find someone who has what you want and that person must also want what you have.

Money must also act as a **unit of measure**, comparable to yards, gallons, tons, cubic feet, or any other measure. British pounds sterling, U.S. dollars, Japanese yen, German marks, French francs Rupee in India all serve as units of measurement.

Anything meeting all of the demands placed on money must be satisfactory as a **store of value**. That is, it must preserve its value over a length of time. Perishable commodities rarely serve as money because wealth stored in perishable

commodities is doomed to extinction. Precious metals such as gold and silver, known for resistance to corrosion and natural deterioration, are the most prized as monetary commodities and have few rivals as commodities that preserve value over time. Livestock reproduce, allowing them to preserve value over time, and even earn a form of interest. Inflation is the chief enemy of paper money because it renders the paper money useless as a store of value.

Money should also furnish society with a **standard of deferred payment**, enabling debtors and creditors to negotiate long-term contracts. Creditors want assurance that debtors cannot legally discharge debts with money possessing less purchasing power than the money originally borrowed. An unanticipated depreciation of the currency shortchanges creditors and gives debtors a windfall gain, arbitrarily redistributing income from creditors to debtors.

On the other hand, if money becomes unusually abundant, debtors easily find the means to repay debts, and creditors find the money repaid to them is worth less. Debtors are at risk if currency unexpectedly appreciates, increasing what debtors have to repay creditors in real terms. Unexpected currency appreciation redistributes income in favor of creditors over debtors. Because those who need to borrow money are usually worse off than those who have money to lend, an income redistribution favoring creditors is likely to cause hard feelings among those who already feel they get less than their share of income. Monetary issues are the focal point of a not-so-secret war between debtors and creditors.

Money falls within two broad categories, **commodity money** and **fiat money**. Commodity money makes use of some commodity, such as tobacco, rice, gold, or silver, that has an intrinsic value, or market value independent of any government decree sanctioning the commodity as legal tender for payment of private and public debts. Commodity monetary standards may make use of tokens or paper circulating money, but the circulating money can always be redeemed in a monetary commodity at an official rate.

Fiat money has no intrinsic value; that is, it has no market value independent of a government decree establishing it as legal tender for private and public debts. Modern monetary systems are called inconvertible paper standards, because the fiat money issued by these systems cannot be converted into a commodity at an official rate. Fiat money has value because governments give themselves a monopoly on the privilege to issue fiat money, enabling them to limit its supply, and governments use their power to adjudicate disputes to make the money legal tender for all debts. By limiting the supply and creating a need, the government confers value on paper money that has little or no intrinsic value. The public accepts paper money as a means of payment and a store of value because the government has taken steps to

ensure that its money is accepted. The government declares its paper money to be legal tender. That is, the government declares that its money must be accepted in settlement of debts. It does this by fiat (hence fiat money). It passes laws defining certain pieces of paper printed in certain inks on certain plates to be legal tender, and that is that. Printed on every Reserve Bank note in the India is "I promise to pay the bearer the sum of the two hundred rupees." Often the government can get a start on gaining acceptance for its paper money by requiring that it be used to pay taxes.

Aside from declaring its currency legal tender, the government usually does one other thing to ensure that paper money will be accepted: It promises the public that it will not print paper money so fast that it loses its value. Expanding the supply of currency so rapidly that it loses much of its value has been a problem throughout history and is known as currency debasement. Debasement of the currency has been a special problem of governments that lack the strength to take the politically unpopular step of raising taxes. Printing money to be used on government expenditures of goods and services can serve as a substitute for tax increases, and weak governments have often relied on the printing press to finance their expenditures. An interesting example is Zimbabwe. In 2007, faced with a need to improve the public water system, Zimbabwe's president, Robert Mugabe, said, "Where money for projects cannot be found, we will print it" (reported in the *Washington Post*, July 29, 2007). In later chapters we will see the way in which this strategy for funding public projects can lead to serious inflation.

Two commodities, gold and silver, have been promoted as the aristocrats of commodity money. Until the 19th century, silver usually prevailed as the predominant form of commodity money, punctuated by intervals of bimetallism, which made use of both gold and silver and established a fixed ratio that set the value of each metal in terms of the other. Aside from the Byzantine period, when gold reigned supreme, the hegemony of silver lasted from the time of Alexander the Great until the 19th century.

Historically, precious metals have had a funny way of showing up and disappearing as civilizations waxed and waned. The silver mines of Laurium helped finance the golden age of Greece, and the decline of the Roman Empire coincided with the exhaustion of the silver mines in Spain and Greece. The stagnation of Western Europe during the Middle Ages may be explained by the virtual disappearance of precious metals during that era. The economic expansion of Europe that led to the eventual world dominance of European civilization in the 19th century followed the European discovery of vast precious metal deposits in the New World

The much-vaunted gold standard, the demise of which is still mourned by a few true believers, actually represents a relatively late development in monetary history. The

gold standard is a recent upstart compared to silver and bimetallic standards. Only in the 50 years preceding World War I (1914–1918) did gold become the sole standard of purchasing power, completely eclipsing the role of silver in the world's monetary system.

The fascination with gold may be a relic of the awe that surrounded money in some primitive societies. The word "taboo" originated from the sacred character and atmosphere of mystery that surrounded primitive money in islands of the South Pacific. In the Fiji Islands, sperm whale teeth, called "tambua," (of which "taboo" is a variant), acted as money and conferred social status on their owners. The power of a whale tooth guaranteed compliance with any request that accompanied it as a gift. On Rossel Island, some of the most valuable units of shell money could only be handled in a crouched position, and many of these units were thought to have been handed down from the beginning of time. In parts of the Philippines, women were not allowed to enter sacred storehouses where rice money was kept.

John M. Keynes, a famous British economist in the first half of the twentieth century, observed in volume two of his *Treatise on Money* (1930) that gold had "enveloped itself in a garment of respectability as densely respectable as was ever met with, even in the realms of sex or religion" (259). Concerning the power that a relatively small amount of gold played in the world's monetary affairs, Keynes wrote in the same work that "[a] modern liner could convey across the Atlantic in a single voyage all the gold which has been dredged or mined in seven thousand years" (259). The world's supply of gold has increased since Keynes wrote these words, but the supply remains small in comparison to the important role it has always played in monetary affairs. Even during Keynes's time, monetary gold lay out of sight in the underground vaults of central banks, and gold transactions were conducted by paper notations (earmarking), rather than physically moving gold to different locations.

The strength of gold as a monetary commodity lay in the hold it commanded on the human imagination, but its weakness lay in its restricted supply, which failed to keep pace with the growth of trade. The gold standard forced the world's economies to struggle constantly against what today would be called a tight money policy. Although fresh supplies of gold occasionally burst forth, furnishing a brief respite from tight money, the long-term trend was one of deflation owing to the limited money supplies.

Money is easily spent, flowing out of your hands like liquid.

The world's trading partners severed the connection between domestic money supplies and domestic gold reserves in the 1930s, hoping that more lax monetary

policies would reflate the depression-ridden economies of that era. Under the Bretton Woods system of the post-World War II era, domestic currencies remained convertible into gold at the request of foreign central banks, but not at the request of private individuals. During the Bretton Woods era, gold reserves failed to keep pace with the need for monetary growth, and by agreement of the members of the Bretton Woods system, a form of “paper gold” was created called “standard drawing rights.” Standard drawing rights are really only entries in accounting logs, but they act as reserves of gold or foreign currencies.

Since 1971, the world’s major trading partners have been on inconvertible paper standards. The United States dollar and other major currencies became strictly fiat money, inconvertible into gold even at the request of foreign central banks. The burst of inflation of the 1970s may have been due partially to a void in monetary discipline left by the departure from the last vestiges of the gold standard. The experience of Japan between 1999 and 2005, however, cautions against generalizations about the inevitability of inflation under a fiat monetary system. Japan posted consumer price deflation for seven consecutive years. Japan’s experience would not have been unusual if Japanese authorities had induced deflation by a restrictive monetary policy and exorbitant interest rates. Before Japan’s episode of deflation, the world’s monetary authorities had already learned how to restrict the rate of monetary growth to noninflationary levels. By the mid-1990s, inflation had subsided to insignificant levels virtually worldwide. Japan’s experience appeared unique because deflation persisted long after short-term Japanese interest rates fell to near zero levels. Japan’s deflation existed under conditions of relatively lax monetary policies. In 2009, the United States is trying to formulate a policy in light of previous experiences with inflation and Japan’s recent experience with deflation. The outcome should reveal clues and hints that are even more interesting about the nature of money.

M1: Transactions Money:- *M1 K currency held outside banks + demand deposits + traveler’s checks + other checkable deposits*

M2: Broad Money:- *M2 K M1 + Savings accounts + Money market accounts + Other near monies*

Beyond M2 Because a wide variety of financial instruments bear some resemblance to money, some economists have advocated including almost all of them as part of the money supply.

for our purposes, “money” will always refer to transactions money, or M1. For simplicity, we will say that M1 is the sum of two general categories: currency in circulation and deposits. Keep in mind, however, that M1 has four specific

components: currency held outside banks, demand deposits, traveler's checks, and other checkable deposits.

Money Multiplier: The money multiplier is the multiple by which deposits can increase for every dollar increase in reserves. Let's not confuse the money multiplier with the spending multipliers that has been discussed so far.

Money Multiplier = $1 / \text{required reserve ratio}$

The link between spending multiplier and money multiplier is both depends on savings. The amount of money the bank is required to save is known as required reserve ratio.

Central Bank:

Most central Bank have two jobs

1. They regulate and oversee the nation's commercial banks by making sure that banks have enough money in reserve to avoid bank runs.
2. Conduct monetary policy which is increasing or decreasing the money supply to speed up or slow down the overall economy.

This monetary policy makes Central Banks influential

Interest Rate: It is when banks lend money, they expect to be repaid the amount they lent, which is called the principle, and a percentage of the principle to cover inflation and to make some profit. That percentage is called interest rate.

Each kind of loans depends on interest rate such as student loan, home loan, car loan etc. When interest rates are low, borrowers will find it easier to pay back loans so they will borrow more and spend more. When interest rates are high, borrowers borrow less and therefore spend less.

A decrease in money supply has the opposite effect. Less money supply means the banks have less money to loan out, so they are going to try and get the highest interest rate possible. But to speed up the economy they can increase the money supply which will decrease interest rates and lead to more borrowing and spending that is called **expansionary monetary policy**. If the central bank wants to slow down the economy they decrease the money supply-less money available will increase interest rates and decrease spending. That's called **Contractionary Monetary Policy**.

Confidence and liquidity keeps the banking system a smooth run. Currently government of India merged banks because of NPA problem, which is to say that their asset situation is very bad. People could not even withdraw money. PMC Bank Punjab and Maharashtra Co-operative Bank has to be given

written request before 6 months for withdrawing even Rupees 1000/- in the September 2019 month¹

So how does the Central Bank change the money supply?

Money Supply:- It is equal to the sum of deposits inside banks and the currency circulation outside banks. If the central bank wants to increase the supply of money, it creates more reserves, thereby freeing banks to create additional deposits by making more loans. If it wants to decrease the money supply it reduces reserves. Central Bank uses monetary tools to increase or decrease money supply in

The total stock of money in circulation among the public at a particular point of time is called money supply. The measures of money supply in India are classified into four categories M1, M2, M3 and M4 along with M0. This classification was introduced in April 1977 by Reserve Bank of India. Let's discuss these one by one:

1. **Reserve Money (M0):** It is also known as High-Powered Money, monetary base, base money etc.
 $M0 = \text{Currency in Circulation} + \text{Bankers' Deposits with RBI (Cash Reserve Ratio)} + \text{Other deposits with RBI}$
It is the monetary base of economy.
2. **Narrow Money (M1):** most liquid
 $M1 = \text{Currency with public (Total currency in the market-Cash in Bank)} + \text{Demand deposits with the Banking system (current account, saving account)} + \text{Other deposits with RBI (foreign central bank or sundry deposits of IMF account)}$
1)
3. $M2 = M1 + \text{Savings deposits of post office savings banks (1. Postal deposits, 2. Saving Certificates e.g. National Savings Certificates or Kishan Bikash Patra, 3. Social Security Scheme e.g. PPF, Senior Citizen Saving Scheme)}$
4. **Broad Money (M3)**
 $M3 = M1 + \text{Time deposits with the banking system}$
5. $M4 = M3 + \text{All deposits with post office savings banks-NSS (least liquid)}$
(Liquidity means the ability of the assets that are the components of this measures to change into money quickly without loss of money)

¹ <https://economictimes.indiatimes.com/industry/banking/finance/banking/rbi-bars-punjab-maharashtra-co-op-bank-from-business-transactions/articleshow/71271849.cms?from=mdr>.

There are basically three tools RBI can do

1. **The Required Reserve Ratio:- CRR - Cash Reserve Ratio (4%)**- Banks in India are required to hold a certain proportion of their deposits in the form of cash. However Banks don't hold these as cash with themselves, they deposit such cash(aka currency chests) with Reserve Bank of India , which is considered as equivalent to holding cash with themselves. This minimum ratio (that is the part of the total deposits to be held as cash) is stipulated by the RBI and is known as the CRR or Cash Reserve Ratio.

When a bank's deposits increase by Rs100, and if the cash reserve ratio is 9%, the banks will have to hold Rs. 9 with RBI and the bank will be able to use only Rs 91 for investments and lending, credit purpose. Therefore, higher the ratio, the lower is the amount that banks will be able to use for lending and investment. This power of Reserve bank of India to reduce the lendable amount by increasing the CRR, makes it an instrument in the hands of a central bank through which it can control the amount that banks lend. Thus, it is a tool used by RBI to control liquidity in the banking system. Decreasing the reserve requirement will increase the money supply and increasing the reserve requirement decreases the money supply.

2. **Discount Rate:-** The second thing the Central Bank can do to change the money supply is to change the interest rate that it charges banks. That interest rate is called the Discount Rate. Decreasing the Discount Rate will make it easier for banks to borrow, and that'll increase the money supply. Increasing that rate will decrease the money supply.
3. **Open Market Operations:-** This is the most important tool. This is when the Central Bank buys or sells short term government bonds, securities, treasury bills. Banks hold those bonds because they earn interest and are generally less risky than stocks. When the Central Bank buys these bonds from banks, it increases that bank's liquidity and increases the money supply. If the RBI issues more bonds, the banks will have less liquidity and less money to loan out, and that'll decrease the money supply

Two Branches of Govt deal in Govt securities:- Two branches that is RBI and Treasury deal the financial market situation for different reasons. First Treasury Department is responsible for collecting taxes and paying the Central govt. bills. Salary check paid to govt. workers, social security payment etc. Tax receipts collected by the Revenue branch of Treasury.

If $G > T$ then differences has to be borrowed. This means Treasury can not print to finance the deficit. The treasury borrow by issuing bonds, bills, securities

etc. The RBI acquired this over time through direct open market purchases that RBI made to expand the money supply as the economy expanded.

The mechanics of Open Market Operations: Suppose the RBI will sell its securities, bills and bonds in the open market then its securities will reduce as it is owned by public. The purchaser will buy that by paying for it to the RBI that will reduce the money reserve in the banks that in turn reduction in RBI. An open market purchase of securities by the RBI results in an increase in reserves and an increase in the supply of money by an amount equal to the money multiplier times the changes in reserves.

Sale of securities by the RBI results in a decrease in reserves and a decrease in the supply of money by an amount equal to the money multiplier times the change in reserves.

Monetary Tools:

Repo rate (5.15%)- also known as the benchmark interest rate is the rate at which the RBI lends money to the banks for a short term. When the repo rate increases, borrowing from RBI becomes more expensive. If RBI wants to make it more expensive for the banks to borrow money, it increases the repo rate similarly, if it wants to make it cheaper for banks to borrow money it reduces the repo rate. Current repo rate is 5.15%

Reverse Repo rate (4.90%)- is the short term borrowing rate at which RBI borrows money from banks. The Reserve bank uses this tool when it feels there is too much money floating in the banking system. An increase in the reverse repo rate means that the banks will get a higher rate of interest from RBI. As a result, banks prefer to lend their money to RBI which is always safe instead of lending it others (people, companies etc) which is always risky.

Repo Rate signifies the rate at which liquidity is injected in the banking system by RBI, whereas Reverse Repo rate signifies the rate at which the central bank absorbs liquidity from the banks.

SLR - Statutory Liquidity Ratio (18.25%)- Every bank is required to maintain at the close of business every day, a minimum proportion of their Net Demand and Time Liabilities as liquid assets in the form of cash, gold and un-encumbered approved securities. The ratio of liquid assets to demand and time liabilities is known as Statutory Liquidity Ratio (SLR). RBI is empowered to increase this ratio up to 40%. An increase in SLR also restricts the bank's leverage position to pump more money

into the economy.

Net Demand Liabilities - Bank accounts from which you can withdraw your money at any time like your savings accounts and current account.

Time Liabilities - Bank accounts where you cannot immediately withdraw your money but have to wait for certain period. e.g. Fixed deposit accounts.

Call Rate (3.70% to 5.25%)- Inter bank borrowing rate - Interest Rate paid by the banks for lending and borrowing funds with maturity period ranging from one day to 14 days. Call money market deals with extremely short term lending between banks themselves. After Lehman Brothers went bankrupt Call Rate sky rocketed to such an insane level that banks stopped lending to other banks.

MSF - Marginal Standing facility Rate (5.40%)- It is a special window for banks to borrow from RBI against approved government securities in an emergency situation like an acute cash shortage. MSF rate is higher than Repo rate. Current MSF Rate: 5.4%.

Bank Rate (5.40%)- This is the long term rate(Repo rate is for short term) at which central bank (RBI) lends money to other banks or financial institutions. Bank rate is not used by RBI for monetary management now. It is now same as the MSF rate. Current bank rate is 5.4%