Money Multiplier

[UPSC Notes]

What is Money Multiplier?

Money Multiplier can be defined as a ratio that relates to the changes in the money supply to a given change in the money base. In layman's language, we can define a Money Multiplier as a multiple by which the initial deposit of a sum of money in a bank gets multiplied the number of times.

The Money Multiplier reflects the amplified change in the money supply that ultimately results from the injection into the banking system of additional reserves. The Money Multiplier is important in macroeconomics because it determines the money supply, which affects interest rates. It's also important in banking because it impacts monetary policy and the stability of the banking sector.

In the concept of the Money Multiplier, the number of multiples depends on the percentage of the legal reserve ratio. It focuses on the relationship between the money supply and the money stock in terms of high-powered money.

Concept of Money Multiplier

Before starting with the concept of the Money Multiplier, it is important for us to set some assumptions and learn about some important terms to simplify this approach and understand this macroeconomic phenomenon in a transparent manner.

General Assumptions

There is only a single bank in the economy. The bank never holds excess reserves and non-bank entities and individuals never hold currency..

What is the Legal Reserve Ratio?

The legal reserve ratio or the required reserve ratio refers to the specified percentage of the amount that commercial banks need to keep with themselves as reserves to meet the demand at the time of uncertainty and also to maintain the trust of the common public. The legal reserve ratio consists of two types of ratios which are as follows:

Cash Reserve Ratio

Cash Reserve Ratio (CRR) refers to the certain percentage of a bank's total deposit that it needs to maintain with the central bank i.e the Reserve Bank of India. It is one of the significant components of RBI's monetary policy and RBI uses it to regulate the demand and supply of money in the economy.

Statutory Liquidity Ratio

Statutory Liquidity Ratio (SLR) refers to a percentage of deposits that all commercial banks have to maintain with themselves in the form of gold, liquid cash, or other securities. These reserves are kept with the commercial banks themselves. Like CRR, SLR is also an important tool of the monetary policy which helps to maintain credit growth, inflation, and liquidity in the economy. The rates of both these ratios are fixed by the Reserve Bank of India.

Formula of Money Multiplier

Money Multiplier = 1/ Required Reserve Ratio = 1/ Legal Reserve Ratio

There is an inverse relationship between the Money Multiplier and the legal reserve ratio which is evident in the formula given above. Let us now understand this concept with a hypothetical example.

Explanation

Assume that the bank has received a deposit of Rs 1000 and the LRR is maintained at 20 percent. Now, the bank will keep Rs 200 as reserves (LRR) and the rest of the amount will be made available to the public in the form of loans. Now, a borrower takes a loan of Rs 800 from the bank either for consumption or for investment purposes.
Suppose, the borrower has spent the loan taken for the purchase of an article. The seller of the article will receive the money and simultaneously deposit Rs 800 again with the bank.
This happens because we have assumed that there is only a single bank in the economy. After receiving Rs 800 from the seller, the bank will again keep aside 20% of the amount i.e Rs 160 as reserves, and provide a loan to the public with the remaining amount.

This process continues till the initial deposit of Rs 1000 becomes Rs 5000 i.e. 5 times the initial deposit.
Thus,

Money Multiplier = 1/ LRR
= 1/ 20% = 5 times.