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# An Overview of Money Supply and Money Multiplier in India: 2016-2023

**Dr. Jaspreet Kaur**

Assistant Professor Economics
Thakur Ramnarayan College of Arts and Commerce, Mumbai
Email: dhupia.jaspreet2910@gmail.com

**Abstract**

This research paper investigates the dynamics of money supply and money multiplier in India during the period 2016–2023. The analysis focuses on the structural composition of narrow money (M1), broad money (M3), reserve money, and their respective multipliers. The study evaluates the changing contribution of currency with the public, demand deposits, and time deposits within the broader monetary framework. The structural disruptions such as demonetization, digital payment expansion, inflationary pressures, and the COVID-19 pandemic play a predominant role in causing variations in money supply . This research paper uses secondary data available on Handbook of Statistics on the Indian Economy. The study takes into account the behavior of these variables over the time with the results pointing indicate moderate variability in the money multiplier, a dominant contribution of time deposits in broad money formation, and a shifting pattern in currency holdings due to macroeconomic and policy shocks. The findings underline the evolving nature of monetary transmission in India and highlight the role of institutional and behavioral factors in shaping liquidity conditions.

***Keywords:*** *Money Supply, Narrow Money, Broad Money, Money Multiplier, Reserve Money, Monetary Policy, India*

## 1. Introduction

Reserve Bank of India plays a pivotal role in governing the quantity of money to be supplied in the economy. Apart from being the sole issuer of currency, lender of last resort, banker's bank and banker to the government, it formulates monetary policy on which entire monetary scenario of the country depends. It is through this policy it keeps a check on various economic variables and their performance along with the impact on money supply of the country.

This research paper tries to analyze the trends in money supply and its components in the above stated period. Moreover this research paper also uses regression analysis to determine the relationship between the variables.

**Literature Review**

There are ample of studies done on money supply and money multipliers in India. Some of them are listed under.

Majumdar (1976) approved the Reserve Bank of India's approach of governing in money supply over the money multiplier approach of money supply determination. This was so because he strongly believed that the variations in money supply as explained by the Reserve Bank of India was economical while the money multiplier approach provided the mechanical explanation.

Pandit (1984) held view that reserve money which plays significant role in determination of money supply was endogenously determined. Moreover the two major components of high powered money namely Reserve Bank of India's net credit to government and net foreign exchange assets were exogenous functions of high powered money.

Kulkarni and Miller (1986) conducted their study for the period of 1950-1979. The study concluded long term relationship between money supply and monetary base. The increase in preference for time deposits over demand deposits led to comparative more increase in broad money relative to narrow money. Most of changes in M1 were explained by currency ratio and for M3 it was were explained by currency ratio and for M3 it was currency ratio and time deposit ratio.

Menon (1988) he throws light on the factors determining money supply in India. Further he mentions about the increasing role of reserve money and declining role of money multiplier which has led to a rise in money supply observed during period of 1960-61.

Darbha (2002) Money supply which is controlled by the monetary authorities can yield fruitful results in the economy if its two important determinants money multiplier and reserve money are properly determined. This requires two essential conditions, stability of money multiplier and proper regulation of reserve money. In his study which was conducted using monthly data for the period of 1978:04 to 1996:06 signifies that a long run relation existed between narrow money (M1), broad money (M3) and adjusted reserve money (H). Moreover his study showed stability of money multiplier as contrasted with the previous studies which failed to predict the stability of money multiplier. Another limitation which was pointed out by Darbha regarding the inability to predict stability of money multiplier was the use of conventional augmented dickey fuller test and Philips Peron tests in earlier studies because they assume that the cointegrating vector is time invariant under the alternative hypothesis and they also have low power in detecting regime shift (Gregory Henson (1996) Therefore Gregory Henson test was used. Moreover in regard to discrete changes in monetary policy were attributable to the removal of controls on interest rates in the inter-bank call money ceiling rates in inter-bank money markets, deregulation of deposit rates etc were also responsible for causing changes in the variables. He also suggested that money multiplier can be predicted accurately over a long time period depending upon monetary authority power to control the reserve money.

**Objectives of the Study**

1. To analyze the trends in money supply and its components, money multiplier from 2015-2023.

2. To examine the changing composition of narrow money**,** broad money and their multipliers over time.

**Data and Methodology**

This research paper is primarily based on secondary data from time period 2025-2023. The data on narrow money supply, broad money supply and reserve money are collected from Handbook of Statistics on Indian Economy available on the website of Reserve Bank of India. The author has calculated the narrow and broad money multipliers as well as the percentage contribution of components of money supply in India. Moreover the author has also calculated the percentage contribution of narrow money supply in broad money supply in India in the post reform period. All these data are in the form of average monetary aggregates provided by the Reserve Bank of India.

**Importance of Money Multiplier**

To have a correct idea of what proportion of money is to be lent and how much is to be kept as reserve is determined by the money multiplier. If excess of money is lent, it would lead to inflation and less of it would create shortages. Both these phenomenon have been witnessed in the economy. Moreover both of these have an adverse impact on the economy. Therefore a proper balance is needed and this could only be achieved if there is proper knowledge about money supply and money multipliers.

**Tabular and Graphical Representation**

The following section deals with tabular representation of data

Table 1: Compilation of Average Monetary Aggregates.

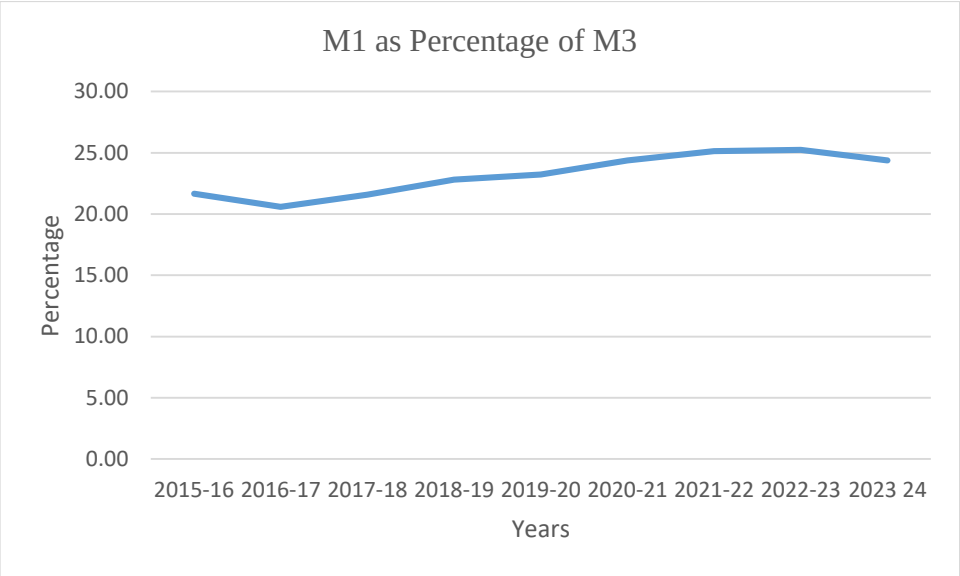
| Years | CP as %of M1 | DD as % of M1 | OD as % of M1 | CP as %of M3 | DD as % of M3 | TD as % of M3 | OD as % of M3 | M1 Mul | M3 Mul | M1 as %M3 |
|---|---|---|---|---|---|---|---|---|---|---|
| 2015-16 | 61.16 | 38.22 | 0.62 | 13.24 | 8.27 | 78.35 | 0.13 | 1.23 | 5.68 | 21.65 |
| 2016-17 | 55.23 | 44.16 | 0.61 | 11.37 | 9.09 | 79.42 | 0.13 | 1.29 | 6.27 | 20.58 |
| 2017-18 | 54.72 | 44.51 | 0.77 | 11.80 | 9.60 | 78.43 | 0.17 | 1.33 | 6.16 | 21.57 |
| 2018-19 | 57.99 | 41.22 | 0.79 | 13.22 | 9.40 | 77.20 | 0.18 | 1.30 | 5.68 | 22.80 |
| 2019-20 | 58.49 | 40.63 | 0.88 | 13.58 | 9.43 | 76.78 | 0.20 | 1.29 | 5.57 | 23.22 |
| 2020-21 | 60.17 | 38.87 | 0.96 | 14.67 | 9.48 | 75.62 | 0.23 | 1.34 | 5.49 | 24.38 |
| 2021-22 | 58.51 | 40.49 | 1.00 | 14.70 | 10.18 | 74.87 | 0.25 | 1.32 | 5.24 | 25.13 |
| 2022-23 | 57.96 | 40.89 | 1.14 | 14.63 | 10.32 | 74.76 | 0.29 | 1.30 | 5.14 | 25.24 |
| 2023 24 | 56.64 | 42.05 | 1.31 | 13.81 | 10.25 | 75.63 | 0.32 | 1.30 | 5.35 | 24.37 |

Table 1: Compiled from Handbook of Statistics on Indian Economy, Reserve Bank of India.

**Narrow and Broad Money Supply in India**

When the relationship between narrow and broad money supply is considered it is seen that percentage of M1 in determing M3 followed a mixed trend and this is possibly due to fluctuations in deposits in India in the post reform period. The share has been 21.54% in 2015 and 24.37% in 2023 with an average of 23.22.

Graph 1. Narrow Money Supply as percentage of Broad Money Supply.



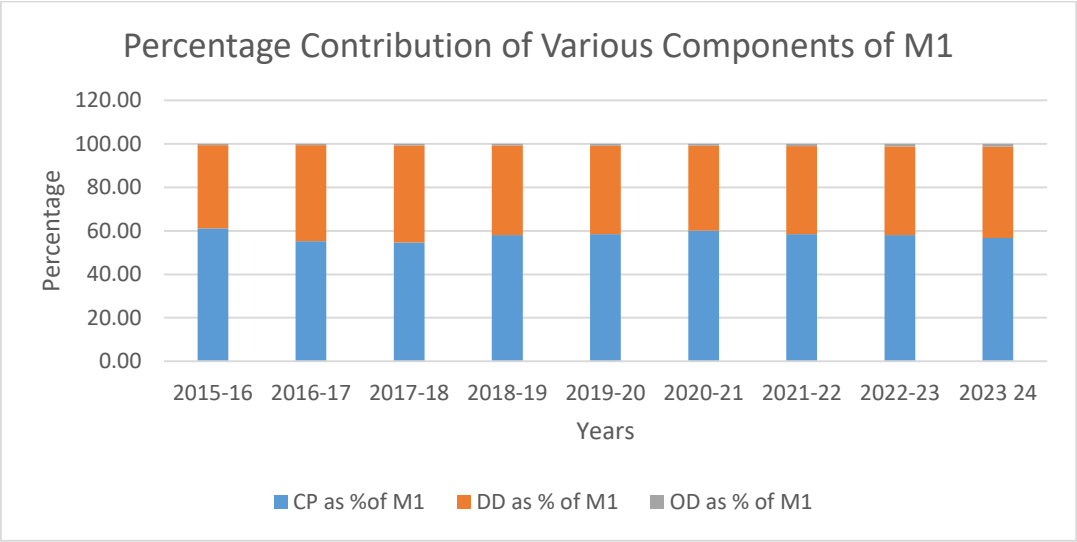

Source: Table 1.

**Performance of Narrow Money Supply in India:**

Money supply can in India is the summation of currency with the public, demand deposits with the banks and other deposits with the Reserve Bank of India. This is the narrow money supply (M1) but when time deposits are added to M1 they together form broad money supply (M3).

The two prominent determinants of narrow money are currency with the public which as occupied a lion share with demand deposits remaining at second and other deposits at the third place. Currency with the public contributed more than half of the composition of narrow money supply. Its share was 61.13 percent in 2015 which with minute upswings (downswings in some years too) reached to 56.64 percent in 2023-24. But the share of demand deposits and other deposits in narrow money was 38.22 percent and 0.62 percent respectively in 2015-16 and 42.05 percent and 1.31 percent in 2023-24

Graph 2: Percentage Contribution of Various Components of Narrow Money Supply in the 2015-2023



Reasons for Fluctuating Currency with the Public:
The advent of demonetization and rise in UPI payment were the prominent reasons behind fluctuations in currency with the public in 2016 and digitalization. Another reason which was responsible for this fluctuating behavior was the onset of COVID 19 pandemic but the usage of cash in purchase of land and keeping cash as a precautionary measure did not eliminate physical cash with the public.

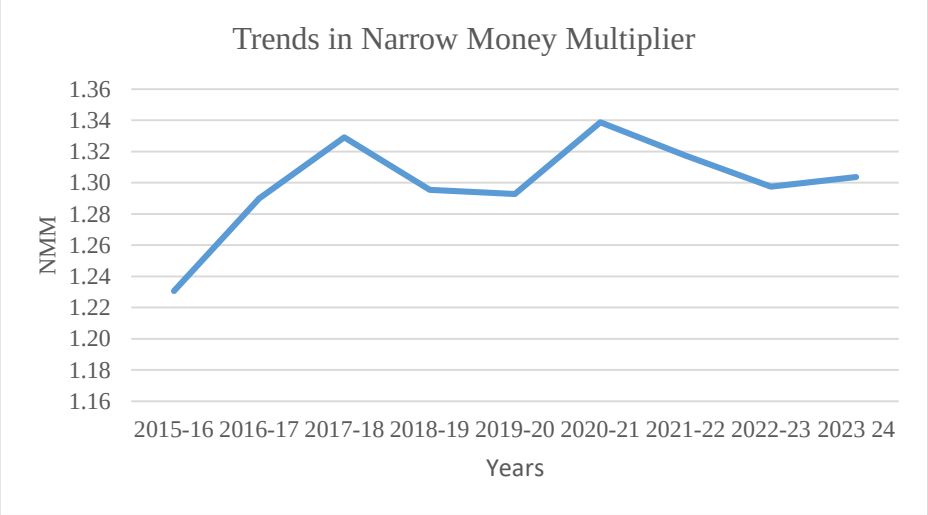
The second most important factor which has led rise to currency with the public is the uncertainty regarding inflation. High inflation rates effects the deposit growth in the banks as people prefer to keep currency in hand to meet the day to day expenses. The reason being that same basket of goods costs more due to fall in purchasing power of the people.

Narrow Money Multiplier: The ratio of narrow money and reserve money gives the value of narrow money multiplier.

M1= mH or m = M1/H

Where M1= money supply
m= narrow money multiplier H= Reserve money

This multiplier is depicted in the graph below. The value of the narrow money multiplier varied between 1.23 in 2015 to 1.30 in 2023 following a constant trend its maximum value was 1.33 in 2017-18.




Source: Table 1

Graph 3. Trends in the Narrow Money Multiplier in 2015-2023.

Regression Analysis

The overall regression of narrow money multiplier over time is estimated as

**M1 Multiplier= 1.27 + 0.005 time**

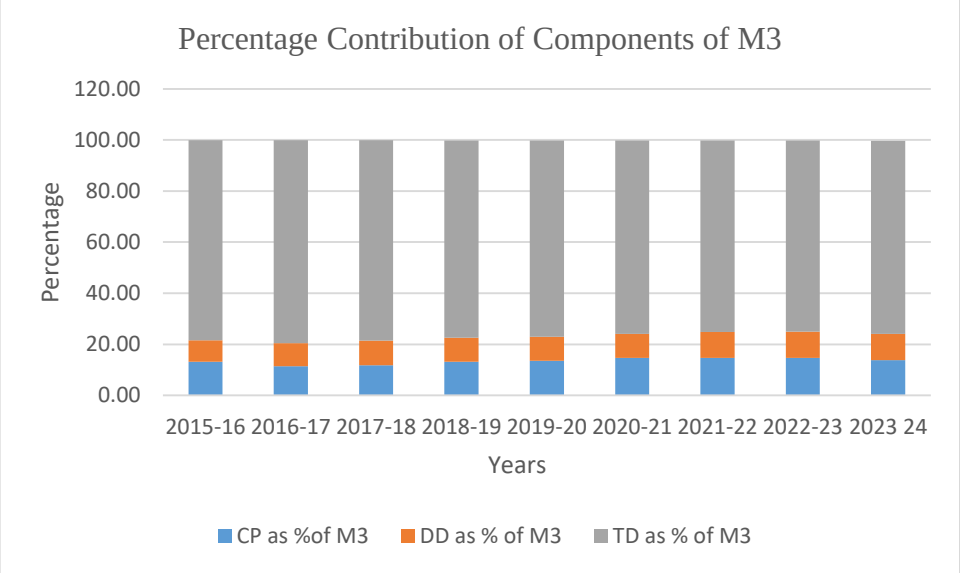
| | | | | |
|---|---|---|---|---|
| Se | (0.020) | (0.003) | $R^2 = 0.24$ | Adjusted $R^2 = 0.13$ |
| t | (60.84) | (1.54) | | |

It is seen from the equation that there is positive association between narrow money multiplier and time. The value of $R^2$ is 0.24means that 24% variations in narrow money multiplier is explained by time. This shows that narrow money multiplier has varied over time.

Performance of Broad Money Supply:

But the scenario changes when broad money supply comes into picture. Currency with the public which occupied major share in narrow money supply was put into back front by the time deposit share in broad money determination.

Currency with the public share fell from 61.16 % in 2014 to 56.64% in 2023 while the share of time deposits contributed more than three fourths (78.35% in 2014 and remained 75.63% in 2023) during the entire period of study.




Graph 4: Percentage Contribution of Components of Broad Money Supply from 2015-2023

Source: Table 1

The most striking feature seen in broad money supply is the contribution of time deposits which has continued fluctuate during this period but contributed more than three fourths in total contribution. The reasons being that time deposits offer greater interest rates than other saving deposits accounts.

Trends in Broad Money Multiplier:

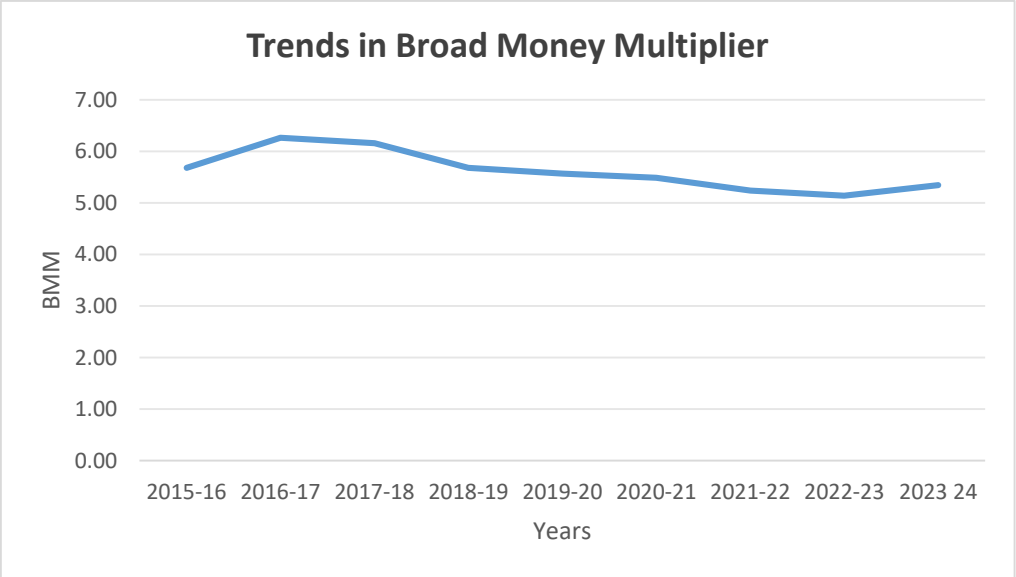
The ratio of broad money and reserve money gives the value of broad money multiplier.

M3= mH or m= M3/H

Where M3= Broad Money Supply

m= Broad Money Multiplier H= Reserve Money.

This multiplier is depicted in the graph above. The value of the broad multiplier ranges between 5.6 to 5. 3 during period of study.




Graph 5: Trends in the Broad Money Multiplier in the Post Reform Period.

Source: Table 1

**Regression Analysis**

The overall regression of narrow money multiplier over time is estimated as

**M3 Multiplier= 6.18 - 00.012 time**

Se (0.17) (0.03) $R^2 = 0.64$ Adjusted $R^2 = 0.58$

t (38.84) (-3.53)

It is seen from the equation that there is negative association between narrow money multiplier and time. The value of $R^2$ is 0.64means that 64% variations in narrow money multiplier is explained by time. This shows that narrow money multiplier has varied over time.

**Policy Implications**

The study suggests that under India's post-2016 Flexible Inflation Targeting framework, the Reserve Bank of India should not rely solely on repo rate adjustments but must simultaneously monitor money supply growth (M1 and M3) and money multiplier stability to ensure effective liquidity transmission, anchored inflation expectations, and balanced credit expansion in the economy.

**Conclusion**

The study evaluates the trends in money supply and money multiplier in India between 2016 and 2023. The findings demonstrate that the composition of narrow and broad money has undergone structural adjustments influenced by macroeconomic shocks and policy interventions.

Currency with the public continues to occupy a dominant share in narrow money, although its relative importance fluctuated due to demonetization, digital payment expansion, inflationary uncertainty, and pandemic-related precautionary behaviour. In contrast, time deposits remain the primary contributor to broad money formation, reflecting household preference for interest-bearing assets.

Therefore RBI plays a pivotal role in governing monetary aggregates and formulates policies which have fruitful impact on Indian Economy

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