International Journal For Business, Management And Accounting

GREEN PUBLICATION

ISSN(Online): 2455-6114
Volume 10 Issue 03 September 2024
Available on-line at: https://ijrbma.com/index.php/bma/issue/archive

DOI:*https://doi.org/10.53555/bma.v10i3.2492* *Received:21-Jun-2024 Accepted:18-Aug-2024*

RESERVE MONEY IN INDIA AND ITS IMPLICATIONS FOR THE BANKING SYSTEM: AN ANALYSIS OF ITS

Dr. Ankit Kumar Sharma[1*], Ms. Pooja Verma[2],

[1]Assistant Professor, Department of Economics Government Degree College, Budaun Uttar Pradesh, India*
Email: ankitsharma.eco@outlook.com
[2]Assistant Professor, Department of Commerce Seth R.L. Saharia Government P.G. College Kaladera, Rajasthan, India
Email: poojaverma.commerce@gmail.comComponents and Sources

Abstract
Reserve money is a key monetary aggregate that reflects the liquidity position of the economy and the reserve base of the banking system. The present study examines reserve money in India with special reference to its trend, composition, major sources, and implications for the banking system. It is based on secondary time-series data and adopts a quantitative and analytical research design. Variables such as reserve money, currency in circulation, bankers' deposits with RBI, other deposits, RBI claims on government, net foreign exchange assets, and net non-monetary liabilities were analyzed using descriptive statistics, trend analysis, percentage analysis, and correlation analysis. The findings reveal that reserve money increased significantly during the study period, indicating a substantial expansion in the monetary base. Currency in circulation remained the dominant component of reserve money and its share increased over time, whereas bankers' deposits with RBI, despite rising in absolute terms, declined in relative share. On the source side, net foreign exchange assets of RBI emerged as the most important contributor, followed by RBI claims on government and net non-monetary liabilities. Correlation analysis further showed a strong positive association between reserve money and its major component-side and source-side variables. The study concludes that reserve money in India has been shaped by both domestic and external monetary factors and continues to hold important implications for banking system liquidity and monetary management.

Keywords: *reserve money; currency in circulation; bankers' deposits with RBI; net foreign exchange assets; banking system liquidity; monetary transmission*

1. Introduction

Reserve money is an important monetary aggregate, as it is the base of the money supply and hence represents the liquidity position of the economy. It comprises currency in circulation, deposits of bankers with the central bank and other deposits and thus plays an important role in the monetary management and banking system operations. In the Indian context, reserve money is largely important as changes in reserve money affect banking reserves and liquidity conditions and the overall process of transmission of money.

In the recent times the role played by reserve money has increased in importance as a result of the changing monetary policy frameworks, financial market development and changing liquidity conditions. In emerging market economies, monetary policy, financial market development and financial stability are closely linked and hence the study of monetary aggregates is more relevant for policy analysis (Bank, 2020). This is especially true of India, where the banking system is still a significant channel for the impact of monetary policy on the economy.

Existing literature shows that the effectiveness of monetary transmission is not only dependent on policy decisions but also on market structure, financial development and liquidity conditions. Monetary transmission is more impeded by structural rigidities and low financial intermediation in developing economies (Mishra *et al.,* 2012). Similarly changes in the financial environment of emerging market economies have also changed the way monetary policy is transmitted over time (Kohlscheen and Miyajima 2015). These studies suggest that analysis of reserve money and liquidity variables are important for understanding monetary behavior.

In India monetary transmission is strongly influenced by the conditions in the banking sector. Evidence indicates that the monetary policy transmission in banks is conditioned by internal balance sheet variables and institutional factors (Das *et al.,* 2015). It has also been noticed that the shift in financial intermediation following the global financial crisis had affected the policy transmission channels in emerging market economies (Mohanty & Rishabh, 2016). This is important to India as the banking system still plays a dominant role in the transmission of monetary policy impulses.

Recent studies further indicate that liquidity conditions and structural frictions remain important in the Indian monetary framework. Although monetary transmission in India has improved, certain impediments still reduce its effectiveness (Mitra & Chattopadhyay, 2020). Bank-level factors such as asset quality also influence the credit channel of policy transmission (Mitra, 2020). In addition, the effectiveness of monetary policy through the banking channel may weaken under certain financial conditions (Borio & Gambacorta, 2017). These findings make it necessary to examine reserve money not only as a monetary aggregate but also as an indicator of liquidity conditions and banking system response.

Against this background, the present study deals with reserve money in India with special reference to its trend, composition, sources and its banking implications. Since the results of the study reveal that reserve money growth was considerable over time, that reserve money continued to be dominated by currency in circulation, and that there was a strong association between reserve money and net foreign exchange assets and bankers' deposits, the topic is relevant for understanding the developments in central bank balance sheet and their implications for the liquidity of the banking system. Thus, the study is useful to get insight about the structure of reserve money in India and its linkage with the banking system.

1.1 Objectives of the Study

1. To analyze the trend and composition of reserve money during study period in India
2. To analyze major sources of reserve money and its contribution in monetary expansion.
3. To study banking implications of reserve money with reference to Banker's deposit with RBI and related monetary variables.

2. Methodology

2.1 Research Design

The current research employs quantitative and analytical research design to investigate the phenomena. It uses secondary time series data to discuss the concept of reserve money in India, its major components, its sources and implication for the banking system. This design is appropriate because it aids in the study of monetary trends and interpreting its banking relevance with regards to a period of time.

2.2 Source of Data

The study is based on secondary data compiled by Maurya (2020). The data has been used because it provides reliable and structured monetary information relevant to reserve money and banking analysis in India.

2.3 Variables of the Study

The key variables taken into consideration for the study include reserve money, currency in circulation, banker's deposits with RBI, other deposits with RBI, RBI claims on government, net foreign exchange assets, etc. These variables are useful in the study of the composition and sources of reserve money. They also help in understanding what the possible implications for the banking system.

2.4 Data Preparation

The data collected is cleaned and arranged before it is analyzed. This process involves trimming unnecessary entries, giving variables appropriate names, arranging the observations in chronological order and verifying the value of missing and inconsistent values. The study's accuracy and clarity are improved by proper preparation of data.

2.5 Data Analysis

The study has descriptive and analytical method in interpreting data. Tools like trend analysis, percentage analysis, summary statistics, and correlation analysis are used to analyze the trend of reserve money and related variables over time. Special attention is given to Bankers Deposits at RBI to understand the implications of the banking system.

3. Results

3.1 Descriptive Statistics of the Variables

Table 1 shows the descriptive statistics of the major variables that are included in the study. The result shows that reserve money had a mean value of Rs 13,26,083.77 crore with a lot of variation in the value of reserve money during the study period which is reflected in the standard deviation. Among the component variables, currency in circulation had the highest average value indicating that it constituted the largest proportion of reserve money throughout most of the period of study. The source-side variables also exhibit large variation. As seen from the Table 1, the average of net foreign exchange assets of RBI among the source variables was the highest followed by net non-monetary liabilities and net claims on government. This means that both factors, both domestic and external, were responsible for the changes that took place in reserve money over time.

Table 1. Descriptive Statistics of Major Variables (Rs crore)

Variable	Mean	Standard Deviation	Minimum	Maximum
Reserve Money	13,26,083.77	7,96,456.65	2,96,459.00	32,01,967.13
Currency in circulation	10,20,944.68	6,40,058.89	2,24,562.00	26,91,705.55
Bankers' deposits with RBI	2,95,601.79	1,59,245.42	60,275.00	9,17,197.00
Other deposits with RBI	9,543.97	9,709.23	682.78	46,942.68
RBI claims on Government (net)	3,39,346.58	3,35,910.45	-1,83,607.79	13,14,023.00
Net foreign exchange assets of RBI	15,24,388.92	9,11,564.06	2,05,354.00	40,17,183.60
Net non-monetary liabilities of RBI	5,38,098.41	3,86,707.44	85,255.00	15,71,102.03

3.2 Trend in Reserve Money

Table 2 illustrates the trend in reserve money and its major constituents for selected years and Figure 1 shows the general trend over the entire period covered in the study. The results show that the amount of reserve money increased tremendously from 3,08,677.00 crores in 2001 to 30,64,897.86 crores in 2020. This is a strong long term growth in the monetary base in India.

A similar upswing can be seen in the major components of reserve money. As is evident from Table 2 and Figure 1, currency in circulation rose steadily over the years and the deposits by bankers to RBI also increased by absolute numbers. However, the increase in currency in circulation was a lot sharper in the later years, particularly towards the end of the study period.

Table 2. Trend in Reserve Money and Major Components (Selected Years; Annual Averages, Rs crore)

Year	Reserve Money	Currency in circulation	Bankers' deposits with RBI	Other deposits with RBI
2001	3,08,677.00	2,33,635.54	71,774.96	3,266.50
2005	4,97,897.10	3,83,770.05	1,09,334.41	4,792.58
2010	11,55,826.48	8,45,788.84	3,06,148.45	3,888.31
2015	18,92,761.82	14,89,345.81	3,91,143.18	12,272.82
2020	30,64,897.86	25,11,188.75	5,15,526.31	38,182.80

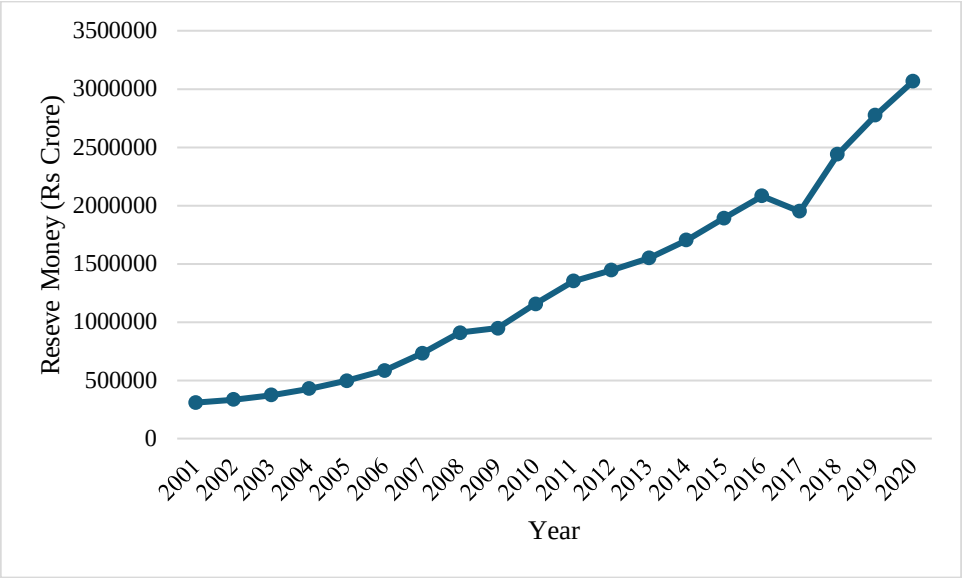

Figure 1. Trend in Reserve Money in India, 2001–2020

3.3 Composition of Reserve Money

The composition of reserve money is shown in Table 3 while Figure 2 illustrates changing shares of the main components of reserve money through time. The results show that currency in circulation was the predominant item all through the period covered by the study. Its share rose from 75.69% in 2001 to 81.93% in 2020, which indicates an increase in the importance of currency in the composition of reserve money.

In contrast, the percentage of bankers deposits with RBI kept decreasing as time passed though their value kept increasing. As per Table 3, the percentage of bankers deposits is reduced from 23.25% in 2001 to 16.82% in 2020. Other deposits with RBI had only a very small proportion of reserve money during the whole period as also visible in Figure 2.

Table 3. Composition of Reserve Money (%, Selected Years)

Year	Currency in circulation	Bankers' deposits with RBI	Other deposits with RBI
2001	75.69	23.25	1.06
2005	77.08	21.96	0.96
2010	73.18	26.49	0.34
2015	78.69	20.67	0.65
2020	81.93	16.82	1.25

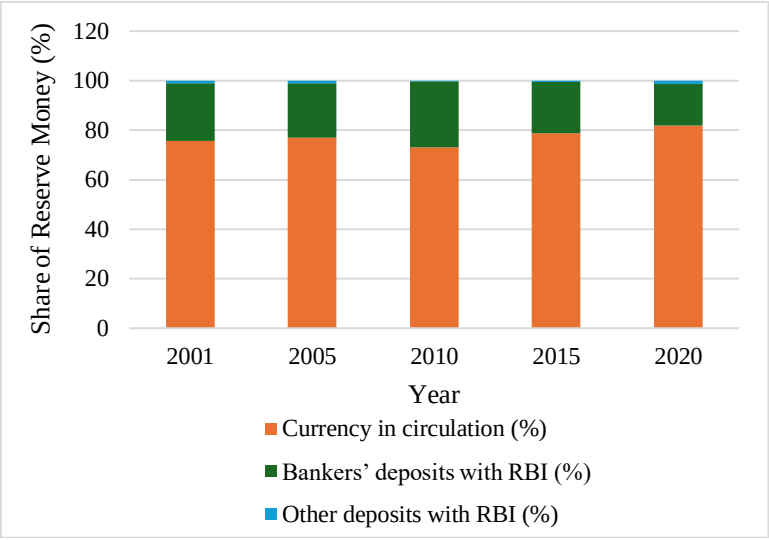

Figure 2. Composition of Reserve Money, 2001–2020

3.4 Source-Side Analysis of Reserve Money

The major source side variables of reserve money are depicted in Table 4 and their movement over time is given in Figure 3. The results show that net foreign exchange assets of RBI became the most important source side variable during the study period. It went from Rs 2,16,361.88 crore in 2001 to Rs 36,43,229.43 crore in 2020, and there was significant growth over the years.

RBI claims on government also increased considerably especially in the later years. As evident from table 4, net claims on government increased from Rs 1,57,711.81 crore in 2001 to Rs 11,03,424.11 crore in 2020. Net non-monetary liabilities also showed a constant rise over the study period, which can clearly be seen in Figure 3.

Table 4. Major Source-Side Variables of Reserve Money (Selected Years; Annual Averages, Rs crore)

Year	RBI claims on Government (net)	Net foreign exchange assets of RBI	Net non-monetary liabilities of RBI
2001	1,57,711.81	2,16,361.88	91,448.62
2005	-9,130.61	6,10,645.01	1,17,762.25
2010	2,03,800.85	12,71,500.32	3,35,276.12
2015	4,57,666.85	22,07,788.42	8,55,555.22
2020	11,03,424.11	36,43,229.43	13,74,236.34

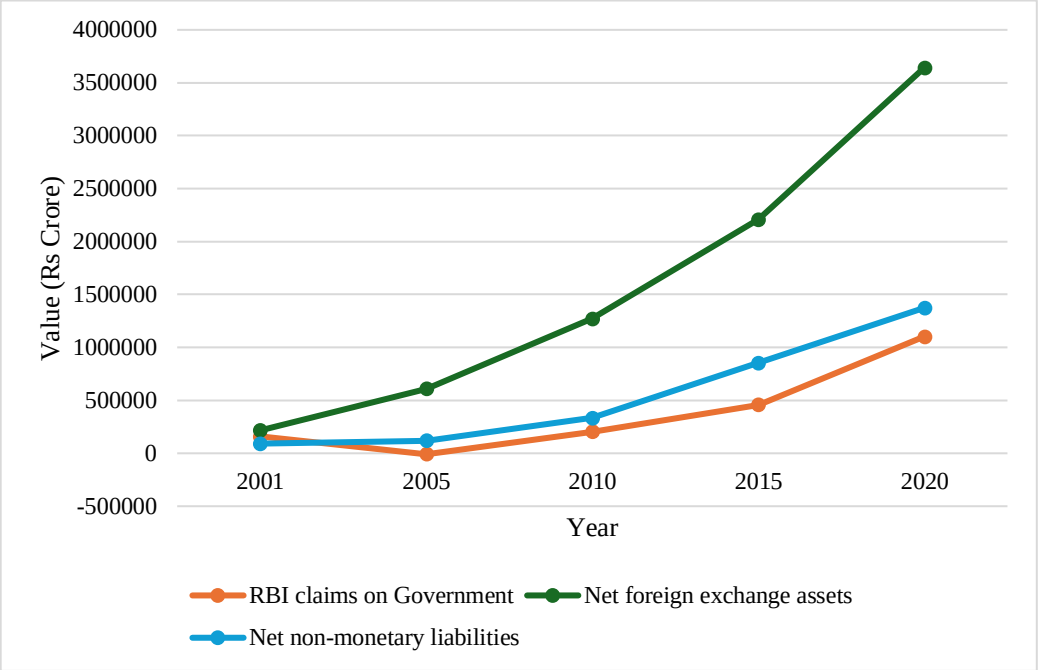

Figure 3. Major Source-Side Variables of Reserve Money, 2001–2020

3.5 Correlation Analysis of Reserve Money and Related Variables

Table 5 shows the correlation coefficients between reserve money and major variables used for the purpose of the study. The results show that reserve money has very strong positive correlation with currency in circulation, net foreign exchange assets of RBI, net non-monetary liabilities and bankers' deposits with RBI. This means that variations in reserve money had a close relationship with variations in these variables during the study period.

As is observed from Table 5, the best correlations is affected between reserve money and currency in circulation (0.997) which is followed by net foreign exchange assets of RBI (0.986). Reserve money is also found to have a strong positive association with bankers deposits with RBI (0.945) and RBI claims on Government (0.899). These results indicate that both the component side and source side variables were closely correlated with reserve money over time.

Table 5. Correlation of Reserve Money with Major Variables (Correlation Coefficient)

Variable	Correlation with Reserve Money
Currency in circulation	0.997
Net foreign exchange assets of RBI	0.986
Net non-monetary liabilities of RBI	0.968
Bankers' deposits with RBI	0.945
RBI claims on Government (net)	0.899
Other deposits with RBI	0.818

3.6 Banking Implications of Reserve Money

The banking implications of reserve money can be seen in terms of movement of deposit of bankers with RBI and their association with total reserve money. As can be seen from Table 2, the burden of bankers in terms of deposits grew from Rs 71,774.96 crore in 2001 to Rs 5,15,526.31 crore in 2020, i.e., banking reserves have grown considerably in absolute terms over the period of study.

At the same time the relative share of bankers' deposits in reserve money fell with time, as reported in Table 3. This reveals that reserve money expansion was more and more powered by currency in circulation, rather than on banking deposits alone. Further, the significant positive relationship between reserve money and bankers national deposits with RBI in Table 5 shows the changes in monetary base continued to be closely related with banking system reserves over the period of study.

4. Discussion

The results of the present study reveal a significant increase in the reserve money in India during the period of the study. The trend analysis showed that reserve money rose steadily over time indicating continual expansion in the monetary base. This finding is consistent with the view that changes in monetary conditions in India have played an important role to influence banking and financial market behavior (Das, 2015). It also supports the argument about the close relationship of monetary policy transmissions in India with liquidity conditions in the financial system (Goyal & Agarwal, 2020).

The study further found that currency in circulation remained the dominant component of reserve money all through the period. Its share was consistently higher than bankers deposits and other deposits with RBI. This would mean that expansion of reserve money in India was largely currency led. Such a pattern can be linked to the general order of Indian monetary conditions where currency demand still has a large relevance in the monetary system (Das, 2015). The finding also means that changes in reserve money do not necessarily translate proportionately into banking reserves.

Another important result of the study is that the deposits of bankers in RBI increased in absolute terms but declined in relative share over the period of the study. This is suggestive of the fact that while banking reserves increased, they did not increase as quickly as the currency in circulation. This pattern could be associated with the changing liquidity environment of Indian banking system. A similar focus on the role of liquidity conditions in the determination of money market outcomes has been stressed by Goyal and Agarwal (2020). It is also in line with the observations of Kumar *et al.* (2017) who noted that liquidity factors play an important role in short-term money market spreads in India.

The source side analysis showed that net foreign exchange assets of RBI became a major factor in the increased reserve money. This means that the developments in external sector and foreign exchange operations of central bank have played an important role in the change in monetary base. This finding is consistent with Raj *et al.* (2018) which stressed that forex market operations are closely linked with domestic liquidity management in India. Their analysis supports the present result that movements in reserve money are not only affected by domestic claims but also accumulations of foreign assets and operations in the liquidity market.

The study also found that RBI claims on government rose over the years and helped in the growth of reserve money. This implies that domestic policy-related operations continued to be an important source side factor in monetary expansion. Such a result is in line with the broader literature on the transmission of monetary policy in India, which emphasizes on the effects of central bank actions and the mechanisms of liquidity management on monetary environment and banking conditions (Das, 2015). The interplay between the operations of policy and liquidity adjustment thus appears to be an important feature of the Indian monetary framework.

The correlation results indicated that there was a strong positive relationship between the reserve money and the variables such as currency in circulation, deposits by bankers with RBI and net foreign exchange assets. This suggests that reserve money tracked quite closely its major components as well as major sources. The positive relationship between reserve money and bankers deposits particularly speaks to the fact that the role of banking reserves in the monetary system remains relevant. This observation is supported by Singh (2020) who found liquidity shocks have important effects on overnight interest rates in India. It is also consistent with that of Kumar *et al.* (2017), who pointed to the role of liquidity conditions in explaining call money rates spreads.

From a banking perspective, the findings imply that there are meaningful implications of the changes in reserve money on the liquidity of the banking system. Even though the share of bankers' deposits has fallen, their absolute increase suggests that the banking system continued to be closely linked to the movement of reserve money. This underpins the argument that liquidity conditions still have an impact on the transmission of monetary policy to the financial system (Goyal & Agarwal, 2020). It is also a reflection of the importance of interest rate transmission channels discussed by Das (2015).

The results may further be looked at from the angle of functioning and performance of Indian banks. As banking growth and productivity can be affected by the structure of ownership, efficiency and other financial conditions, fluctuations in the reserve money and liquidity can have ramifications for the banking operations. In this regard, Ghosh (2016) found that the growth performance of Indian banks are linked with structural and ownership related factor. The present findings complement that view by showing that macro-monetary conditions may also form an important background for banking sector behavior.

Overall, the study confirms that reserve money in India grew much during the study period and what moved it was mostly currency in circulation, net foreign exchange assets, and banking reserves. The discussion with existing literature suggests that the findings are broadly consistent with previous works on liquidity management, money market transmission and monetary policy in India (Raj *et al.,* 2018). They also serve to strengthen the importance of liquidity conditions in understanding some of the banking implications of monetary expansion (Singh, 2020).

5. Conclusion

The present study discussed reserve money in India with special reference to the issues of trend, components of reserve money, sources of reserve money and banking implications. The results indicate that reserve money increased substantially over the period of the study suggesting an expansion in the monetary base. This is the increasing size and scale of liquidity in the Indian economy and is an important monetary indicator as the reserve money. The analysis further showed that currency in circulation throughout the period remained dominant in reserve money. Although the deposits of bankers with RBI also rose by absolute measure, their share declined over the years. This would imply that the increase in reserve money was not only due to the increase in the banking reserve but was also caused by an increase in the amount of currency. On the source side, net foreign exchange assets of RBI emerged as the most important contributor to reserve money and RBI claims on government and net non-monetary liabilities also showed notable growth. The correlation results showed that there was a strong positive correlation between reserve money and major monetary variables like currency in circulation, bankers deposits with RBI and net foreign exchange assets. This confirms the fact that reserve money moved closely with its component-side and source-side variables. From the banking point of view, the rising of bankers deposit with RBI implies that reserve money was still related to banking system liquidity, although currency was playing the dominant role. Overall, the study concludes that the reserve money in India is not only influenced by domestic factors but also by external monetary factors and continues to have important implications on the banking system.

References

1. Bank, S. A. R. (2020). Financial market development, monetary policy and financial stability in emerging market economies. *BIS Papers chapters*, *113*, 293-305.
2. Mishra, P., Montiel, P. J., & Spilimbergo, A. (2012). Monetary transmission in low-income countries: effectiveness and policy implications. *IMF Economic Review*, *60*(2), 270-302.
3. Das, A., Mishra, P., & Prabhala, N. (2015). *The transmission of monetary policy within Banks: Evidence from India*. working paper, CAFRAL.
4. Mitra, A. K., & Chattopadhyay, S. K. (2020). Monetary policy transmission in India-recent trends and impediments. *RBI Bulletin*.
5. Kohlscheen, E., & Miyajima, K. (2015). The transmission of monetary policy in EMEs in a changing financial environment: a longitudinal analysis.
6. Mohanty, M. S., & Rishabh, K. (2016). Financial intermediation and monetary policy transmission in EMEs: What has changed post-2008 crisis?.
7. Mitra, P. (2020). Asset quality and credit channel of monetary policy transmission in India: Some evidence from bank-level data.
8. Borio, C., & Gambacorta, L. (2017). Monetary policy and bank lending in a low interest rate environment: diminishing effectiveness?. *Journal of Macroeconomics*, *54*, 217-231.
9. Ghosh, S. (2016). Productivity, ownership and firm growth: evidence from Indian banks. *International Journal of Emerging Markets*, *11*(4), 607-631.
10. Das, S. (2015). *Monetary policy in India: Transmission to bank interest rates*. International Monetary Fund.
11. Raj, J., Pattanaik, S., Bhattacharyya, I., & Abhilasha. (2018). Forex market operations and liquidity management. *RBI Bulletin*, *72*, 13-22.
12. Goyal, A., & Agarwal, D. K. (2020). Policy transmission in Indian money markets: The role of liquidity. *The Journal of Economic Asymmetries*, *21*, e00137.
13. Kumar, S., Prakash, A., & Kushawaha, K. M. (2017). *What explains call money rate spread in India?* (No. id: 11975).
14. Singh, B. (2020). *Liquidity shocks and overnight interest rates in emerging markets: Evidence from GARCH models for India*. Reserve Bank of India, Department of Economic and Policy Research.
15. Maurya, A. (2020). *RBI Open Dataset* [Data set]. Kaggle. https://www.kaggle.com/datasets/iabhishekmaurya/rbi-open-dataset