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COURSE:- B.A.Programme

SUBJECT:- Skill
Enhancement Course (SEC)

62273601 :- BCTDA

Basic Computational Techniques For Data Analysis:

Acknowledgement

I would like express my special thanks of gratitude to my teacher "MISS. SAKSHI JINDAL". who gave me the golden opportunity to do this wonderful project on the topic "INSTRUMENTS EFFCT ON MONETARY POLICY IN INDIA", which also helped me doing a lot of research and I came to know about so many new things I am really thankful to them. Secondly I would also like to thank my parents and friends who help me a lot in finalizing the project within the limited time frame.

INDEX

TITLE

INSTRUMENT EFFECT ON MONETARY POLICY OF INDIA

Monetary Management In RBI (Reserve Bank of India)

Monetary Policy Instruments (MPI)

Flexible inflation Targeting framework (FTC)

Monetary Policy

Monetary Policy Committee (MPC)

Monetary Policy Process (MPP)

Monetary Policy Framework (MPF)

Abstract

Through this project we can to know that monetary policy is a lever to regulate financial economy and says the relation between reserve money and narrow money because it is the essential but its transmission impact relies on the channels through which it transmits into the system. This paper reports regional variation while exercising a project lever in the context of Indian economy, which may depicts that within a common geographical boundaries policy impact is different in each state of India.

This paper basical on relation with what is impact on GDP of Instruments Effect of Monetary policy with India like (Reserve Money, Narrow Money) Banker is Deposits with RBI, Board Money, Money Multiplier, Currency Deposit Ratio, etc. GDP Related to economy growth and that growth compare Effects of Instruments.

The Review says that to make monetary policy significant then the RBI should slowdown the escalation of trade, linking weighted, Reducing Rates, lowering the interest rates, low inflation, adequate liquidity, cut the Cash Reserve Ratio etc.

But the problem is that money can be directly affected through reserve ratio, the depends on the nature of financing rather on the composition of different sectors of economics. The objective is that the monetary policy ensure inflation targeting, price stability, full employment benefits, exchange rate stability, cost money or the rate of interest etc.

Introduction

Monetary Management refers to the management of money supply and interest rate in the demand side economics, This involves the monetary policy laid by the central bank, This may also used by the government of a country to acheive their goals like inflation, consumption, growth and liquidity.

In India, Monetary policy of Central Bank (RBI) is aimed to at managing the Quantity of money supplied to the government of India to acheive their requirements of different sectors of the economy and for increasing the pace of the economic growth. The easy expansionary monetary policy is implement by reduces bank reserve or lowering the key interest rate and to improve the market Statutory liquidity to encourage economic activity.

Monetary Policy also refers to the behavior of the nation's central bank, concerning the nation money supply. Its included

✓ REPO RATE:- also known as the brenchmark 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 become more expensive. If repo rate 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 :- is the short term borrowing rate at which RBI borrow 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 reserve repo rate means that the banks will get a higher rate of interest from RBI. As a result, banks prefers to lend their money to RBI which is always safe instead of lending it others (people, companies etc) which always risky.

REPO RATE signifies the rate at which liquidity is injected banking system by RBI, whereas reserve repo RATE signifies the rate at which the central banks absorbs liquidity from the banks.

✓ CRR (CASH RESERVE RATIO):- Banks in India are required to hold the certain proportion of their deposits in the form of cash. However banks don't hold these as cash with themselves, they deposit such cash(asks 'currency chests) with Reserve Bank of India, which is considered as equivalent to hobding cash with 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 Rs 100, and if cash reserve ratio is 9%, the banks will have hold Rs.9 with RBI and the banks will have hold Rs. 9 with RBI end 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 as 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.

✓ SLR - Statutory Liquidity Ratio :- 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. eg :- Fixed Deposit accounts.

✓ CALL RATE :- 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/deposits 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:- It is 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 then Repo rate. Current MSF Rate : 5.4%.

✓ BANK RATE:- 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%.

Review of Literature

Now let's see some reviews related to monetary management in RBI, monetary policy & how it works.

* Ananth Narayan, professor, S.P. Jain institution of management and Research "I except RBI to look at the flexibility of linking weighted average call rate to repo rate or reserve repo. The other suggestion would be to tie liquidity stance with monetary policy stance can be in surplus, neutral or deficit mode."

* Mohanty MS, Klau M - Monetary policy and macroeconomic stabilizations, Monetary policy rules in emerging market economics: issues and evidence ..., 2005:- "Using a standard open economy reaction function, we test whether central banks in emerging market economies react to changes in inflation, output gap, and the exchange rate in a consistent and predictable manner".

* Ghosh S, Industry effects of monetary policy: Evidence from India:- The study exploits 2-digit level industry data for the period 1981-2004 to ascertain the interlinkage between a monetary policy shock and industry value added.

* Sengupta Nandini, Sectoral Effects of Monetary Policy in India, First Published May 26, 2014:- Every economy comprises of different sectors with divergent characteristics. These different sectors respond heterogeneously to identical unanticipated macro-economic stimuli ately. Using a Vector Autoregression model this study finds that the impact of a monetary policy shock at the sectoral levels is heterogeneous with manufacturing being the most respective.

-ogeneous with manufacturing being the most respective."

* Abdul Aleem, Transmission mechanism of monetary policy in India :- "Considering the external constraints on monetary policy, it estimates a series of vector autoregression model to examine the effects of an unanticipated monetary policy tightening on the real sector".

* Rao Punita, Monetary Policy : Its Impact On the Profitability Of Banks. In India. "The purpose of this study investigate the impact of monetary policy on the profitability of banks in the context of financial sector reforms in India to and implication of the banks."

* Leena Kaushal and Neha Pathak ; Monetary Policy and Profitability Performance in the Banking System - A case of Commercial Banks in India. "changes in inflation and banking sector interest profitability in India."

Problem of Study.

Through this project we may study about the points written below:-

1. How the policy conduct in surplus liquidity condition.
2. How the policy stance in major economics & the directions of interest Rate for the country of policy I mean to say monetary policy.
3. How money supply directly affected through Reserve Ratios, indiredly affect the cost of credit, transmission impact-gelies, etc.
4. How RBI manage the money supply in India, Aim of RBI and How monetary policy committee worked?
5. How much effectiveness between Reserve Ratio & Narrow Ratio.

Objective of Study

The objective of study these topic is that :-

- To understand the RBI's monetary Policy Regulations.
- To see the effectiveness between Reserve rate & Narrow Rate.
- To understand RBI management or monetary policy committee
- To the Effect of monetary policy on GDP Ratio.

Research Design

AREA OF STUDY	India
DATA TYPE	Secondary data
STATISICAL ANALYSIS	Line graph and double coloured graph
SECONDARY DATA SOURCE	RBI's Annual Report (2000-2019) Rbi.org.in Ministry of finance.

Hypothesis

Setup an hypothesis about testing of sample and its parameters from data. Such tests are referred to as tests of significance of statiscal hypothesis

Null Hypothesis is denote by H_1

Alternative Hypothesis is denote by H_0

Narrow Money Vs Reserve Money

Narrow Money = $a_0 + \alpha_1$ Reserve Money + e_i

Hypothesis tested

$H_0 = \alpha_1$ ie Reserve Money has effect on Narrow Money

$H_1 = \alpha_1$ ie Reserve Money has significant impact on Narrow Money

Currency GDP Vs Reserve Money, Currency Circulation, Bankers Deposit with RBI.

A set of hypothesis is tested

Hypothesis I:

$H_0: \beta_1 = 0$ ie Reserve Money has no effect on Currency GDP Ratio.

$H_1: \beta_1 \neq 0$ ie Reserve Money has significant impact on GDP Ratio.

Hypothesis II:

H_0 : $\beta = 2$ ie Currency in Circulation has no influence GDP Ratio

H_1 : $\beta \neq 0$ ie Currency in Circulation has significant impact on Currency GDP Ratio.

Hypothesis III :

H_0 : $\beta_3 = 0$ ie Bankers Deposit with RBI has no influence Currency GDP Ratio

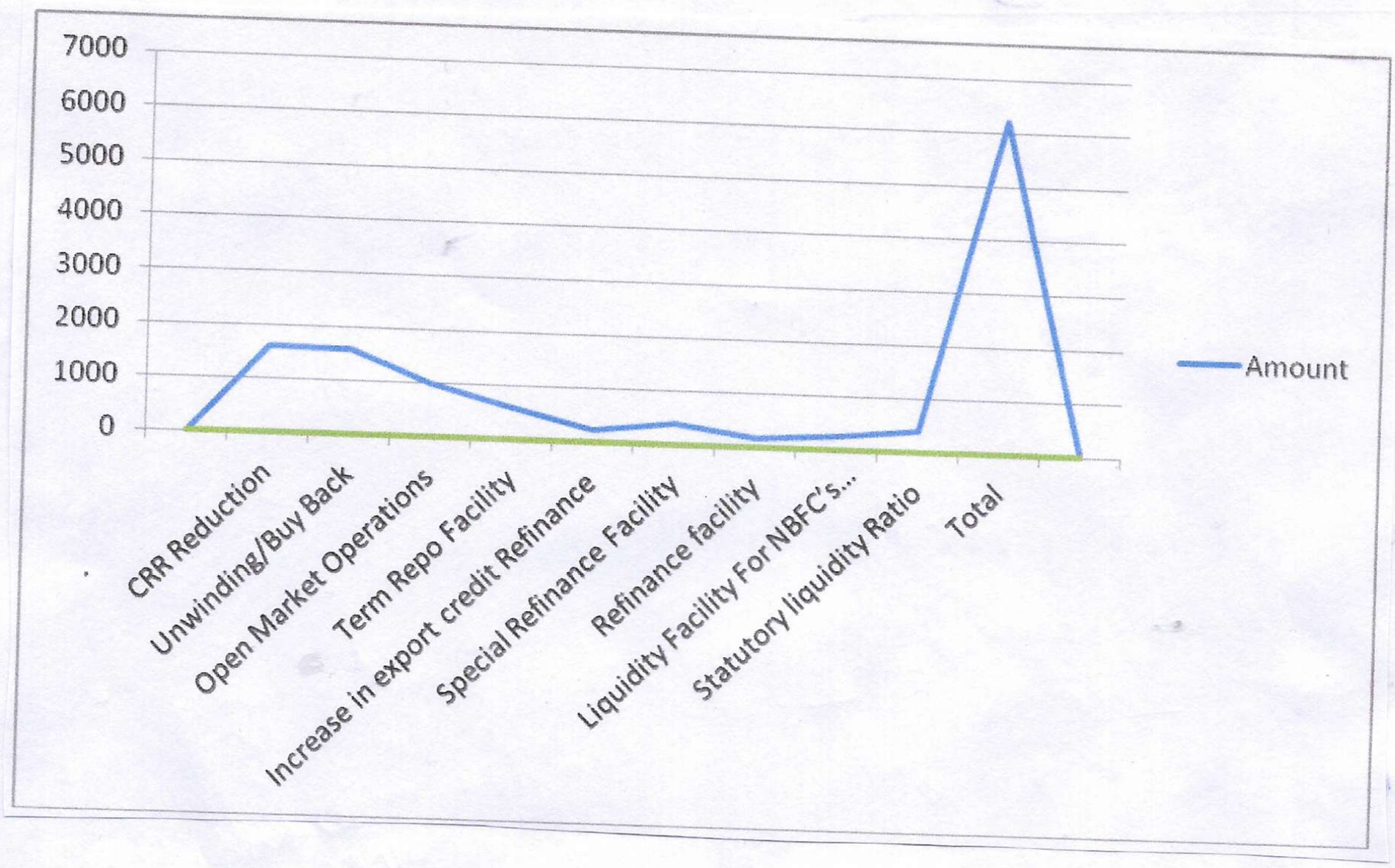
H_1 : $\beta_3 \neq 0$ ie Bankers Deposit with RBI has significant impact on Currency GDP Ratio

Data and Analysis

Measures / Facility	Amount	% of GDP
CRR Reduction	1600	2.9
Unwinding / Buy Back	1590	2.9
Open Market Operations	1000	1.9
Term Repo Facility	600	1.1
Increase in export credit Refinance	223	0.4
Special Refinance Facility	385	0.7
Refinance facility	160	0.3
Liquidity Facility for NBFC's through special Purpose vehicle @	250	0.4
Statutory Liquidity Ratio	400	0.7
Total	6208	11.3

Table - 1 :- Effect of Monetary Policy in terms

Author :- (Ministry of finance of India Appendix)


7000
6000
5000
4000
3000
2000
1000
0
Amount
CRR Reduction
Unwinding/Buy Back
Open Market Operations
Term Repo Facility
Increase in export credit Refinance
Special Refinance Facility
Refinance facility
Liquidity Facility For NBFC's...
Statutory liquidity Ratio
Total

SLR RATES	CRR	MSF	Repo Rate	Reverse Repo Rate	Base Rate
18.75%.	4%.	5.4%.	5.15%.	4.9%	8.95%. – 9.40%.

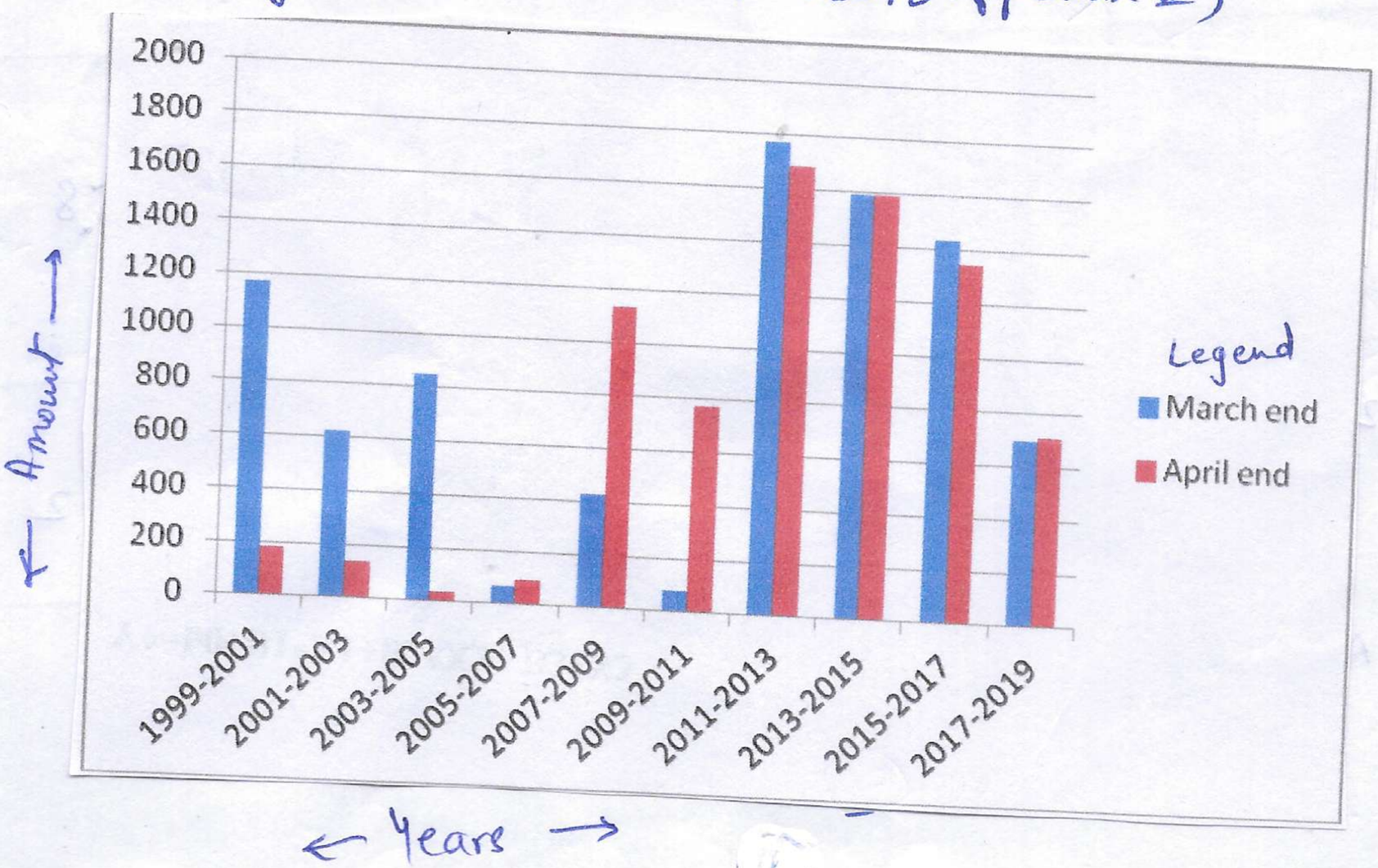
Table - 2:- Lastest RBI Bank Rates in Indian Banking 2019

Author :- (RBI.org.in Appendix 4. Rates)

Years	March end	April end	Total
1999-2001	1170	181	1351
2001-2003	624	137	761
2003-2005	847	40	887
2005-2007	72	93	165
2007-2009	428	1131	1558
2009-2011	81	777	1590
2011-2013	1772	1688	3460
2013-2015	1594	1589	3183
2015-2017	1436	1349	2785
2017-2019	700	708	1408

Table-3 :- Effect of monetary policy on GDP in Month of March end & April end in Year till 2019

Author :- (Rbi.org.in Annual Report GDP ratio Appendix IV)



Effect changes of GDP through Monetary Policy

Table-4 :- Money

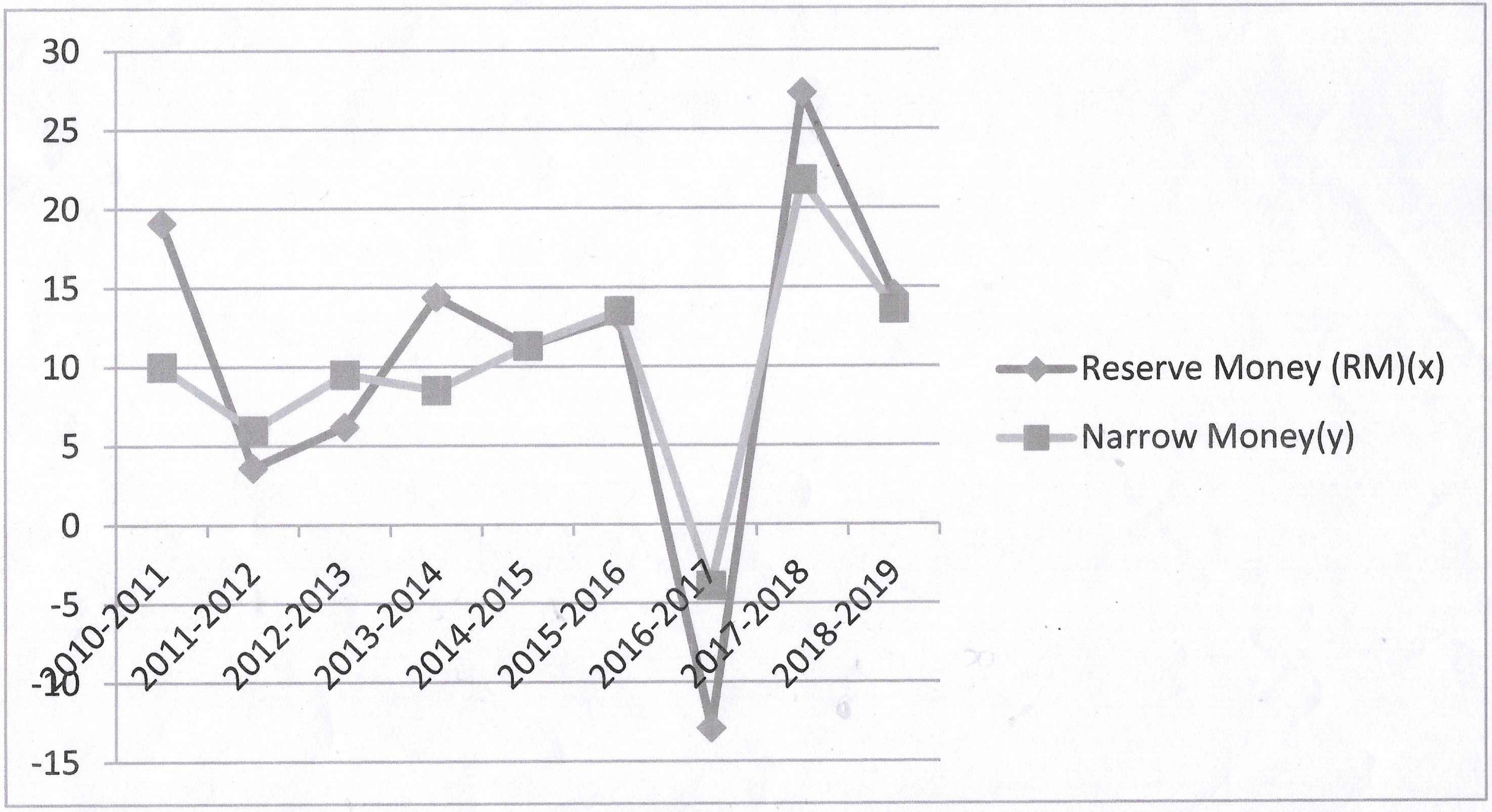
	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19
Reserve Money (R.M)	19.1	3.6	6.2	14.4	11.3	13.1	-12.9	27.3	14.5
Currency in Circulation	18.8	12.4	11.6	9.2	11.3	14.9	-19.7	37	16.8
Bankers' Deposits with RBI	20.2	-15.9	-10	34	8.3	7.8	8.4	3.9	6.4
Currency GDP Ratio	12.4	12.2	12	11.6	11.6	12.1	8.7	10.7	11.2
Narrow Money (M1)	10	6	9.2	8.5	11.3	13.5	-3.9	21.8	13.6
Broad Money (M3)	16.1	13.5	13.6	13.4	10.9	10.1	6.9	9.2	10.5
Currency Deposite Rate	16.3	16.1	15.7	15.1	15.2	16	11	14.4	15.4
Money Multiplier (Ratio)	4.7	5.2	5.5	5.5	5.5	5.3	6.7	5.8	5.6
GDP M_3 Ratio.	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2

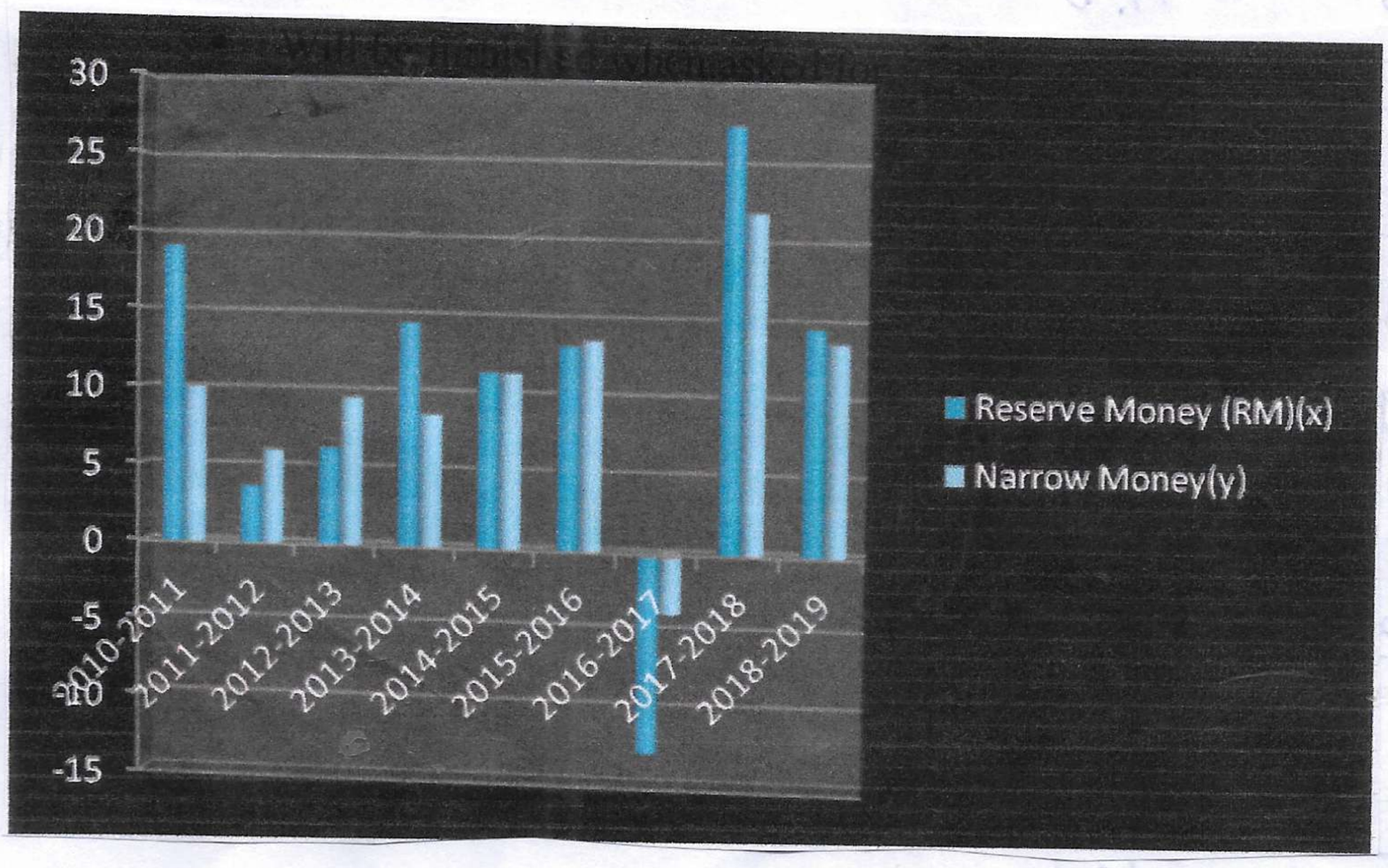
Author :- RBI Annual Report 2018-19 Appendix Inflation, Money & Credit.

	X	Y
Years	Reserve Money	Narrow Money
2010-2011	19.1	10
2011-2012	3.6	6
2012-2013	6.2	9.5
2013-2014	14.4	8.5
2014-2015	11.3	11.3
2015-2016	13.1	13.5
2016-2017	-12.9	-3.9
2017-2018	27.3	21.8
2018-2019	14.5	13.6

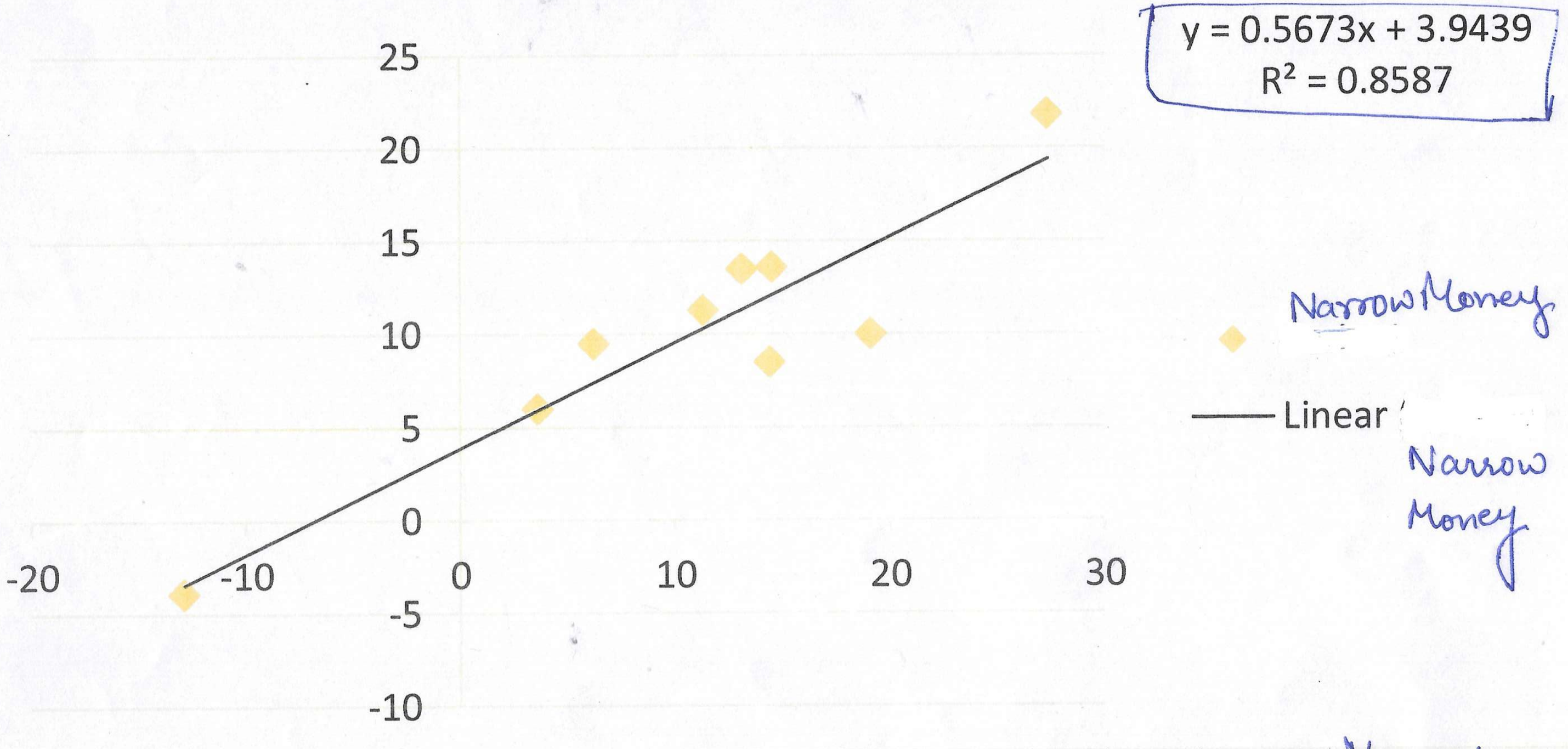
Table :- 4.1 Reserve Money and Narrow Money

Author :- RBI Annual Report 2018-19 Appendix inflation, Money & Credit → Money table → Reserve Money & Narrow Money


30
25
20
15
10
5
0
-5
-10
-15
2010-2011
2011-2012
2012-2013
2013-2014
2014-2015
2015-2016
2016-2017
2017-2018
2018-2019
Reserve Money (RM)(x)
Narrow Money(y)


30
25
20
15
10
5
0
-5
-10
-15
2010-2011
2011-2012
2012-2013
2013-2014
2014-2015
2015-2016
2016-2017
2017-2018
2018-2019
Reserve Money (RM)(x)
Narrow Money(y)

SCATTERPLOT OF NARROW VERSES RESERVE MONEY



Y = Narrow Money

X = Reserve Money.

Years	X Reserve Money	Y Narrow Money	x^2	y^2	$\lvert x-\bar{x}\rvert$	$\lvert y-\bar{y}\rvert$
2010-2011	19.1	10	364.81	100	8.366	0.03
2011-2012	3.6	6	12.96	36	7.134	4.03
2012-2013	6.2	9.5	38.44	90.25	4,534	0.53
2013-2014	14.4	8.5	207.36	72.25	3.666	1.53
2014-2015	11.3	11.3	127.69	127.69	0.566	1027
2015-2016	13.1	13.5	171.61	182.25	2.366	3.47
2016-2017	-12.9	-3.9	166.41	15.21	23.634	13.93
2017-2018	27.3	21.8	745.29	475.24	16.566	11.77
2018-2019	14.5	13.6	210.25	184.96	3.766	3.57
Total	96.6	90.3	2044.82	1283.85	70.598	40.13

Mean of Reserve Money $(\bar{X}) = \frac{96.6}{9} = 10.734$

Mean of Narrow Money $(\bar{Y}) = \frac{90.3}{9} = 10.034$

Median of Reserre Money $(X) = \left(\frac{9+1}{2}\right)^{th}$ item $= \left(\frac{10}{2}\right)^{th}$ item $= 5^{th}$ item $= 11.3$

Median of Narrow Money $(Y) = \left(\frac{9+1}{2}\right)^{th}$ item $= \left(\frac{10}{2}\right)^{th}$ item $= 5^{th}$ item $= 11.3$

Standard deviation $= \sqrt{\frac{\Sigma x^2}{N} - \left(\frac{\Sigma x}{N}\right)^2}$

$\sigma x = \sqrt{\frac{\Sigma x^2}{N} - \left(\frac{\Sigma x}{N}\right)^2} = \sqrt{\frac{2044.82}{9} - \left(10.734\right)^2} = \sqrt{272.20 - 115.218}$

$= \sqrt{111.982} = \boxed{10.582}$ Ans

$\sigma y = \sqrt{\frac{\Sigma y^2}{X} - \left(\frac{\Sigma y}{N}\right)^2} = \sqrt{\frac{1283.85}{9} - (10.03)^2} = \sqrt{142.65 - 100.60} = \sqrt{42.05}$

$= \boxed{6.484}$ Ans

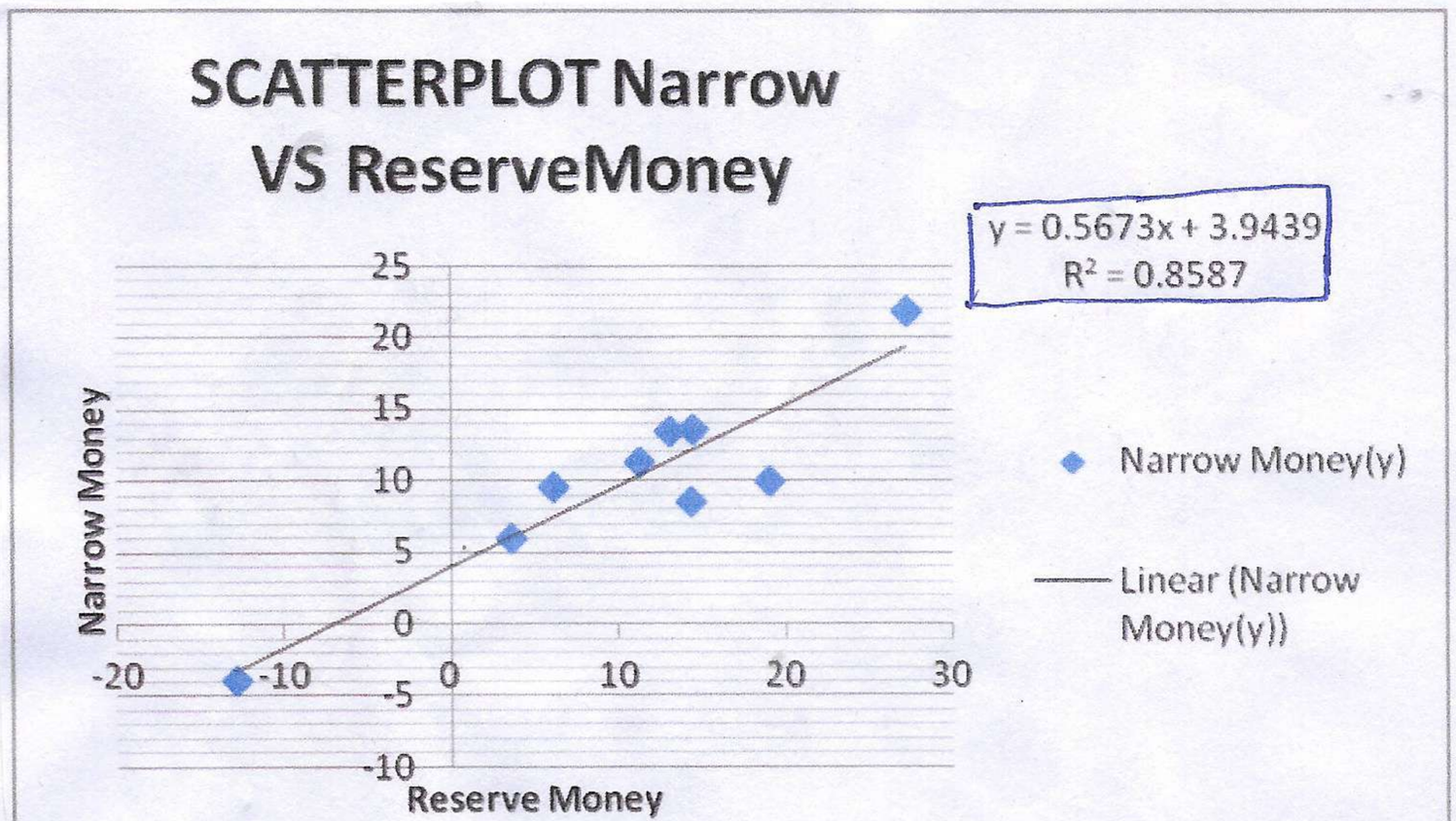
Mean Deviation $= \frac{\Sigma|X-\bar{X}|}{N}$

Mean Deviation of Reserve Money $= \frac{\Sigma|X-\bar{X}|}{N}$

$= \frac{70.598}{9} = 7.8442$

Mean Deviation of Narrow Money $= \frac{\Sigma|Y-\bar{Y}|}{N}$

$= \frac{40.13}{9} = 4.4589$



	Reserve Money (RM)(x)	Narrow Money(y)	NARROW MONEY (ESTIMATED)			
2010-2011	19.1	10	14.7801			
2011-2012	3.6	6	5.9862894	SIGN=	"+"	
2012-2013	6.2	9.5	7.4613802	MAGNITUDE=	"POSITIVE"	"HIGH"
2013-2014	14.4	8.5	12.11359			
2014-2015	11.3	11.3	10.354827			
2015-2016	13.1	13.5	11.376044	CORRELATION	0.92665354	
2016-2017	-12.9	-3.9	-3.3748636			
2017-2018	27.3	21.8	19.432309			
2018-2019	14.5	13.6	12.170324			
	23		16.992736			
	3		5.6458838			
	-34		-15.345793			
				FOR REGRESSION		
				DEPEDENT VARIABLE =	RESPONSIVE VARIABLE	NARROW MONEY
				INDEPDENT VARIABLE=	PREDICTOR, EXPLANTORY	RESERVE MONEY
				Y=a+b*X		
				a = intercept	3.94385603	
				b= slope	0.56734261	

Y on X

means

Narrow Money on Reserre Money

Regression equation is

Narrow Money = $a_0 + b$ Reserve Money $\Rightarrow$ Narrow Money = 3.94 + 0.56 (Reserve Money)

Multivate Regression

(I)independent variable
(D)Dependent variable

Y^=b0+B1*X1+B2*X2 + B3*X3

	(I)Reserve Money (RM)(x1)	(I)Currency in Circulation(x2)	(I)Bankers' Deposits with RBI(x3)	(D)Currency-GDP Ratio$ (y)	D^ Y^ estimate
2010-11	19.1	18.8	20.2	12.4	33
2011-12	3.6	12.4	-15.9	12.2	-6
2012-13	6.2	11.6	-10	12	0
2013-14	14.4	9.2	34	11.6	46
2014-15	11.3	11.3	8.3	11.6	19
2015-16	13.1	14.9	7.8	12.1	19
2016-17	-12.9	-19.7	8.4	8.7	14
2017-18	27.3	37	3.9	10.7	19
2018-19	14.5	16.8	6.4	11.2	18

Table3(1(2)):- in this using mulivate regression between GDP Ratio over ReserveMoney,Currency circulation,Bankers Deposits. Throught this we the effect on economy .

Author:-RBI APPENDIX TABLE 4 MONEY

SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.587886
R Square	0.34561
Adjusted R Square	-0.04702
Standard Error	1.166052
Observations	9

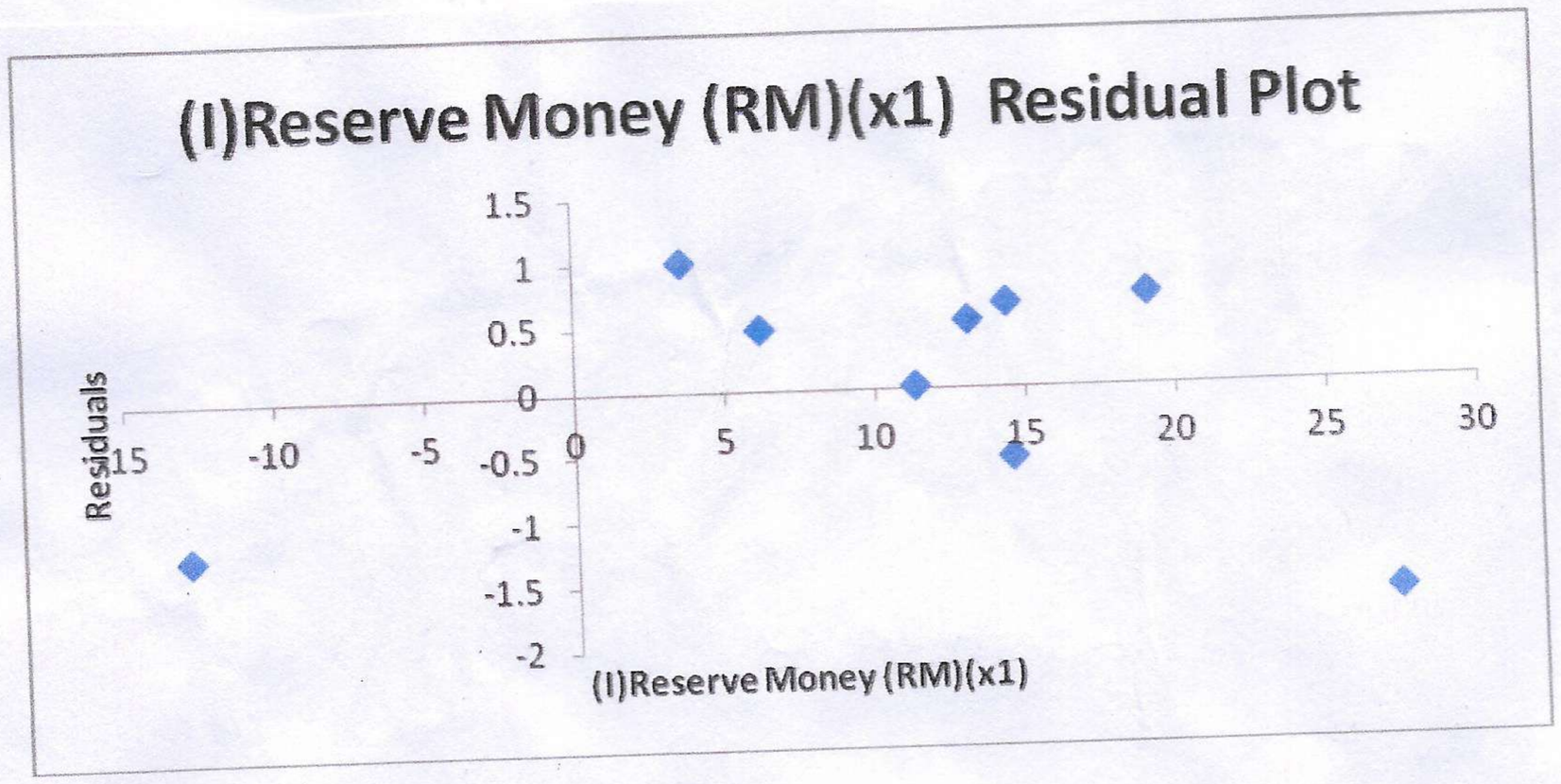
ANOVA

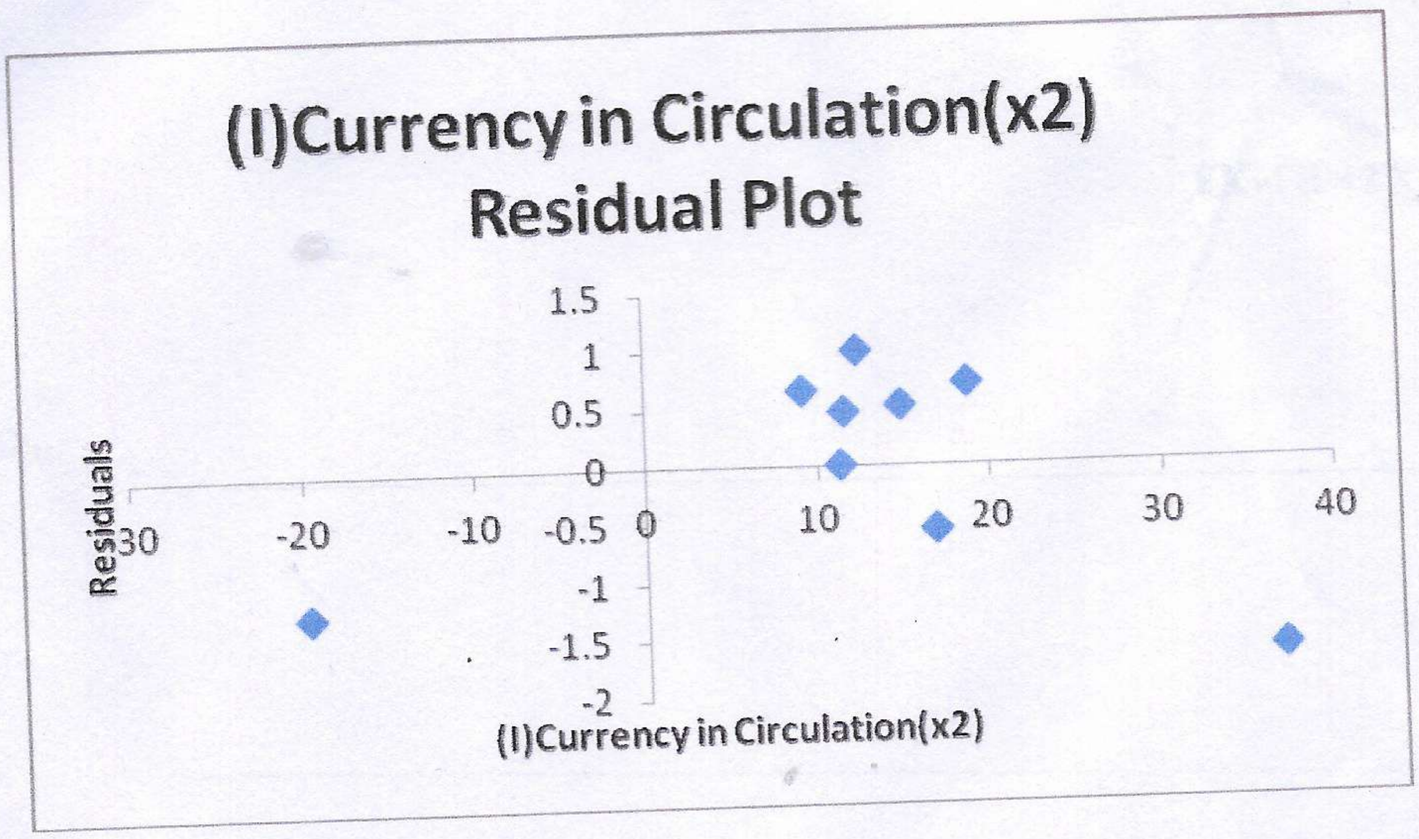
	df	*SS*	*MS*	*F*	*Significance F*
Regression	3	3.590502	1.196834	0.880234	0.51081314
Residual	5	6.798387	1.359677		
Total	8	10.38889			

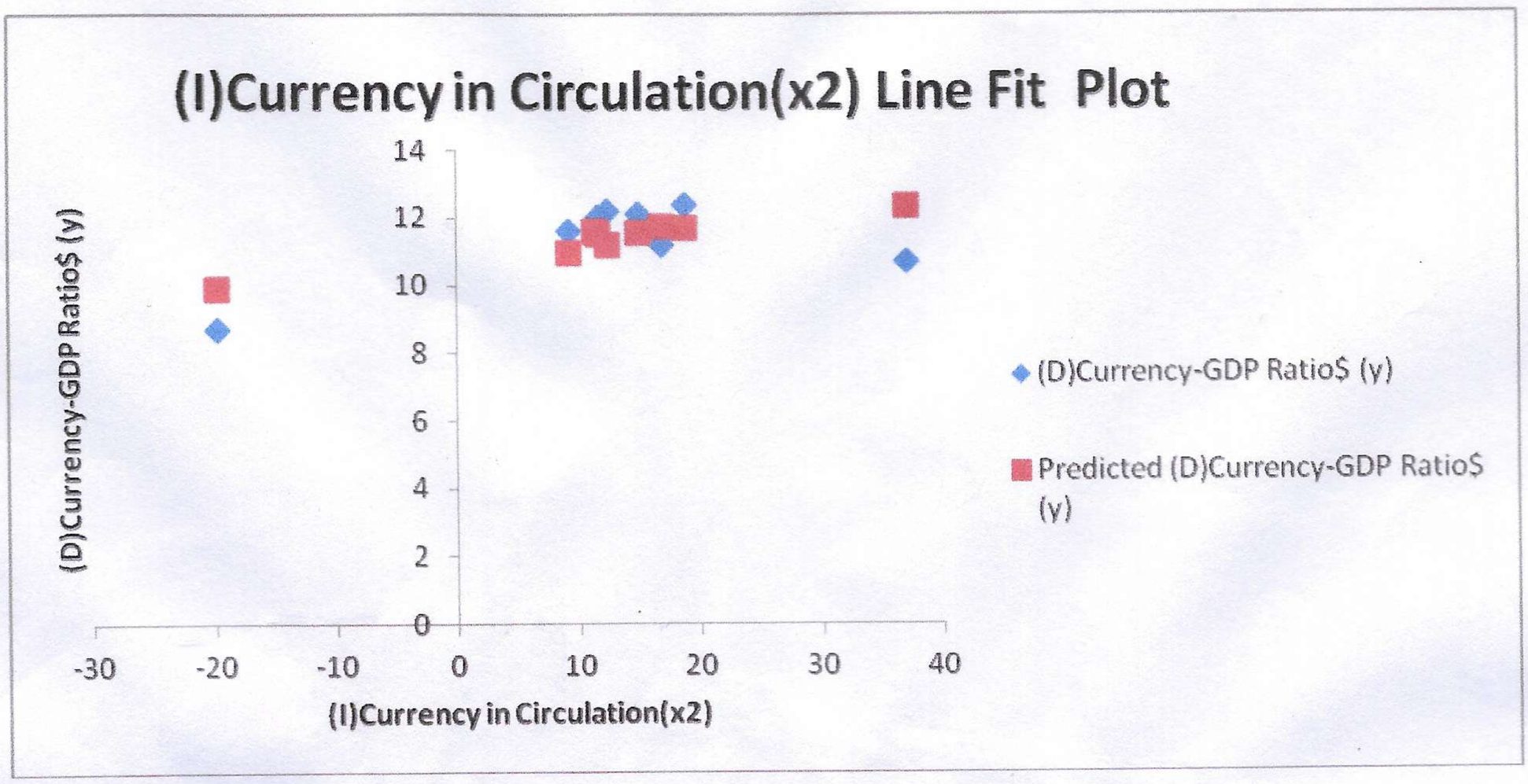
	Coefficients	tandard Err	t Stat	P-value	Lower 95%	Upper 95%	ower 95.0%	pper 95.0%
Intercept	10.92737	0.585568	18.66114	8.13E-06	9.42211814	12.43262	9.422118	12.43262
(I)Reserve Money (RM)(x1)	0.227519	0.524039	0.434164	0.682266	-1.11956709	1.574605	-1.11957	1.574605
(I)Currency in Circulation(x2)	-0.12379	0.386945	-0.3199	0.761976	-1.11846049	0.870889	-1.11846	0.870889
(I)Bankers' Deposits with RBI(x3)	-0.06218	0.138502	-0.44894	0.672264	-0.41821048	0.293852	-0.41821	0.293852

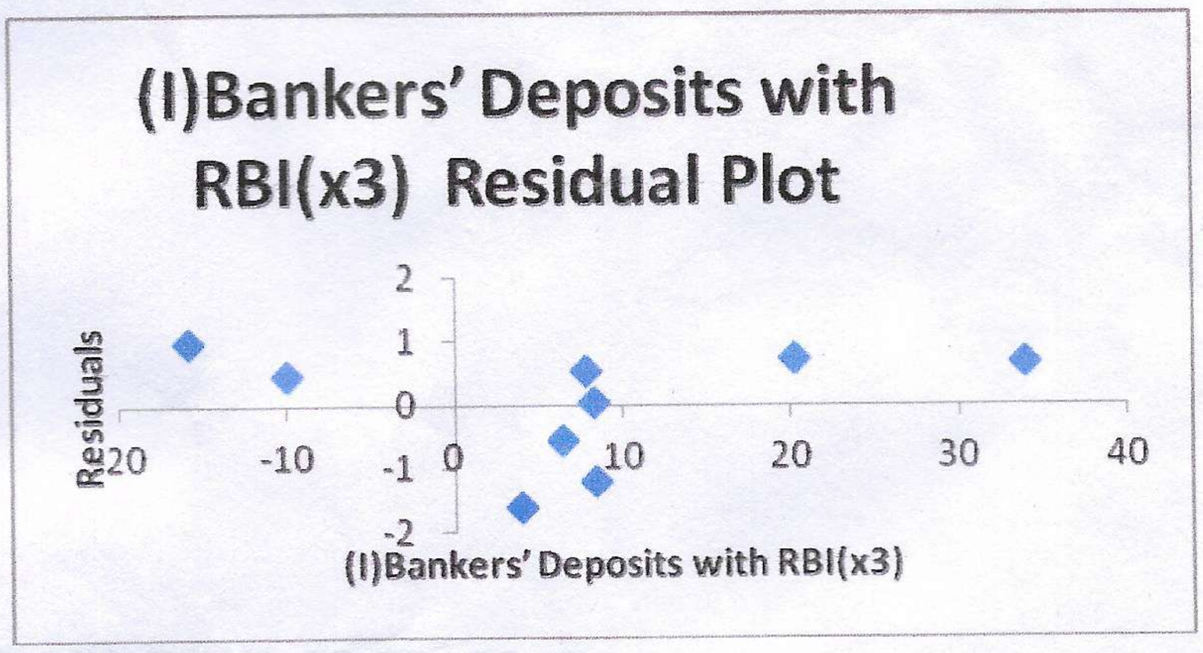
RESIDUAL OUTPUT

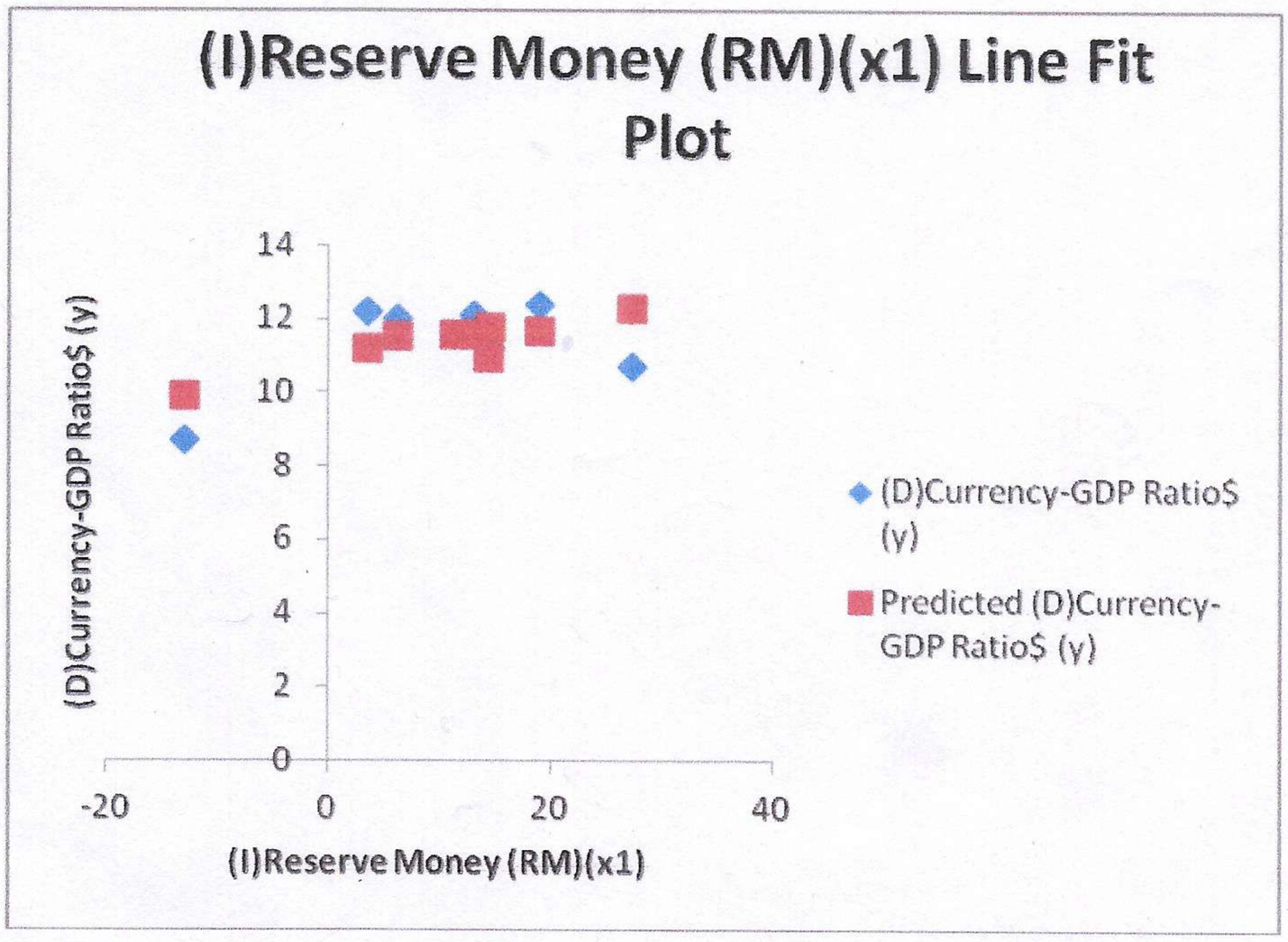
Observation	Predicted (D)Currency-GDP Ratio$ (y)	Residuals	Standard Residuals
1	11.68979	0.710212	0.770424
2	11.20014	0.999857	1.084626
3	11.52386	0.476137	0.516504
4	10.95072	0.64928	0.704326
5	11.58347	0.016534	0.017936
6	11.57846	0.521539	0.565755
7	9.90865	-1.20865	-1.31112
8	12.31606	-1.61606	-1.75307
9	11.74885	-0.54885	-0.59538

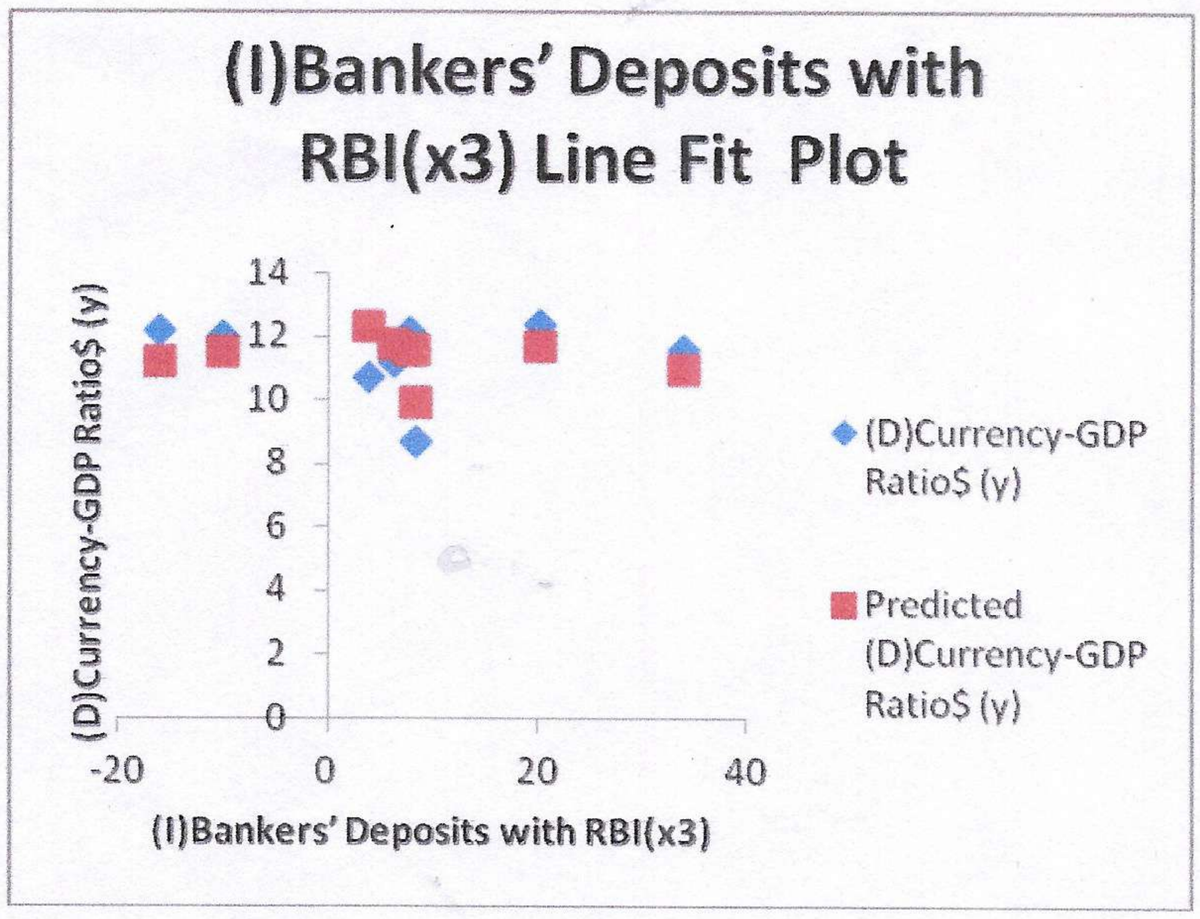

(I)Reserve Money (RM)(x1) Residual Plot
Residuals
1.5
1
0.5
0
-0.5
-1
-1.5
-2
-15
-10
-5
0
5
10
15
20
25
30
(I)Reserve Money (RM)(x1)


(I)Currency in Circulation(x2)
Residual Plot
Residuals
1.5
1
0.5
0
-0.5
-1
-1.5
-2
-30
-20
-10
0
10
20
30
40
(I)Currency in Circulation(x2)


(I)Currency in Circulation(x2) Line Fit Plot
(D)Currency-GDP Ratio$ (y)
Predicted (D)Currency-GDP Ratio$ (y)
(D)Currency-GDP Ratio$ (y)
(I)Currency in Circulation(x2)
14
12
10
8
6
4
2
0
-30
-20
-10
0
10
20
30
40


(I)Bankers' Deposits with RBI(x3) Residual Plot
Residuals
(I)Bankers' Deposits with RBI(x3)
2
1
0
-1
-2
-20
-10
0
10
20
30
40


(I)Reserve Money (RM)(x1) Line Fit Plot
(D)Currency-GDP Ratio$ (y)
14
12
10
8
6
4
2
0
-20
0
20
40
(I)Reserve Money (RM)(x1)
(D)Currency-GDP Ratio$ (y)
Predicted (D)Currency-GDP Ratio$ (y)


(I)Bankers' Deposits with RBI(x3) Line Fit Plot
(D)Currency-GDP Ratio$ (y)
14
12
10
8
6
4
2
0
-20
0
20
40
(I)Bankers' Deposits with RBI(x3)
(D)Currency-GDP Ratio$ (y)
Predicted (D)Currency-GDP Ratio$ (y)

MONETARY POLICY REGULATIONS AND RBI

The central bank (RBI) is the main body that controls the monetary policy in India. They control the flow of money into the market through various instruments of monetary policy. This help the RBI control the inflation and liquidity in the economy. Let us take a look at the instruments of monetary policy the RBI uses.

RBI
Reserve Bank of India.

The RBI central bank of India. It was established in 1935. under a special act of the parliament. The RBI is the main authority for the monetary policy of the country. The main functions of the RBI are to maintain financial stability and the required level of liquidity in the economy. The RBI also controls and regulates the currency system of our economy. It is the sole issuer of currency notes in India. The RBI is the central banks that controls all the other commercial banks, financial institutes, finance firms etc. It supervises the entire financial sector of the country.

The Regulations of Monetary Policy are as follow:-

1. Main Authority of Monetary policy
2. Instruments of monetary policy that the RBI has as its dispol.
3. Open market operations
4. Bank rate.
5. Variables reserve requirements
6. Liquidity adjustment facilities
7. Moral Suasion.

Instruments of Monetary Policy and the Reserve Bank of India -

The RBI is the main body that controls the monetary policy in India. They control the flow of money into the market through various instruments of monetary policy. This helps the RBI control the inflation and liquidity in the economy. Let us take a look at the instruments of monetary policy the RBI uses.

1) Open Market Operation

Open Market Operation is when the RBI involves itself directly and buys or sell short-term securities in the open market. This is a direct and effective way to increase or decrease the supply of money in the market.

It also has a direct effect on the ongoing rate of interest in the market.

Let us say the market is in equilibrium. The RBI decides to sell short-term securities in the market. The supply of money in the market will reduce. And subsequently, the demand for credit facilities would increase. And so correspondingly the rate of interest would also see a boost.

On the other hand, if RBI was purchasing securities from the open market it would have the opposite effect. The supply of money to the market would increase. And so, in turn, the rate of interest would go down since the demand for credit would fall.

2) Bank Rate.

One of the most effective instruments of monetary policy is bank rate. A bank rate is essentially the rate at which the RBI lends money to commercial banks without any security or collateral. It is also the standard rate at which the RBI will buy or discount bills of exchange and other such commercial instruments.

So now if the RBI were to increase the bank rate, the commercial banks would also have to increase their lending

rates. And this will help control the supply of money in the market. And the reserve will obviously increase the supply of money in the market.

3) Variable Reserve Requirement:

They are two components to this instrument of monetary policy, namely:- the cash reserve ratio (CRR) and the Statutory Liquidity ratio (SLR).

Let us understand them both.

Cash Reserve Ratio (CRR) is portion of deposits with commercial banks that it has to deposit to the RBI. So CRR is percent of deposits the commercial banks have to keep with the RBI. The RBI will adjust the said percent to control the supply of money available with the bank. And accordingly, the loans given by the bank will either become cheaper or more expensive. CRR is great tool to control inflation.

The Statutory Liquidity Ratio (SLR) is percent of total deposit that the commercial have to keep themselves in the form of Cash Reserve or Gold. So increase SLR will mean the banks have fewer fund to as loans Thus controlling the supply of money

in the economy. And the opposite is true as well.

4> Liquidity adjustment facility.

The Liquidity adjustment facility (LAF) is indirect instrument for monetary control. It control the flow of money through Repo Rate and Reverse Repo Rate.

The Repo Rate is actually the rate at which commercial banks and other institutes obtain short-term loans from the central bank.

Reverse Repo Rate is the rate at which the RBI parks its fund with commercial banks for short time periods So RBI constantly changes. These rates to control the flow of money in market according to economic situation

5) Moral Suasion

This is an informal method to monetary control. The RBI is the central bank of contry and thus enjoy's a supervisory position in banking system. If their is a need it can urge banks to exercise credit control at a times. To maintain the balance of fund in the market. This method actually quite effective since banks tend to follow the policies set by the RBI.

COMPOSITION OF MONETARY POLICY

- GOVERNOR OF RBI - Ex- OFFICO, SHAKTI KANTA DAS
- DEPUTY GOVERNOR OF RBI, Ex-OFFICO, B.P. KANUNGO
- ONE OFFICER OF RBI, MEMBER - MICHAEL PATRA.
- SHRI CHETAN. GHATE, PROFFESSOR, INDIAN STATISTICAL INSTITUTE (ISI), PROFESSOR. PAMIDUA, DIRECTOR, DELHI SCHOOL OF ECONOMICS.
- DR. RAVINDRA H. DHOLAKA, PROFESSOR, INDIAN INSTITUTE OF MANAGEMENT, AHMEDABAD MEMBER.

MONETARY POLICY COMMITTEE (MPC)

Monetary Policy Committee (MPC) responsible for brench marks of interest rate in India. The meeting is held at least 4 times a year and publish discussion after each meeting. This consist of Six members :- Three official of RBI, 3 external members nominated by the government of india, Governor of RBI is a chairperson, current mandate of the committee is to maintain 4% annual inflation until 31st March 2021 with an upper tolerance of 6% and a lower tolerance of 2%. This committee created in the year 2016 to bring transparency and accountability in fixing the monetary policy. Governor of RBI is disqualified at any time; the decision is lonely taken by the governor of RBI. Before declaring MPC, technical advisory committee (TAC) is appointed. The composition of MPC is Governor of RBI, ex officio - SHAKTIKANTA DAS, Deputy Governor ex-officio - BP KANUNGO, One officer of RBI is nominated, member - MICHAEL PATRA, other members - SHRI CHETAN GHATE, PAMI DUA etc.

FINDING AND CONCLUSION

Though this research project I am able to Table 1 see how the Rate and Instruments changes on GDP/Monetary Policy year to year. In Table 2 latest RBI Bank Rates in Indian Banking in 2019. In Table 3 seen that there is all years there is decrease in rates in the month of April expected, In 2017-2019 in increase in rates of April ending. Table 4 see estimated the Rates of Money and correlation magnitude is positive and regression.

From this project regress we know the how error ki of equal deal

$$Y = A + B^{*}X1 + C^{*}X2 + D^{*}X3 \ldots Xn + Ui \qquad E$$

Standard Error = " 1.166 " Using multirate Regression between GDP ratio over Reserve Money, Currency Circulation, Bankers Deposits. through this we see the effect on economy. From Narrow Money & Reserve Money regression know the Causation between Narrow Money & Reserve Money and it is highly correlate like 0.9 because comes under range -1 to +1 and 0.9 nearly on +1 peak. and mean is calculate average of Reserve Money & Narrow Money and median calculate Statiscal Median in Excel =MEDIAN(Range selected).

We also find that if the monetary policies changes then the rates also may changes, the rates didn't remain constant year by year there is aspects like change in interest rate, liquidity rates and etc. I am also able to understand know monetary policy committee worked and that make from monetary policy asped- its become more important day by day & year by year
I am glad that I able to complete this Research work on time.

Recommdation & References

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