

## Economy Impact on Commercial Banking assets and liabilities – A Study

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### ABSTRACT:

In any economy banking sector plays a crucial role especially countries like India where majority of the population are not associated with the banking system. Our paper has been emphasized to measure the impact of Indian economy on the Indian banking assets and liabilities by considering 20 years data i.e. 1995-2015. Johnson co-integration analysis has been applied on augmented Dicky fuller stationery data and the granger causality test result unveils that funds with the bank were fail to influence the Indian GDP. Regression weight estimation integrated that Repo rate had influenced the IIP and deposits with the bank. The linear regression had proven that the monetary policy changes are influencing the Indian inflation rate. This study is useful to the banking regulators, bankers, government statutory bodies and research scholars.

**Key Words: Funds with banks, Bank Assets and liabilities, GDP, IIP, Inflation**

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### INTRODUCTION:

The Commercial Bank of India, also known as Exchange Bank was a bank which was established in Bombay Presidency , in 1845 of the British Raj period. In modern era, banking sector especially commercial banks play a crucial role in developing an economy. It supplies money to the economy. Generally banks accept deposits and lend loans and advances. Apart from this banks also perform agency services. Banking sector has been transformed from traditional methods to modern methods. Banks mobilize the savings of

public and help agriculture, industry and other sectors in raising finance or capital. It even helps in monetary policy of RBI. Infact technology in banking field is also improvised and sophisticated like RTGS NEFT etc. So to conclude banking sector is rapidly developing in India.

Financial Sector Reforms introduced in 1991 have greatly changed the face of Indian Banking. The banking sector has improved rapidly from a regulated environment to a deregulated economy. The banking industry is in a active towards a vibrant global market and sophisticated information technology. Due to this changing, banks attention to expand their activities from just lending to borrowing to other ends like insurance, e-banking etc. Numbers of financial institutions have entered in the financial world with varieties of financial products after the initiation of economic reforms. the roles of banking services, not only deals with banking related to accepting the deposits and giving the loans. But also as insurance, investment in different sectors of management and banking etc. Background of Banking Evolution of Banking in India has its origin as early as traditional period.

#### **REVIEW OF LITERATURE:**

**1. Prof. P. Sheela:** Her main focus is to match the assets-liability-management (ALM) in the areas of maturity of interest rates so that risk arising from mismatches of assets and liabilities can be managed. Her focus is limited to public sector banks i.e., Union Bank and Indian Bank .the multivariate statistical technique and ratio analysis have been conducted to study the nature and strength of relationship between the assets and liabilities in these two nationalized banks. Her papers is also indicates a strong relationship between fixed assets and net worth for both the banks where as our study relates to over all commercial banks.

**2. Dr.Sangappa.V.Maman Shetty:** The researchers have focused on banking sector reforms and its impact and major areas like taxation, financial institutions, and insurance acting as a major catalyst in strengthening Indian economy. The researcher has found impact of the reforms on credit deposit ratio, investment in government securities. The study is limited to banking in rural areas which is not sufficient. Our study has been emphasized over all banking system in India which is also included rural banking also.

**3. Meenakshi Rajeev and HP Mahesh:** This paper had attempted to focus on 4 issues of banking sector. The issues are as follows

✓ banking sector reforms

- ✓ NPA
- ✓ Joint Liability Group (JLGs)
- ✓ self help group(SHG).

Their study is limited to private sector NPA which are not performing well when compared to public sector banks NPA

4. **Dr. Anurag b singh and Miss. Priyanka tendon:** They focus is on issues in asset liability management and various categories of risk that are required to manage it and also the strategies for ALM from assets side as well as liabilities side .Their findings proved successful tool in risk management. This paper is limited to banking leverage ratios only; where our focus is on macro economic factors.

5. **Prof. (Dr) Kanhaiya Singh:** This paper is an attempt to analyze the impact of measures and strategies banks undertook to manage the composition of asset-liability and its impact on their performance in general and profitability. Our study is extended to measure the impact of Indian economy assets and liabilities

6. **Tamiru Belete:** This study focuses on increasing public awareness to mobilize more saving and fixed deposits and this will enhance their performance in provision of loans and advance to customers. His SCA model was used to estimate the profitability which is measured by ROA as a function of balance sheet and macroeconomic explanatory variables. For over a period from 2005 to 2010.this analysis result showed that all assets, except fixed assets, mainly loans and advances affect profitability but our papers deals with a period of 1995-2015 over all fixed assets and liabilities also.

7. **Garima Chaudhary:** The growth of such banks is not possible unless they witness some success in the context of customer satisfaction or may it be the net assets held by these banks, efficiency of their management or the networks of each bank both in private as well as the public sector bank. His papers cover the performance comparison of private sector banks and the public sector banks and to give the reasons and suggestions Keywords: RBI, ATM, Capital Adequacy Ratio (CAR), liability dimension. whereas our deals with all commercial banks in India where as our papers tells Monetary policy key rates were having influence on IIP and

other banking assets and liabilities.

**8. Debasis Bagchi:** This study attempts to find out behaviour of the banks with respect to their capital adequacy ratio dynamics, by decomposing the financial statements and used information analysis of the balance sheet and a data of 1998 and 2002, for twenty public sector banks. They found that information measures can explain banks' policy decisions on liabilities and assets reorganisation. Quantitatively, we found that proportional development took place, in both liabilities and asset items of the banks under different capital adequacy ratio values where as our papers uses Trends further study is recommended in this area by considering various macro levels economic variables which were having impact on banking assets and liabilities along with the Indian economy.

**9. Uthaya Chandar:** His focus of this study will be towards the investment practices of the banks. This paper suggests the way to the policy makers to improve the management of investment policy and recommends suggestions to raise the profit. In the study of the financial institutions, the investment and investment problems will revolve around the concept of managing the surplus financial assets and will lead to the wealth maximization and providing a significant further source of income. And it works for providing a benefit to the supplier of the funds that is the banks where as our study is useful to the banking regulators bankers, government statutory bodies and research scholars.

**10. Seema Jaiswal** She had studied relationship between two sides of the balance sheet of scheduled commercial banks in India for the period 1997-2008, using statistical tool multivariate canonical correlation analysis. There is decline in canonical correlation, indicating lower dependency between asset and liability accounts. This study also gives important relationship between individual asset and liability account of balance sheet. For funding long term liability, banks are relying on short-term assets, which is a risky strategy of ALM. whereas our papers is by considering 20 years data i.e., 1995-2015. Johnson co-integration analysis has been applied on augmented Dicky fuller stationery data and the granger causality test result unveils that funds with the bank were fail to influence the Indian GDP Regression rate.

### **OBJECTIVES:**

- To measure the relationship between Inflation, Fiscal Deficit, funds with bank, bank credit (loans), deposits of banks.
- To measure the impact of funds available with banks to GDP.
- To know the impact of deposit in the banks and credit of banks on inflation.
- To study the relationship of Repo Rate, Reverse Repo Rate, SLR with funds available at banks.
- To know the impact of Repo Rate on deposits with the banks and IIP.

### **HYPOTHESIS:**

**Ho – Null hypothesis** - Funds available with banks will not influence the GDP.

**Ho – Null hypothesis** – Bank deposit funds will not influence the inflation.

**Ho – Null hypothesis** – Credits of the banks will not influence the inflation.

**NEED OF THE STUDY:** A strong banking system will reflect the strength of the country's economic position. Country like India majority of the citizens parks their savings with banks instead of any other risk oriented asset classes. Many external and internal factors which will influence the economy in turn affect the banking system. Our paper mainly discusses the Indian economy impact on banking assets and liabilities. External factors were not considered in this paper.

**SCOPE OF THE STUDY:** The study has been confined for the period of 20 years i.e., 1995- 2015. In this paper commercial banks data has been considered. The internal economic factors such as GDP, IIP, Inflation, fiscal deficit and monetary policies were considered. The focus of the analysis is to know the economic factors impact on funds of the banks in india.

**Empirical Study: Repo Rate, Reverse Repo Rate, SLR, Inflation, GDP, IIP and Fiscal Deficit**

**RESOURCE METHODOLOGY:** This analysis has been done on secondary data by using descriptive statistical tools. The following formulas were considered for the analysis.

**Source of data:** Websites, books, news papers and journals.

**Johansen Co-integration:** Co-integration is a statistical property of time series variables. Two or more time series are co-integrated if they share a common stochastic drift. If two time series  $x$  and  $y$  are co-integrated, a linear combination of them must be stationary.

$Y - Bx = u$ , Where  $u$  is stationary.

**2. Granger causality test:** Granger causality test is a statistical hypothesis test for determining whether one time series is useful in forecasting another. A time series  $X$  is said to Granger-cause  $Y$  if it can be shown, usually through a series of t-tests and F-tests on lagged values of  $X$  that those  $X$  values provide statistically significant information about future values of  $Y$ .

**Null hypothesis:** The null hypothesis refers to a general statement or default position that there is no relationship between two measured phenomena. Rejecting or disproving the null hypothesis- and thus concluding that there is a relationship between two phenomena.

**Alternative hypothesis:** In statistical hypothesis testing, the alternative hypothesis is applicable when probability is  $> 0.5$ . Alternative hypothesis is that the quality is poorer in the second half of the record.

**3. Augmented Dickey-Fuller Test:** Augmented Dickey-Fuller Test is a test for a unit root in a time series sample. It is an augmented version of the Dickey-Filler test for a larger and more complicated set of time series models.

$$\Delta y_t = \alpha + \beta t + \gamma y_{t-1} + \delta_1 \Delta y_{t-1} + \dots + \delta_{p-1} \Delta y_{t-p+1} + \epsilon_t,$$

**4. Correlation:** A correlation study is a research writing that attempts to relate an event to another events or sets of causality which precipitate the event.

$$r = \frac{n(\Sigma xy) - (\Sigma x)(\Sigma y)}{\sqrt{[n\Sigma x^2 - (\Sigma x)^2][n\Sigma y^2 - (\Sigma y)^2]}}$$

**5. Regression:** A statistical measure that attempts to determine the strength of the relationship between one dependent variable and the series of other changing variable.

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \dots + \beta_n X_n + \epsilon$$

#### LIMITATIONS:

1. Funds available with the bank, data has been considered from 1999 onwards.

2. Banks credits and amount of deposits with the bank data has been considered from 2007 year onwards.

**DATA ANALYSIS:**

1. To measure the relationship between Inflation, Fiscal Deficit, funds with bank, bank credit (loans), deposits of banks.

Correlations		Inflation	F.D	Deposits of banks	Gdp	Funds with banks	Bank credits
<b>Inflation</b>	Pearson Correlation	1					
	Sig. (2-tailed)						
	N	21					
<b>F.D</b>	Pearson Correlation	0.224	1				
	Sig. (2-tailed)	0.329					
	N	21	21				
<b>Depositsofbanks</b>	Pearson Correlation	0.248	.933**	1			
	Sig. (2-tailed)	0.279	0				
	N	21	21	21			
<b>Gdp</b>	Pearson Correlation	0.105	-0.203	-0.063	1		
	Sig. (2-tailed)	0.652	0.378	0.787			
	N	21	21	21	21		
<b>Fundswithbanks</b>	Pearson Correlation	0.043	.787**	.827**	0.03	1	
	Sig. (2-tailed)	0.855	0	0	0.897		
	N	21	21	21	21	21	
<b>Bankcredits</b>	Pearson Correlation	0.214	.944**	.992**	-0.074	.837**	1
	Sig. (2-tailed)	0.351	0	0	0.75	0	
	N	21	21	21	21	21	21

**Interpretation:** The above analysis of bivariate co-relation has been applied between the select variables and the result unveils that GDP is observed slightly negative correlation with fiscal deficit and deposits of the bank and the bank credits. The Indian fiscal deficit is having a strong correlation with deposits of the banks, funds with bank and bank credit.

2. To measure the impact of funds available with banks to GDP.

Data Trend:	None	None	Linear	Linear	Quadratic		
Rank or	No Intercept	Intercept	Intercept	Intercept	Intercept		
No. of CEs	No Trend	No Trend	No Trend	Trend	Trend	AIC	SIC
0	-123.4051	-123.405	-123.262	-123.262	-122.2986	18.20072	18.38331
1	-115.5224	-110.724	-110.723	-110.703	-110.4016	17.64606	18.01124
2	-111.785	-106.823	-106.823	-104.946	-104.9459	17.68357	18.23133

**Interpretation:** The above analysis of Johnson co-integrated test has been applied between funds with the bank to Indian GDP and the results indicate that log likelihood rank values were stated to be in decreasing trend in both linear and quadratic model along with the two alpha levels hence data is stated to be co-integrated between both variables.

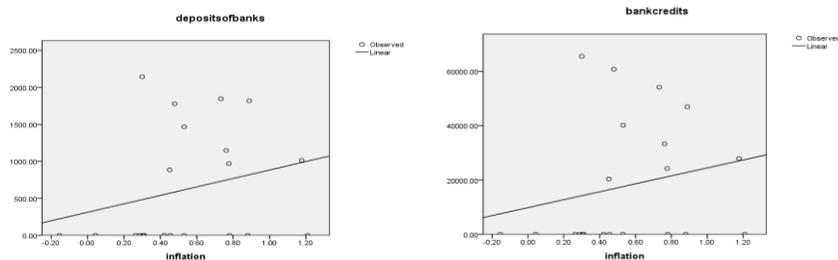
Null Hypothesis:	Obs	F-Statistic	Prob.
DGDP does not Granger Cause DFUNDSWITHBANKS	14	1.83334	0.2148
DFUNDSWITHBANKS does not Granger Cause DGDP		1.37569	0.3011

**Interpretation:** The above analysis of granger causality test has been applied on Johnson co-integrated data of funds with bank to GDP  $H_0$  null hypothesis has been accepted because the probability value have fallen in significant region and reject the  $H_1$  alternative hypothesis this test results shows that funds with the banks fail to influence the GDP.

3. To know the impact of deposit in the banks and credit of banks on inflation.

Equation	Model Summary					Parameter Estimates	
	R Square	F	df1	df2	Sig.	Constant	b1
Linear	0.061	1.242	1	19	0.279	310.931	571.431

**Interpretation:** The above analysis of linear Regression indicates that inflation got effected by the deposit in the banks and credit of the banks the probability value had fallen in significant region.



**Interpretation:** The above graph shows that all the values of bank deposits on credit were fallen above the inflation trend line and in both the graph inflation movement is left to right upward movement has been observed.

4. To study the relationship of Repo Rate, Reverse Repo Rate, SLR with funds available at banks.

Correlations		Control Variables	Repo	Reverse repo	slr
Funds with banks	Repo	Correlation	1		
		Significance (2-tailed)	.		
		Df	0		
	reverse repo	Correlation	0.861	1	
		Significance (2-tailed)	0.		
		Df	18	0	
	Slr	Correlation	0.05	-0.178	1
		Significance (2-tailed)	0.833	0.452	.
		Df	18	18	0

**Interpretation:** The Above analysis of partial co- relation result indicates that under the banks with funds as a control variable reverse repo and SLR were slightly strongly positive co-related with repo rate .but at the same rate SLR is observed slightly negative co-relation with revenue reo rate.

5. To know the impact of Repo Rate on deposits with the banks and IIP.

Model Summary	
Multiple R	0.535
R Square	0.287
Adjusted R Square	0.207
Std. Error of the Estimate	7.299
Log-likelihood Function Value	-27.432

	Sum of Squares	df	Mean Square	F	Sig.
Regression	385.356	2	192.678	3.617	0.048
Residual	958.993	18	53.277		
Total	1344.349	20			

	Unstandardized Coefficients		Standardized Coefficients		t	sig
	B	Std. Error	Beta	Std. Error		
(Constant)	8.446	0.265			31.823	0
Deposits of banks	0.001	0.001	0.526	0.462	1.14	0.269
IIP	-0.011	0.005	-0.96	0.462	-2.079	0.052

**Interpretation:** In the above analysis of regression of weight estimation has been applied to measure the impact on Repo rate on deposits with the bank and IIP, the  $R^2$  value is observed 28.7% which is below the slab value of 60% Both the variables got effected with the repo rate because the probability value observed significant which were below the 0.5.

**FINDINGS:**

1. Deposits with the bank, funds with the bank credit were observed strong co-relation with fiscal deficit of India.
2. Bank credits were formed to be slightly negative co-relation with GDP.
3. Funds with the bank were failed to influence the GDP.
4. This study results shows that inflation has been influenced by deposits with bank, bank credit and funds with the banks.
5. Repo rate is influencing the deposits with the bank along with IIP during the analysis period.

### **CONCLUSION:**

We conclude the analysis of economy impact of India commercial banking assets and liabilities in these study commercial banks which were recognised by RBI has been considered as the economist says stronger banking assets will have stronger economy in the country as this analysis indicates that funds with the banks were failed to influence the Indian GDP. Monetary policy key rates were having influence on IIP and other banking assets and liabilities. Trends further study is recommended in this area by considering various macro levels economic variables which were having impact on banking assets and liabilities along with the Indian economy.

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