DEPOSITS AND CREDITS IN THE INDIAN COMMERCIAL BANKING SECTOR: AGGREGATE AND REGIONAL LEVELS OF ANALYSIS

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ABSTRACT

The Indian Commercial Banking Sector can be characterized as a continuously evolving set of financial stocks and flows, whose patterns, variability and trends might have important implications for both individual and macroeconomic decision making units. Movements in aggregate inflows and outflows can shed some light on the underlying behavior of the various dynamics of fund flows in the Indian Commercial Banking Sector. From this viewpoint, our study attempts to understand how the aggregate financial flows of deposits and credits have evolved during the post-liberalization period of 1995-96 up to 2016-17. The analysis carried out here reveals that there is considerable variability in the behavior of some of the measures of aggregate deposits and aggregate credits while other measures have experienced relatively more stable movements across time. We also find that the periodic behavior of annual growth rates of the key measures of aggregate deposits and credits varies considerably across different sub-periods. Lastly, we find that the distribution of both deposits and credits is more biased in favour of the metropolitan centers as compared to the rural, semi-urban and urban regions.

Keywords: Aggregate Cash Flows, Commercial Banks, Financial Performance, Indian Financial System, Regional Deposits and Credits.

1. INTRODUCTION

The Commercial Banking System occupies a sizeable space in the broader financial and economic system of our economy. The role of Commercial Banks in enabling large-scale, diverse and dynamic financial flows and subsequently the impact of these flows on the economy have been critical issues of academic investigation and policy debates. A banking system

essentially comprises of stocks of deposits and credits that flow across the economy altering both real and nominal economic activities. The changes in these stocks produce inflows in and outflows from the banking system. The Indian banking sector can be characterized as a continuously evolving set of financial stocks and flows, whose patterns, variability and trends might have important implications for both individual and macroeconomic decision making units. The financial inflows of the banking system consist of demand deposits, time deposits and other deposits which play a critical role in both aggregate and disaggregate levels of economic decisions. Outflows can be broadly grouped as food credit, non-food credit, total net bank credit and other credits. Inflows and Outflows that can shed some light on the underlying behavior of the various dynamics of fund flow in the Indian Commercial Banking Sector (ICBS). From this viewpoint, our study attempts to understand how the aggregate financial flows of deposits and credits have evolved during the period of post-liberalization. This study tries to unearth some elementary but important insights into the patterns and trends in the ICBS. The attempt is primarily on the observations made out of analytical and exploratory notes of the behavior of fund flows in the ICBS.

2. OBJECTIVES

In what follows of the remaining story of this paper, a clear attempt is made to provide a cursory examination of the dynamics of aggregate flow of funds in the ICBS which must have evolved out of institutional, market-oriented and regulatory framework-based underlying behaviors. To articulate this idea, it is important to look at the various aspects of the following key issues which are arranged as the prime objectives of this study.

I. To analyze the time-series behavior of aggregate financial inflows and outflows pertaining to ICBS.

II. To examine the possible inter-dynamics and intra-dynamics between aggregate financial inflows and outflows in the ICBS.

III. To investigate the scenario of the aggregate deposits and credits across different areas in order to examine the financial prudence of the banking sector.

3. DATA AND METHODOLOGY

This paper analyses the inflows and outflows, which can be reflected in the movements of aggregate deposits and loans and advances, by examining aggregate demand deposits, aggregate time deposits, and other deposits, and, also taking into account aggregate food credits and aggregate non-food credits, for more cohesive and comprehensive analysis.

All the variables are used in nominal form so as to maintain uniformity in size and scale of the measurement of the variables that are employed in our study. The choice of these variables is dictated primarily by the belief that these variables together can explain a sizeable chunk of the total aggregate financial flows in the ICBS. The paper also investigates the area-wise distribution and behavior of total bank deposits and total bank credits spread across rural, semi-urban, urban and metropolitan areas. The data on all the variables were obtained from the Handbook of Statistics of the Reserve Bank of India (RBI) and various issues Economic Survey published by the Ministry of Finance, Government of India. Our sample period ranges from 1995-96 up to 2016-17.

This study employs descriptive statistical measures, ratios and graphs for examining the data. These elementary methodologies could provide more meaningful understanding of the objectives stated though the same can be examined by carrying out more complex econometric modeling to draw the inferences. We purposefully have avoided the modeling aspects for addressing the time-series behavior of the variables chosen here as our stated objectives can be properly examined by using basic statistical framework including ratios and graphs.

4. LITERATURE REVIEW

The literature that analyzed the issues narrated here is limited in the Indian context and the most important works among the available studies have been presented as follows.

Kumbhakar and Sarkar (2003) investigated the Total Factor Productivity growth of the Indian Banking sector for the period 1985 to 1996 with a particular emphasis on the relationship between deregulation and productivity growth across both public and private sector banks in India. The authors employed a generalized shadow cost function to investigate the extent of distortions in input uses in the Indian banking sector due to regulations and the subsequent impact of deregulation on input uses. The major inputs that were employed in this study were Labour, Capital and the sum of Equities and Reserves. The study found that deregulation measures following 1991 reforms did not impact much the productivity in the public sector banks while deregulation improved the productivity growth of private banks.

Das, Nag and Ray (2005) analyzed the performance of the Indian banking system by estimating Data Envelopment Model and demonstrated various efficiency scores for the period 1997 to 2003. They observed that Banks could not reap the benefits of liberalization aimed at strengthening the financial system and hence could not improve their operational efficiency. Systemic economies of scales are not properly utilized in term of both technical and cost efficiencies. However, the bank size, ownership and listing on the stock exchange have bearing on the profitability of the Banks. The estimated efficiency scores clearly indicate that the score

varies across the banks considerably and most of the scheduled commercial banks (nationalized banks) have better scores and, the State Bank of India and its associates performed well. Variations in the scores reflect varying levels of efficiencies which will have long lasting effect on profitability and productivity. However, they have not gone in detail of proper structural estimation of the efficiency parameters to identify the scale of operation and productivity. It appears that their connotation on allocative efficiency is not properly examined.

Kamath (2007) investigated the financial performance of the Indian banking sector for the period 2000 to 2004 by using the so-called Value Added Intellectual Coefficient (VAIC) which the author defined as the intellectual capability of a bank and was measured as the sum of Capital Employed Efficiency (CEE) and Human Capital Efficiency (HCE). These efficiencies in turn were estimated using information of the expenditures on compensation and development of employees and physical capital and materials used in the banks. This analysis was undertaken across public, private and foreign banks. The study found that foreign banks were the top performers on both HCE and VAIC while public sector banks were the top performers on CEE. This study, though throws some elementary analysis on VAIC, does not dwell into the technical details of efficiency and financial performance.

Goyal and Joshi (2012) analyzed the opportunities and challenges in the Indian banking sector and identifies some of the key opportunities and challenges based on their review which actually can become strength if banking sector uses them properly. They have also demonstrated various issues such as urban and rural marketing process, optimization of human abilities and resources and risk in the finance function that bear strong consequences on banking system. The paper concludes with broad suggestions on innovations and product differentiations which can contribute to their efficient functioning.

Singh and Sharma (2016) investigated the bank-specific and macroeconomic factors that determined the liquidity of Indian banks. They have amply demonstrated various determinants that are responsible for changes in the liquidity across time in the system. They also built up a panel model and estimated fixed and random effects models to show how the factors affecting liquidity of Indian banks have behaved across space and time. In their well-written paper, the estimates for fixed effect model turned out to be excellent though the OLS estimates and random effect models did provide good results. They observed that ownership patterns do affect liquidity trend and profitability. They identified that institution-specific factors such as Capital Adequacy Ratio and Bank Size and, macroeconomic factors such as inflation, unemployment, GDP, etc. have significant influence on bank liquidity.

5. EMPIRICAL ANALYSIS, ESTIMATES AND INFERENCES

The study first organizes the behavior of flows of deposits and credits and their constituent components into ratios and indexes for the analysis and then, subsequently, examines the patterns, changes and variabilities of the same in order to draw inferences. Statistical estimates are presented for analytical and empirical evidences to support our inferences.

## 5.1. Trends and Patterns in the Aggregate Bank Deposits of ICBS

Deposits of the ICBS can be grouped into aggregate demand and time deposits for our analytical purview as it is obvious that other deposits which constitute smaller portion have not been included. It is quite clear from the observed pattern in Graph 1 and Graph 2 that Aggregate time deposits are consistently larger than demand deposits and, the variability and fluctuations indicated in the annual growth rate of demand deposits is larger than that of time deposits. The growth rate of demand deposits is steeply falling and reaching negative values during 2007-08 through 2011-12 and a similar pattern is observed in Graph 1 as marginal fall is evident in the total demand deposits.

Graph 1: Behaviour of Aggregates of Demand Deposits, Time Deposits, and Total Deposits
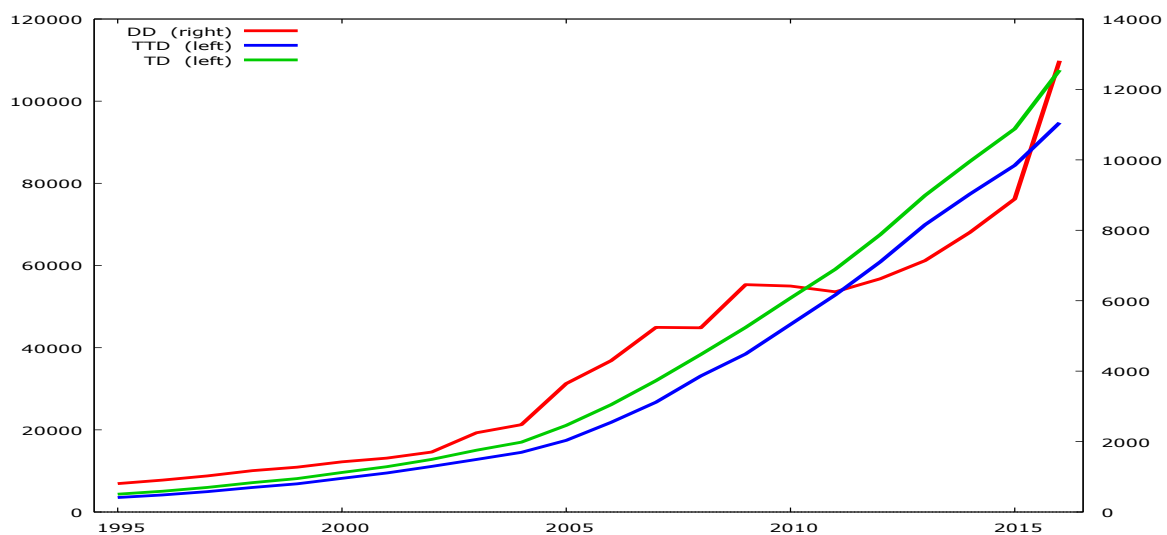
Notes: (1). DD   = Aggregate Demand Deposits.
              (2). TTD   = Aggregate Time Deposits.
              (3). TD   = Aggregate Total Deposits.

Graph 2: Annual % Growth Rate of various Aggregate Deposits
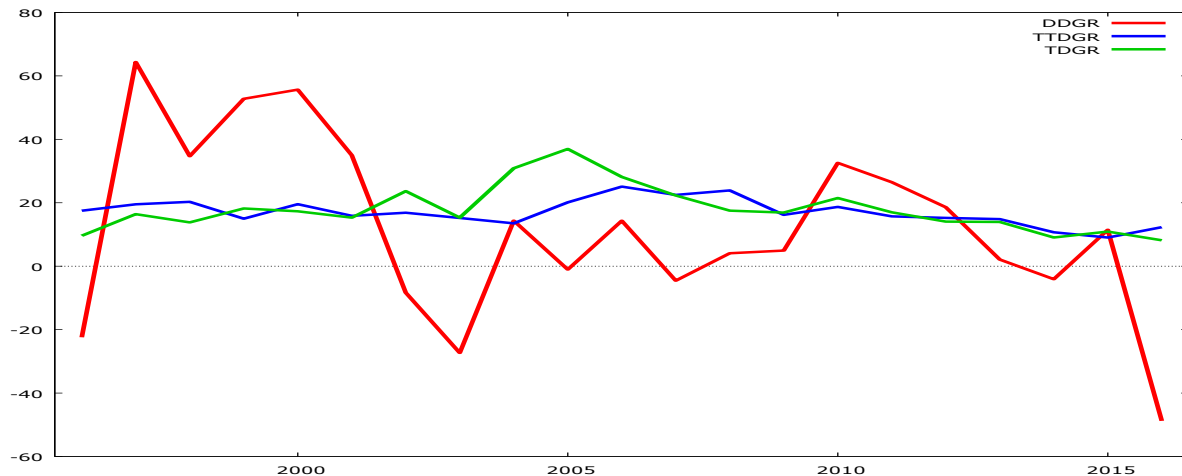
Notes: (1). DDGR   = Annual % Growth Rate of Aggregate Demand Deposits.
        (2). TTDGR   = Annual % Growth Rate of Aggregate Time Deposits.
        (3). TDGR   = Annual % Growth Rate of Aggregate Total Deposits.

This could be probably due to the underlying complex interactions of interest-rate policy, the monetary policy paradigm and broader portfolio substitution behavior during the emergence of the financial crisis and the subsequent impact. The tight monetary policy followed for some short-run period during the crisis might have produced some exogenous impact. However, the demand deposit growth rate became positive and also picked up some growth momentum in it resulting into a steep rise in the aggregate demand deposits. Though the exogenous parameters for Commercial banks play key role, demand deposits are the most likely variable which can be influenced by momentary and short run market fluctuations. The growth rate of time deposits and increasing trend of the same are quite smooth and consistent as compared to demand deposits. In fact, growth momentum in the overall deposits is propelled by the growth rate of time deposits. It is observed that after 2005-06, growth of all the deposits are showing a steeper upward trend though there is a considerable variability in the demand deposits over the sample period.

Table 1: Presence of Linear Trend in key Aggregate Banking Cash Inflow variables using a simple linear trend regression

Variables in Level Form	Presence of Linear Trend at maximum 5 % level of significance	Trend value
DD	YES	471.28
TTD	YES	4225.71
TD	YES	4696.99
Variables in Growth rates	at maximum 5 % level of significance	Trend value
DD	NO	0.10
TTD	NO	-0.28
TD	NO	-0.23

Source: Author's calculations.

Notes: (1). DD = Aggregate Inflow of Demand Deposits.
(2). TTD = Aggregate Inflow of Term Deposits.
(3). TD = Aggregate Inflow of Total Deposits.

It is also attempted here to estimate probable trend pattern in the various measures of aggregate deposits. Table 1 shows that DD, TTD, TD show linear trend across the sample period and more importantly, it is significant at 5 % level. It is obvious that growth rates may not show linear trend as prima-facie, it seems to be the case of stationary series. However, some sort of a curvi-linear trend momentum is visible but that is not statistically significant. The estimates for trend-coefficients in case of TTD and TD are quite closer as it can be noticed from the graph both the level form and the growth movements are quite closer. The coefficient for DD is different than the other deposit variables.

5.2. Trends and Patterns in the Aggregate Bank Credits of ICBS

The behavioural patterns of credits are a key to the banking sector in terms of its growth, profitability and productivity. Prudential lending produces very less NPA and thereby enhancing productivity and growth. Merely looking at the pattern depicted in Graph 3, right side indicates aggregate food credit while the left side shows aggregate non-food and total credits, it can be observed that the movement of total credit is almost explained by the behavior of non-food credit and this can be noticed in the Graph 4 where growth rates of FC, NFC and TBC are presented. The variations in the growth rates of non-food credit are significant in explaining the movements of total bank credit. It is very interesting to notice that the behaviour of FC is completely different from NFC and TBC. In fact, annual growth rate of FC is more volatile and accordingly fluctuations in the level form are noticed. A sharp rise can be noticed in FC from 2008-09 to 2012-13 as opposed to fall in the trend of the deposits. This can be attributed to the credit policy

followed during the financial crisis and in its aftermath. It is also possible that non-consumer and non-industrial credit must have got increased. A steep fall in NFC is noticed after 2014-15 as there is a negative annual growth for the same. Negative growth rate during 2003-04 to 2004-05 also contributed in the falling trend of FC but as per the credit policy appraisal the factors that have contributed for negative growth during 2003-04 and 2004-05 are different from the period 2014-15 onwards. 2003-04 is circumvented by the tight monetary policy and recession, whereas the scenario after 2014-15 is more of a slump in the factors determining the credits and to some extent Demonetization, including the change in the tax regime.

Table 2 presents a confirmative note on the inference that we have drawn from the Graphs 3 and 4. A presence of linear trend is indicated for FC, NFC and TBC. Again, the close examination of trend values suggests that the growth momentum in TBC is explained mainly by NFC. Growth rates do not suggest any presence of linear trend.

Graph 3: Behaviour of Aggregates of Food, Non-Food and Total Bank Credits
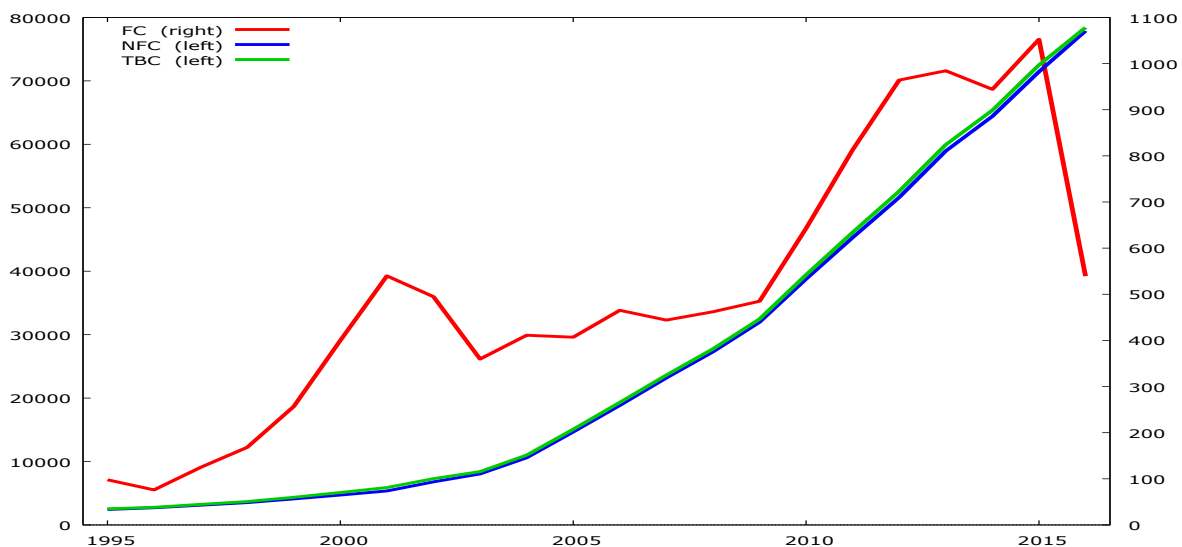
Notes: (1). FC = Aggregate Food Credit.
(2). NFC = Aggregate Non-Food Credit.
(3). TBC = Total Bank Credit.

Graph 4: Pattern of Annual % Growth Rate in Aggregate Banking Cash Outflows throughout the sample period
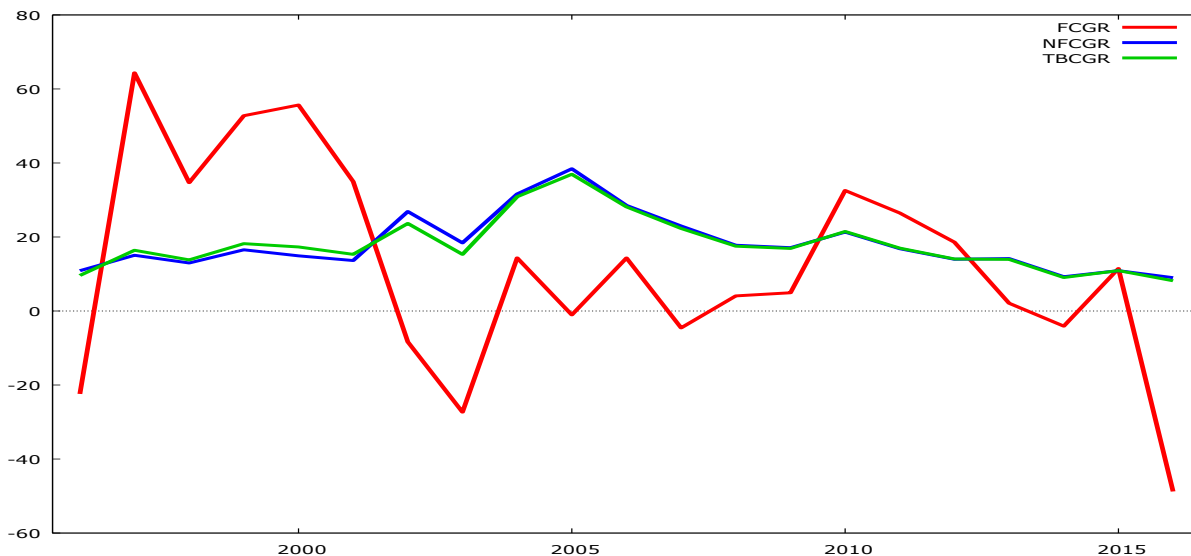
Notes: (1). FCGR   = Annual % Growth Rate of Aggregate Food Credit.
        (2). NFCGR   = Annual % Growth Rate of Aggregate Non-Food Credit.
        (3). TBCGR   = Annual % Growth Rate of Total Bank Credit.

Table 2: Presence of Linear Trend in key Aggregate Banking Cash Outflow variables using a simple linear trend regression method

Level Form Variables	*Presence of Linear Trend* at maximum 5 % level of significance	*Trend Value*
FC	YES	39.11
NFC	YES	3638.27
TBC	YES	3677.38
Growth rate Variables	at maximum 5 % level of significance	*Trend Value*
FC	NO	-1.86
NFC	NO	-0.21
TBC	NO	-0.24

Source: Author's calculations.

Notes: (1). FC   = Aggregate Food Credit.
        (2). NFC   = Aggregate Non-Food Credit.
        (3). TBC   = Aggregate Total Bank Credit.

Graph 5: Annual Growth rates of aggregate bank deposits and aggregate bank credits
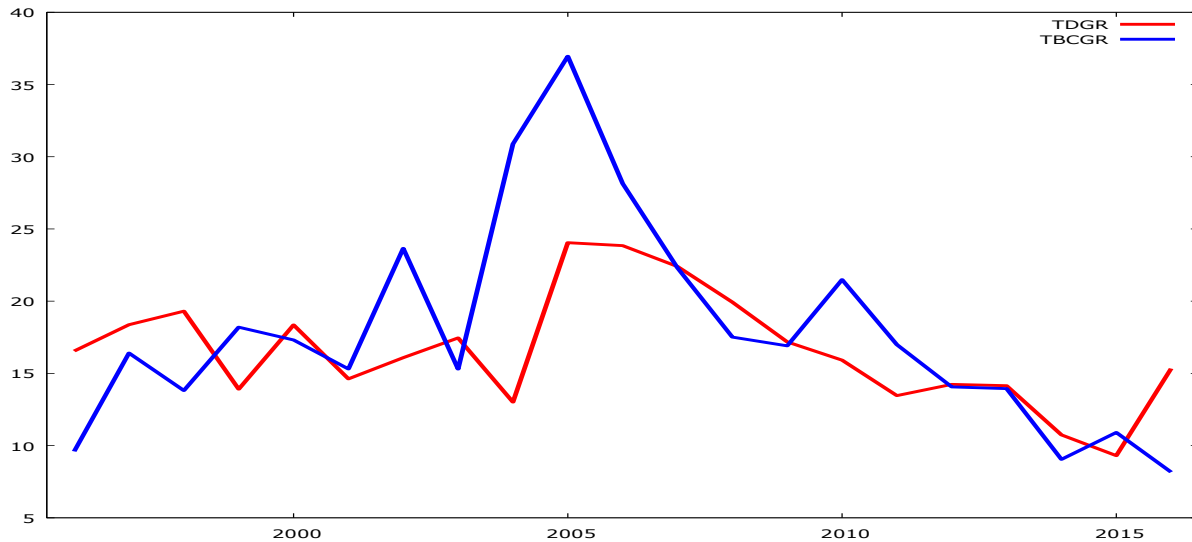
Notes: (1). TDGR   = Annual % Growth Rate of Aggregate Total Deposits.
           (2). TBCGR   = Annual % Growth Rate of Aggregate Total Bank Credit.

Profitability is a key organizational goal for any commercial bank in a vibrant economy and this parameter determines the entire financial performance of the banking system in general and productivity and market expansion in particular. It has been observed that, the total deposits are always higher than the total credits in our sample period. This indicates the vibrant commercial banking system prevalent purely on the quantum of deposits and credits in the deepened Indian financial markets. This observation is independent of issues connected to profitability and NPAs.

Despite deposits being higher than credits, the annual growth rate of credits are much higher than the deposits and possibly this indicates the credit policy that the RBI has followed in tandem with the changes in the credit creation process and the variations in the credit multiplier. An abnormal and steeper fall and rise is notched from 2003-04 to 2008-09 in the annual growth rates of credits. Positive sentiments, credit buoyancy and economic growth must have caused steep rise from 2003-04 to 2005-05 and subsequent fall can be attributed to some sort of recession in the Indian economy and the financial crisis.

By considering the flow of deposits and credits for the sample period under study, the flow of funds indicate that the commercial banking system was not put under any stress but this would be a gross statement if proper analysis on NPA and so-called bank scams that had inherently affected banking system are not carried out properly. Since out attempt is a funds flow analysis purely on the deposit and credits, the study does not delve into detail of the NPA related issues.

Probably, the quantum of NPA and its implications, even today, is not stronger enough to create a stand-still movement for commercial banking activities. This could be a common-sense statement but it explains the reality well.

The Graph 6 throws an idea on how demand to time deposits, food to non-food credits, and, net of total deposit to total credit have behaved over a period of time. Except for the period 1997-98 to 2002-03, the trend in the ratio of food to non-food credit seems to be gradually falling though the fall is marginal. Decreasing trends can be noticed in both the ratio of demand deposit to time deposit and the ratio of net deposits to total deposits. The fall in the NBDTD from 2003-04 to 2006-07 is significant compared to the decrease in the same for the period 2009-10 to 2011-12.

Graph 6: Ratios of various measures of aggregate fund flows
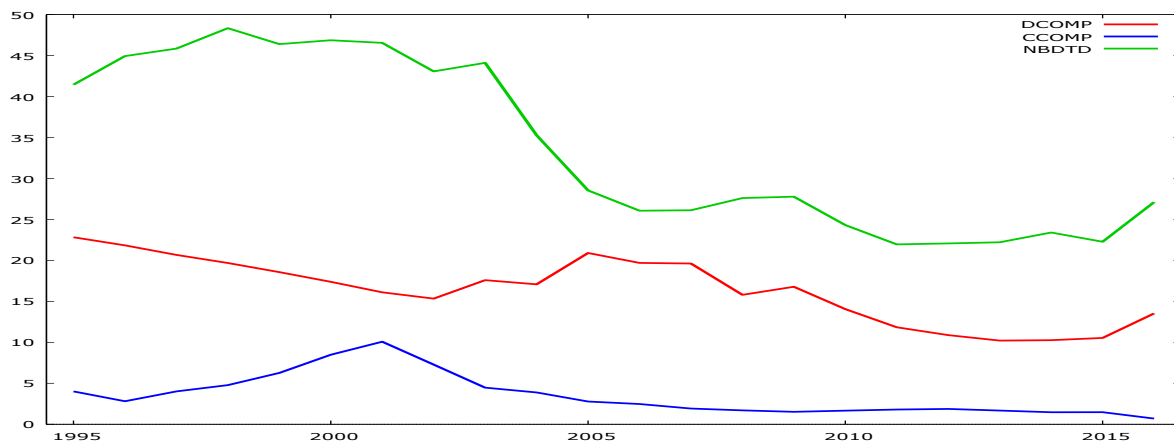
Notes: (1). DCOMP =   Ratio of Aggregate Aggregate Time to Aggregate Demand Deposits.
        (2). CCOMP =   Ratio of Aggregate Non-Food to Aggregate Food Credits.
        (3). NBDTD =   Net Aggregate Total Banking Deposits has been defined as the difference between Aggregate Banking Deposits and Aggregate Total Banking Credit.

Graph 7: Annual variations in various measures of aggregate fund flows
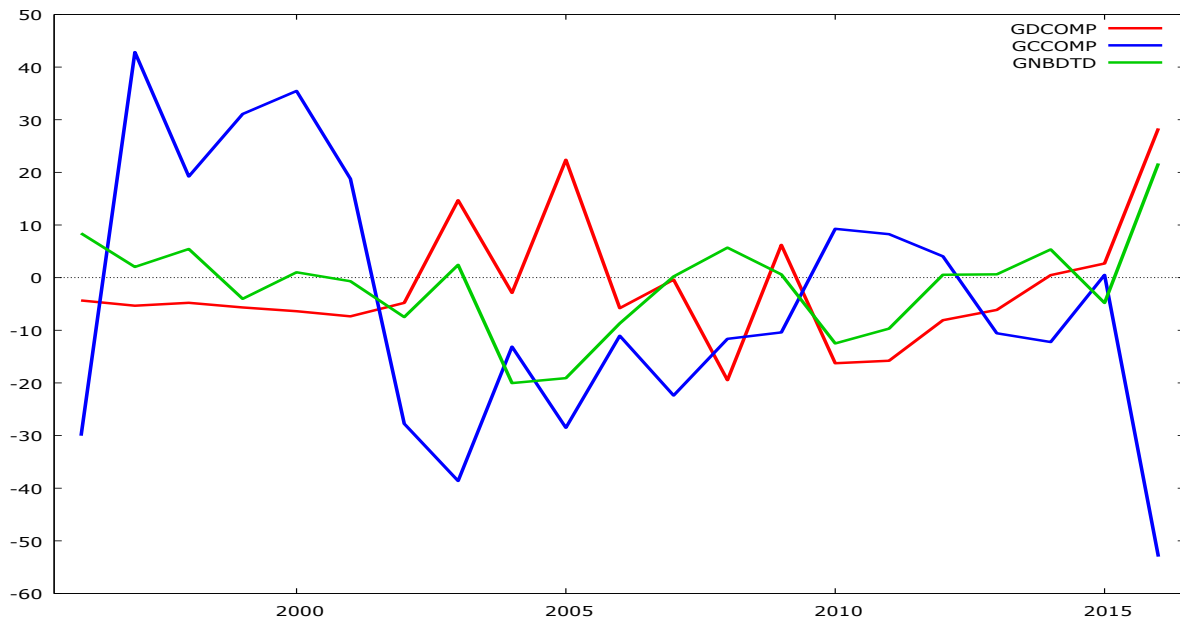
Notes: (1) GDCOMP   =   Annual % Growth rate in DCOMP.
(2). GCCOMP   =   Annual % Growth rate in CCOMP.
(3). GNBTD   =   Growth rate of NBDTD.

This speaks very clearly to the fact that net flow has not been much altered even during the financial crisis. The annual variations of the same suggest that fluctuations in the growth rate of NBDTD are less compared to that of CCOMP and DCOMP. Annual growth rate for food to non-food credit ratio is more volatile than any other series indicating that the credit and monetary policy did not attempt in the distribution of credit to food and non-food items judiciously. This must have arisen out of constraints on the overall credit policy-making process subjected to the prevailing financial and monetary considerations. It is a matter of debate to know whether the policy-making process constrained the abnormal fluctuations in food to non-food credit ratio or the underlying real factors are responsible.

5.3. Descriptive Statistical Estimates

An attempt has been made to understand the variations and shifts in the averages of various measures of deposits and credits. While doing this, we have divided the sample period into four sub-periods and estimated the arithmetic mean for each sub-period and calculated coefficient of variations to account for variabilities. To construct the inference properly, we have estimated the descriptive statistics by annual growth rates of variables. The results are reported in Tables 3 and

4. The four sub-periods mentioned here are 1997-98 to 2001-02, 2002-03 to 2006-07, 2007-08 to 2011-12 and 2012-13 to 2016-17. The considerations pertaining to uniformity or differences in the macroeconomic conditions that prevailed and the policy conduct thereof motivated us to divide sub-periods as mentioned above.

Table 3: Mean of annual growth rates of key aggregate deposit and credit variables across sub-periods

	Aggregate Inflows			Aggregate Outflows		
	Periodic % Growth Rates of:					
Period	DD	TTD	TD	FC	NFC	TBC
1997-98 to 2001-02	11.09	18.04	16.91	48.49	14.63	16.21
2002-03 to 2006-07	23.70	18.16	18.89	-1.61	28.77	26.99
2007-08 to 2011-12	8.41	19.39	17.78	12.70	19.20	19.04
2012-13 to 2016-17	16.21	12.42	12.75	-4.14	11.46	11.23

Source: Authors' Calculations

Notes: (1). DD = Aggregate Demand Deposits.   (4). FC   = Aggregate Food Credit.
            (2). TTD = Aggregate Time Deposits.   (5). NFC = Aggregate Non-Food Credit.
            (3). TD   = Aggregate Total Deposits.   (6). TBC = Aggregate Total Bank Credit.

Table 4: Coefficient of Variation of annual growth rates of key aggregate deposit and credit variables across sub-periods

	Aggregate Inflows			Aggregate Outflows		
	Periodic Coefficient of Variation (%)			Periodic Coefficient of Variation (%)		
Period	DD	TTD	TD	FC	NFC	TBC
1997-98 to 2001-02	27.65	13.44	14.54	27.17	9.46	10.59
2002-03 to 2006-07	66.23	25.25	25.88	1085.83	25.34	30.08
2007-08 to 2011-12	155.80	18.94	19.57	125.57	14.43	13.83
2012-13 to 2016-17	97.57	21.38	20.28	-638.48	21.74	24.26

**Source:** Authors' Calculations

Notes: (1). DD = Aggregate Demand Deposits.   (4). FC   = Aggregate Food Credit.
            (2). TTD = Aggregate Time Deposits.   (5). NFC = Aggregate Non-Food Credit.
            (3). TD   = Aggregate Total Deposits.   (6). TBC = Aggregate Total Bank Credit.

The following observations can be made from the Tables 3 and 4 which could be crucial for understanding the behavioural patterns in the aggregate deposits and credits. First, out of four sub-periods classified here the first period that is 1997-98 to 2001-02, registered a very strong positive growth across all the estimates of deposits and credits. Second, one can notice that the third sub-period from 2007-08 to 2011-12 produced a moderate, still, strong positive growth rate in terms of mean. But other sub-periods such as the sub-periods two and three experienced wide range of growth rates starting from negative values to the very good positive annual growth rates. If one looks at the individual variables placed in the Tables, average fluctuations in FC is very high as compared to any other variables and this can be noticed from the shift in the mean value across four sub-periods along with coefficient of variation reported in table 4. Very high and abnormal estimates for coefficient of variation for FC are observed. Third, though, the coefficient of variation is increasing for DD across sub-periods, the mean value is positive and this resulted into good amount of average fluctuations. NFC and TTD show considerable amount of stability as indicated by coefficient of variation and consequently not much fluctuations in the mean values across the periods. Lastly, perhaps, the estimates provided here reconfirm some of the observations and inferences which we have made earlier in the study.

5.6. Regional Distribution of Deposits and Credits

Inclusive development is supposed to presume financial inclusion as well. Financial inclusion can be analyzed in terms of how far deposits are mobilized across the rural and urban populations and also to what extent credits have cut-across geographical distribution. Of course, this does not tantamount to analyzing the financial prudence and viability of credits as such but it indicates mere financial participation of the people involved. We have divided the geographical location as rural, semi-urban, urban and metropolitan regions. The following Graph 8 displays the average amount of deposit per account over our sample period while Graph 9 shows the average amount of credit per account for the chosen period.

Graph 8: Index of Average Amount of Deposits per Deposit Account for the sample period across major regions in India
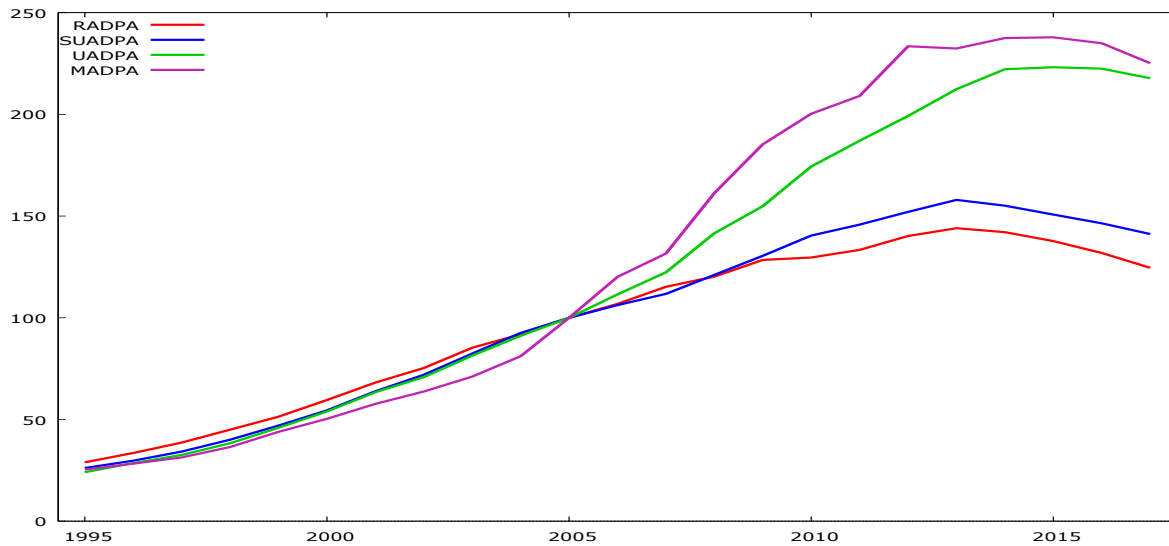

Notes: (1). RADPA = Rural Average Deposits per deposit account.
  (2). SUADPA = Semi-Urban Average Deposits per deposit account.
  (3). UADPA = Urban Average Deposits per deposit account.
  (4). MADPA = Metropolitan Average Deposits per deposit account.

The Graph 8 shows a clear departure of average deposit per account across all regional classifications from 2005-06 onwards. Before 2005-06 the co-movements of these variables are quite similar and closer. Average deposits have shown very high rise for metropolitan cities while that of rural region is very low. This is true even at absolute level of deposits. This clearly indicates the urban-rural divide in the geographical distribution of deposits and more importantly, it is quite possible, the determinants of deposits that could be essentially different from each other. Urban region moves closer to metropolitan region while semi-urban region tends to converge towards the rural region. The gap between rural and urban average deposits has widened considerably over time especially after the financial crisis (2007-08). Though, the gap between semi-urban and urban regions on the average deposits is increasing after 2006-07, comparatively the same seems to be lesser than that of the metropolitan and rural regions. Overall increase in the average deposits across time in all four major regions does not indicate the financial inclusion directly but shows some broad evidence of financial spread and deepening. We do not have much information on the number of persons operating a particular account or number of accounts per family and therefore it is very difficult to cut across the

population in terms of age, gender and income groups under the four geographical classifications that are produced here in order to fully examine the financial inclusion.

Graph 9: Index of Average Amount of Credit per Credit Account for the sample period across major regions in India
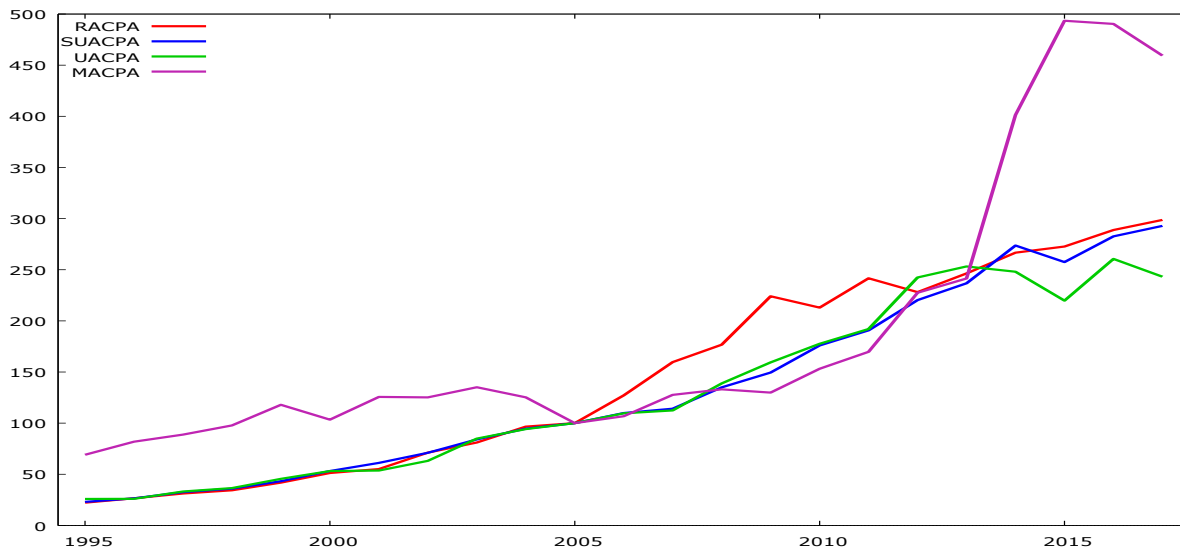
Notes: (1). RACPA   =   Rural Average Credit per credit account.
        (2). SUACPA =   Semi-Urban Average Credit per credit account.
        (3). UACPA   =   Urban Average Credit per credit account.
        (4). MACPA   =   Metropolitan Average Credit per credit account.

The information placed in Graph 9 reveals the average amount of credit per credit account across the four major regions. One must categorically note here that the number of accounts in case of credit is different than that of deposits. Therefore, vector comparison is not possible. We observe a consistently and approximately closer movement of average credit per account across all regions except the metropolitan average credit after the period of 2012-13. We observe a very sharp increase in the average credit per account for metropolitan region and the same seems to be falling from the peak from 2014-15 onwards. This abnormal rise can be attributed to the credit and investment policies that favoured urban centers across food and non-food credits. Fall in the same from 2014-15 onwards could be probably due to a sharp fall that can be noticed in the food credit though the underlying pattern across geographical distribution can be different from each other.

Average deposits per person and average credits per person show two different kinds of behaviour both in terms of trend and in terms of annual variations. It is important to understand

that the underlying variables which determine the behavior of deposits are different than that of credit and therefore even in the same geographical classifications we do not find any synchrony. The correlation coefficients are estimated between average deposits and average credits for the same regions. The values of coefficients worked out to be 0.94, 0.93, 0.99 and 0.76 for rural, semi-urban, urban and metropolitan regions respectively. All the correlation coefficients are significant at 1 % level. This reveals an important truth that for metropolitan cities the correlation is comparatively moderate while other regions registered a very high correlation. This reconfirms the observation that there are abnormal fluctuations in the average credit per account in metropolitan region especially after 2013-14.

6. LIMITATIONS AND CONCLUSION

This study has analyzed the issues under consideration with a modest attempt placing primarily on ratios, indexes and graphs apart from some estimates on trend and correlations. We fully understand that the flow of funds examined in terms of deposits and credits particularly in the context of commercial banks are very complex issues. One might also use proper econometric modeling and exercise to carry out the same debate but yet arrive at qualitatively quite similar conclusions. A difference could be at the most on rigorous quantitative analysis. One can always include various other forms of deposits and disaggregated frameworks for analyzing the same. It is hoped that further research in this line can address these limitations.

The analysis carried out reveals that the annual growth rate in demand deposits and food credits portray very high variability and fluctuations in the mean. Policy-making should address this variability, which is quite considerable, properly. These variables are crucial for not only credit policy but also for aggregate demand management in terms of consumption and flow of short-term money into the system. As India is a large country cutting across not only rural-urban divide but also in terms of income groups and age-groups which have significant impact on these two variables. Persistent co-movement of time deposits with total deposits indicates a strong saving behavior in the society which might push overall savings rate but to some extent liquidity aspect can be compromised. We observe a declining trend in the annual growth rate of time deposits and this must be a serious concern for the future of financial performance of commercial banks. Therefore it is argued that the policy emphasis on achieving less variability in the growth rate of demand deposits and consistent and moderate upward trend in the time deposits. It is desirable not to have abnormal fluctuations in food credit as this credit cuts across various segments in terms of demographic, cultural and socio-economic distinctions. If one makes an analysis in terms of the average deposits and average credits per account across various regions, the distribution of both deposits and credits is more biased in favour of the metropolitan centers. This goes against the framework of financial inclusion and therefore monetary policy in general

and credit policy in particular must address this issue comprehensively through more prudent priority sector lending, microfinance facilities other and welfare measures aimed at developing rural areas and poverty-ridden urban regions.

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