Concentration and Competition in the Indian Banking Sector: A Bank-group wise Study

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Abstract – The Indian Banking Sector is in an evolutionary phase, particularly in the post reforms period, exhibiting several changes over time. The impact of reforms in the form of easing of entry norms and deregulation of interest rates has led to greater privatization of the Indian banking sector. The infusion of technology has added a new dimension to the way banking services are provided and the way banking is done by customers, and private banks, both, domestic and foreign, have played a leading role in the adoption of the same. Private banks are found to adopt aggressive product and price policies in the race for a bigger pie of the Indian banking sector. The increased level of competition seems to have induced consolidation of the sector with mergers, amalgamations and rationalization witnessed both among private sector and public sector banks. Most studies on the level of competition in the banking sector undertake the examination of the level of concentration in the sector as a whole. The pre sent study augments this approach by examining bank group-wise levels of concentration. The premise of such an examination is that while individual banks chart their ways of responding to the changing environment and influence the structure of the sector, there may be fundamental difference in the nature of the competitive changes within different bank groups. Interestingly, the analysis reveals apparently conflicting trends in the Indian Banking Sector. On the one hand, entry of private banks has led to increase in the level of competition as revealed by secular decline in the Net Interest Margin; on the other hand, it has evoked consolidation within all bank-groups, leading to increase in the level of concentration. The study shows that increased levels of concentration are consistent with increased levels of competition. The nature and dimensions of the intra-bank group structural changes and their performance implications may throw light on the structure of the Indian Banking Sector that might emerge in the years to come and may reflect preliminary but vital indicators for an inquiry into what constitutes an appropriate and effective banking structure for the Indian economy.

Keywords – Indian Banking Sector; Banking Reforms; Banking Structure; Bank Groups; Level of Concentration

INTRODUCTION

The banking sector of India has witnessed a gradual transformation over the years and the introduction of reforms in 1990s has added new dimensions to it. The banking sector today has moved up on a higher trajectory not only in terms of its size and composition but also in terms of the sophistication it has achieved in its operations, along with several setbacks and failures. Faced with increased levels of competition from private sector banks, both domestic and foreign, the public sector banks (PSBs) have also been pulled out of their traditional mode of functioning and have geared up not just to face the challenges posed by globalization but also to meet upfront the opportunities it holds, head on. The Indian Banking Sector (IBS) today, is a picture of

modernity and a globalized approach, armed with technological development.

The IBS is multi-layered, catering to different sections of the population, with sector specific banking institutions, differentiated banks, rural banks, small and large commercial banks and cooperative banks. However, the sector is dominated by scheduled commercial banks (SCBs). In the recent past, government has announced several mergers among the PSBs. The private sector bank group has also witnessed a few mergers in the past and it would not be surprising if they also look for consolidation in their operations in response to the competitive forces that play out in the aftermath of the mergers in the PSB group. In view of these changes, it is worthwhile to examine how banking reforms have affected the IBS.

REVIEW OF THE RELATED LITERATURE

The banking sector is a very topical research area. Several studies have made an attempt to address varied issues and challenges related to banks and banking structure for different economies. Beck and Hesse [1] have examined the impact of financial market reforms measured by privatization and entry of foreign banks on the market structure and efficiency measured by interest rate spreads and margins in Uganda. They report absence of strong evidence for such linkages. Interestingly, their study finds that market structure has a stronger cross sectional impact on interest margins than cross-time trends.

Claessens, Demirguc-Kunt and Huizinga [2], Barajas, Steiner and Salazar [3] and Demirguc-Kunt, Laeven and Levine [4] in similar studies find that ownership structure of the banking system comprising more number of foreign banks on account of entry reforms increased competition leading to lower average net interest spread, which in turns indicates improvement in the efficiency of the intermediation function. However, these studies do not support any significant linkages to exist between market structure, measured by the level of concentration, and interest margins. Claessens and Laeven [5], on the other hand, support the view that competitive systems lead to greater efficiency. They also report that concentration in the banking sector does not mean lower levels of competition as traditionally assumed. Dabla-Norris and Floerkemeier [6] report in the case of US banking sector that market structure with higher concentration level positively affects net interest margins and that such gains go to banks with higher market

A study on the impact of financial sector reforms on the efficiency of banks by Hauner and Peiris [7] conclude that consolidation and privatization in the banking sector of Uganda have resulted into higher efficiency, particularly, for larger banks and foreign banks. A study on the banking sector of Sub-Saharan African middle-income countries by Chen [8] finds that, among other factors, the depth of financial development and the degree of market competition are important for efficiency of banks. He has analyzed differences in the efficiency of public sector banks, private banks and foreign banks from the view point of market structure and institutional factors.

Hassan, Sanchez and Safa [9] have studied the impact of financial liberalization on entry of foreign Islamic banks. Their results suggest that macroeconomic stability and opportunities for higher returns are primary entry forces. They find that foreign Islamic banks are

found to follow aggressive banking strategies in the host countries and earn higher profit margins than domestic Islamic banks. Hossain [10] has analyzed the post liberalization performance of banks in terms of interest rate spread. Applying dynamic panel regression model for Bangladesh, he finds that the private banks existing since the pre-liberalization era had gained market power in place of PSBs in the post liberalization era, but interest spread and margins continued to remain high, indicating little competitive and efficiency gains even after financial reforms, in absence of appropriate monetary policy and institutional development.

Dong, Guariglia and Hou [11] in their study for China find strong support to the proposition that entry of foreign banks facilitates the development of the domestic banking sector by having positive effect on profitability and efficiency of the sector. A similar study, Luo [12], found that entry of foreign banks in China increased the competitive pressure on domestic Chinese banks to improve their performance.

Studies in the context of the IBS have focussed on trends in interest rates, reserve ratios, capital adequacy, etc., post banking reforms, or the expansionary effects of the banking sector post reforms and on the trends in profitability and efficiency, and in NPAs (Bhanavat and Kothori [13]; Arumugam and Selvalakshmi [14]; Shivagami and Prasad [15]; Balayya [16]; Chadha [17]). A study by Chandanani [18] related to market structure and competition in relation to the banking sector is limited to review of literature on the area. Mohan [19] has examined various indicators of performance of financial sector and finds improvement in efficiency, competitiveness and strength of various segments of the financial sector. In another study, Mohan and Ray [20] have examined the impact of financial sector reforms on each segment of the financial sector including banking sector and how it has impacted policy rates, reserve requirements and expansion in banking activities. A Discussion Paper of RBI [21] underlines the need for reorientation of the IBS sector in view of the expansion and structural changes of the real economy. It suggests dilution government ownership in PSBs so as to attract private capital infusion, and allowing more PVBs so as to increase the size of the banking sector.

OBJECTIVES OF THE STUDY

One clear line of observation that emerges from the review of literature is the large number of studies originating in the countries with relatively underdeveloped banking sector and which have recently liberalized the sector. Most of these countries find strong

impact of the entry of foreign banks on their domestic banking sector. While in the context of India, there are studies that have examined the impact of banking reforms on bank performance and efficiency, no study is found that examines the implications of banking reforms on the banking structure in India in terms of impact on the concentration in the sector. In this context, the present study seeks to examine bank group-wise changes in the level of concentration and competition after the easing of entry norms in the banking sector.

The study differs from other researches on the topic in that it analyzes the bank group-wise changes along with entire banking sector based changes. The premise for such an analysis is that, there are fundamental differences in the way the three bank groups, viz, PSBs, PVBs and Foreign Banks (FBs) operate. PSBs are historically driven by social banking objectives and inclusiveness, PVBs, particularly, new PVBs are oriented towards adoption of technology and superior service standards, while FBs cater to high-end clients for which strong empirical evidence is found in Detragiache et al. [22], Beck and Peria [23] and Claessens and Van Horen [24].

MATERIALS AND METHODS

The premise of the study is established by reviewing relevant literature on banking sectors across a wide range of countries. The studies reviewed are essentially those that have examined banking structures, levels of concentration and competition in the banking sectors of various countries in the context of liberalization of their banking sectors. Relevant literature is also reviewed in the case of the IBS. The lack of studies on bank group wise levels of concentration in the context of India forms an important base for the present study.

The study employs data on bank group-wise deposits and advances. The level of concentration is examined by analysing bank-wise level of advances in each bank group as well as for the entire IBS. The level of concentration in each bank group has been computed by summing up the advances of top five banks in each group. For the concentration ratio of the entire IBS, concentration ratio up to seven banks has also been computed to substantiate the robustness of the findings. The level of competition has been studied by examining the long run trend in bank group-wise net interest margin which is calculated by dividing the net interest income of each bank group by their respective total assets. The data has been sourced from various publications of RBI as

well as from annual reports of banks. The period of study ranges from 1992 to 2019.

RESULTS AND DISCUSSION

Entry of private banks has resulted into increased non-price competition in terms of financial products and services, level of technology and quality of customer services offered. The impact of competition is evident in increased efforts for cost cutting and reorganization of business. Apart from liberalizing entry, the central bank has also sought inorganic growth of the sector by effecting mergers and acquisition for better structure of the banking sector. In September 2019, the government announced major measures of consolidation of the IBS which may be viewed as a step closer to the partial realization of the long standing recommendations of the Narasimham Committee II for a leaner banking structure comprising, among other things, fewer number of large banks, notwithstanding the fact that the Committee was against merging weaker banks with stronger ones. Some mergers also took place in the case of PVBs such as in the case of ICICI Bank, HDFC Bank, Kotak Mahindra Bank and IDBI Bank. The impact of deregulation measures in the form of entry, exit, mergers and acquisitions can be captured by the impact on the level of concentration and competition in the banking sector.

Consolidation in the Indian Banking Sector

The impact of the liberalising the entry of domestic and foreign private banks in 1992-93 is clearly visible in the increase in the number of banks in these two categories, which has substantially changed the ownership structure of the IBS. The number of FBs increased by 20 in the first six years of the easing of entry norms (Fig. 1). The year 1996 witnessed the highest number of PVBs at 35, compared to 24 in 1993. After the initial entries, the impact of competitive forces on the banking sector is seen in the mergers and closures of some banks since the mid-2000s. Between 1993 and 2019, 37 mergers took place within the PSBs and PVBs, including the merger among ten PSBs announced in September 2019 by the government.

The decade of 2010 has seen much consolidation in the FBs segment with many banks winding up business in India, particularly around the time of the global financial crisis combined with stringent requirements of capital adequacy affecting their profitability. Since the year 2000 till date the FB segment has witnessed entries and exits of 23 foreign banks. Currently, the ownership structure of IBS is characterized by more than 50 percent of the banks belonging to the group of FBs. PVBs have

steadily declined in number in the later years of the decade of 2010. It may be noted, though, that there is a substantial investment by foreign investors in PVBs.

A high degree of consolidation has been effected in the PSB group. Their number reduced from 28 to 21 in the 2018 with the merger of all SBI associated banks with the State Bank of India. Further merger of Nationalized Banks, viz, Dena Bank and Vijaya Bank with the Bank of Baroda has reduced the total number of PSBs to 19, including IDBI Bank in which the major share is held by the Life Insurance Corporation of India. After the mergers of ten PSBs, announced in September 2019 are fully operationalized, the total number of PSBs would reduce to 12.

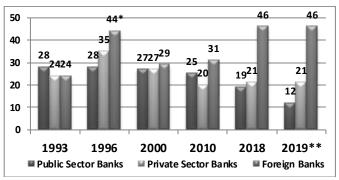


Fig 1. Bank Group-wise Number of BanksSource: Trends and Progress of Banking in India,
RBI Publication.

Going by the ownership structure, a substantial degree of privatization of the sector can be observed over the 29 years since 1990. While ownership pattern-wise, the number of private banks constitute more than twothirds of the total SCBs in India, in terms of volume of business the PSBs not only outweigh the PVBs and FBs but they also lead ahead by a huge margin given their historically significant position in the IBS. However, a noteworthy observation regarding increased level of competition in the IBS is that while in the year 1990 the deposits mobilized by the PSBs were more than 23 times greater than those mobilized by the domestic PVBs, in 2018 this margin has reduced to 2.6 times even as the number of banks in the two groups are nearly the same. This indicates the declining gap between the two bank groups. PVBs have the highest CAGR in the volume of deposits (Table 1). The degree of privatization in the IBS has increased from 10 percent in 1990 to 30 percent in 2018 as per deposit mobilization.

Table 1: Bank group-wise Growth in Deposits (CAGR)

Year	Public Sector Banks	Private Sector Banks	Foreign Banks
1990-2000	15.55	29.85	18.37
2000-2010	18.02	23.59	17.16
2010-2018	10.73	17.37	9.64
1990-2018	15.02	26.63	16.59

Source: Computations based on data sourced from Publications of RBI

Similar picture of increased competition in the IBS can be seen in the relative size of advances of the three bank-groups (Table 2). The advances of PSBs were 22 times greater than that of PVBs in the pre-reform year 1992, and the same has reduced to 2.14 in 2018. This shows the rapid strides made by PVBs in advances since banking reforms and indicates closing up of the gap between the two in terms of their market presence, if not market power.

Table 2: Bank Group-wise Relative Advances Ratio

Year	PSBs:PVBs	PSBs:FBs	PVBs:FBs
1992	22.56	16.79	0.74
2000	6.32	9.88	1.56
2010	4.27	16.54	3.87
2018	2.14	13.23	7.58

Source: Computations based on data sourced from Publications of RBI

Table 3: Advances-Based Concentration Ratio (%) in the Public Sector Bank Segment

BANK	2000	2010	2018	2019*	
State Bank of India (&	34	31	34	40	
Associates)	34	31	34	40	
Bank of Baroda	7	7	7	12	
Bank of India	8	6	6	6	
Canara Bank	7	6	7	12	
Punjab National Bank	7	7	8	12	
Concentration Ratio CR ₅	63	57	62	82	
Total Number of Banks	27	25	19	12	
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^{*}considering merger of ten banks into four

A common and well established measurement of structural change in a sector is to examine its level of concentration. It is measured in terms of the concentration ratio (CR) by summing up the market shares of the top three or five firms within an industry or sector. A higher value would indicate higher level of concentration, that is, a lower degree of competition, implying monopolistic or oligopolistic structure. In this

^{*}No. of foreign banks as 44 refers to the year 1999 **Based on mergers announced by the Government in September, 2019.

section, changes in the structure of the IBS has been examined by using the concentration ratio of top five banks in each bank group as well as for the overall IBS in terms of their advances. Studies in this area typically calculate the CR in terms of top three or five banks that claim a major share of the chosen criteria. In this study CR₃ level has not been considered as more than one bank is found to have similar market share at the third rank. Tables 3 to 6 show the levels of concentration for each category examined.

The initial decadal fall in CR in the PSB segment is reversed on account of mergers effected between 2010 and 2018 involving SBI and Bank of Baroda, increasing the CR_5 to 62. The recent mergers announced by the government would take about two years for becoming completely operational. However, for the year 2019 the advances of these respective banks have been combined to measure the level of concentration among the 12 banks that would remain in the PSB segment. The result shows drastic increase in the CR_5 to 82 percent. It may be noted, though, that this increase in the level of concentration is due to inorganic growth of the PSBs caused by mergers. This is bound to push most PVBs to a lower ranking in terms of their volume of advances, and increase the level of concentration in the IBS.

Table 4: Advances-Based Concentration Ratio (%) in the Private Sector Banks Segment

BANK	2000	2010	2018	2019
ICICI Bank	43	29	19	18.9
HDFC Bank	6	20	24	26.4
J & K Bank	6	4	-	
Axis Bank	5	17	16	16
Indusind Bank	6	4	-	
Kotak Mahindra Bank	-	-	8	7.8
Yes Bank	-	-	8	7.8
Concentration Ratio CR ₅	65	74	75	76.9
Total Number of Banks	27	20	21	21

The CR among PVBs is not only high but has consistently increased. Consolidation within the bank group can be observed with reduction in the number of banks and with new PVBs, established in the reforms period, emerging as the top five largest banks. This contrasts with the experience of the Bangladesh (Hossain [10]) where in private banks existing in the preliberalization era were found to gain more market power. Unburdened with the past and a greater adaptability to modern and smart banking are some of the attributes that have enabled new PVBs in India to gain greater traction and leave the old PVBs far behind in competition. The

PVB group is found to exhibit oligopolistic competitive structure even as the number of banks in the PVB segment has reduced.

Table 5: Advances-Based Concentration Ratio (%) in the Foreign Banks Segment

BANK	2000	2010	2018	2019
Citibank	25	22	16	16.6
Standard Chartered Bank	20	25	18	18.1
Hongkong & Shanghai Banking Corpn.	17	14	15	18.1
ABN Amro Bank	10	8	-	-
Bank of America	6	-	-	-
Deutsche Bank	-	8	11	13.0
DBS Bank	-	-	5	4.9
Concentration Ratio CR ₅	78	77	65	71
Total Number of Banks	29	31	46	46

The FB group also exhibits high degree of concentration even as it has the maximum number of banks relative to PSB and PVB groups. Most of the FBs have very limited operations restricted to select metropolitan cities or to very few branches or single branch. It may also be noted that although FBs as wholly owned subsidiaries have limited operations in India, foreign investors have substantial investment in the form of direct and portfolio investments in PVBs, including HDFC Bank, ICICI Bank, Axis Bank, Kotak Mahindra Bank and Yes Bank, all of which are the top private sector banks in India. Foreign investment in these banks ranges from 46 to 73 percent while in PSBs it is 13 to 15 percent.

It may be concluded that in both public and private sector bank segments there is a consolidation observed as banks seek to optimize their size. The nature of consolidation in the PSB segment is different and largely the result of government decision to increase the size of banks through mergers so as to have a desired banking structure closer on the lines of the recommendations of the Narasimham Committee and one that can gear up for the target of a larger economic size of the Indian economy. These mergers are motivated by the objectives of improving the national reach of the merged banks and increasing their global presence, supported by capital infusion. For the PVBs rationalization of operations and spread, and expansion are expected to be the major driving forces as they respond to the evolving structure of the sector, driven by market forces.

In Table 6, this segment studies showed the level of concentration of the IBS in terms of advances, combining all three bank groups (Table 6). Analysed for the entire banking sector, the level of concentration was relatively

lower at around 50 percent in 2000, which has subsequently reduced to around 45 percent in 2018.

Table 6: Advances-based Concentration Ratio (%) in the Indian Banking Sector

DANIZ (1)	2000	2010	2018	DANIZ (E)	2019*
BANK (1)	(2)	(3)	(4)	BANK (5)	(6)
SBI	25.9	24.1	22.2	SBI	24.4
HDFC Bank	-	-	7.5	HDFC Bank	9.1
ICICI Bank	7.4	5.2	5.9		
PNB	5.4	5.4	5.0	PNB + OBC + UBI	7.7
BOB	5.3	5.0	-	BOB + Dena + Vijaya Bank	7.4
Canara Bank	5.2	4.9	-	Canara + Sydicate Bank	7.3
Axis Bank	-	-	5.0		
Concentration Ratio CR5	49.2	44.6	45.6	Concentration Ratio CR ₅	55.9
BOB			4.9	ICICI Bank	6.5
Canara Bank			4.4	Axis Bank	5.5
Concentration	n Ratio)	54.9		67.5
CR ₇				Concentration	
				Ratio CR7	
Number of	83	76	86	Number of	79
Banks				Banks	

^{*}considering merger of ten PSBs into four

The fall in the CR indicates the increased level of competition on account of entry of PVBs and the more aggressive stance adopted by them. It may be noted that between 2010 and 2018, although the CR has remained more or less constant, there is an increase in the number of banks from 76 to 86. Nine out of these ten entrants were in the foreign bank segment, although, size-wise they are not very significant. The composition of the CR for the IBS in the year 2018 has undergone change with PVBs showing up in the list of top five banks compared to the earlier years.

Column 6 in Table 6 showing market shares of top five banks in total advances in the year 2019 is derived by adding up the advances of the banks which are to be merged as announced by the government in September 2019. It is evident that in the post amalgamations scenario the CR₅ increases by ten percentage points, amounting to 22 percent increase over the current level of concentration. Also, the composition of the top five banks has changed. After the mergers in 2019, CR₇ increases from 55 percent to as high as 67.5 percent even with the reduction in the total number of banks. The slide of PVBs from the top positions is expected to trigger competitive responses in the form of strategic alliances and other measures. Further, it may also be noted that the CR₇ for

2018 compares very closely to CR₅ for 2019, which further underlines the substantial impact of the mergers on the level of concentration.

Net Interest Margin and the Level of Competition in the Indian Banking Sector

Looking to the nature and circumstances of the increase in concentration ratio in the context of the IBS, higher CR cannot be taken to mean purely lower degree of competition. In an evolving banking system, often the higher levels of concentration may be the result of reaction to increased levels of competition as banks seek to expand their size for greater competitive edge or relevance through organic or inorganic growth. Baumol, Panzar and Willig (1982) as cited in Claessens and Laeven [5] echo the view that the structure of an industry (or sector) as measured by its CR or any other alternative way does not adequately indicate the level of competition. The same appears to be the case of the IBS. It needs to be examined whether increased concentration in the IBS is tantamount to lower level of competition. In such a premise, a more appropriate measure to capture the level of competition, and thereby to analyze structural changes, is the interest margin of the banks. Net Interest Margin (NIM) is the net interest income of a bank taken as a ratio to its total asset. A priori, increased levels of competition would reflect in the fall in the NIM over time. As the data by Bankscope (The Global Economy.com 2016) reveals, the NIM of banks in countries with more evolved and developed banking sector, implying stronger competitive structure, is lower compared to countries with underdeveloped banking sector. Fig. 2 depicts the bank group-wise movements in NIM along with the NIM for all SCBs.

All three bank groups exhibit different patterns of the trend in NIM. PSBs have witnessed a clear and relative sharpest decline of 37 percent in the NIM over 26 years and it is more closely correlated with the NIM of all SCBs indicating the stronger impact that PSBs exert on the competitive scenario. The NIM of the PVB group exhibits more dynamism over the 26 year period. The lower NIM of PVBs in the initial years after banking reforms were introduced indicates the phase of aggressive pricing and product policy adopted by them. This is substantiated by the rapid strides in the range of 300 to 400 times made by them in terms of increase in deposits, advances and total assets in the study period, compared to 30 to 40 times in the case of PSBs and FBs. Five to six new PVBs occupy nearly 50 percent share of the total advances of PVB group over the major period since reforms, while the 20 old PVBs shared the remaining 50

percent with each bank claiming a very small proportion. This indicates that with a more concentrated presence the new PVBs have achieved greater economies of scale in deposits as well as advances. Several mergers were witnessed in the PVB groups as HDFC Bank, ICICI Bank and Kotak Mahindra Bank which helped the PVBs to rationalize the position. This may explain the increased efficiency in terms of increase in NIM, post 2002. However, more in-depth study based on disaggregate bank level data is required.

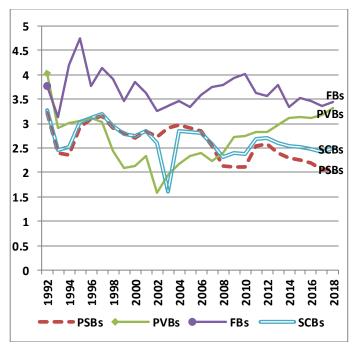


Fig. 2 Bank Group-wise Net Interest Margin Source: RBI Publications, Annual Reports of Banks

The NIM of FBs is consistently higher indicating their superior efficiency. It is common knowledge that most FB branches or offices in India are located in metropolitan cities and cater to high income sections of depositors and borrowers, particularly foreign subsidiary companies in India and are found to be 'cream skimming' (Mian [25]; Detragiache et al., [22]; Beck and Martinez Peria [23]; Sarma and Prashad [26]). Gormley [27] has also concluded that in the case of India, FBs have been found to finance a narrow group of very profitable firms only and particularly the large firms with better collateral. The average deposit size of FBs vis-a-vis PSBs and PVBs was four to five times higher in 1990 which has increased to 21 and ten times, respectively in 2017, despite the higher levels minimum balance to be maintained. Similar is the case with average credit size of FBs. This explains the consistently high NIM maintained by them, only marginally sliding downwards, and may not reflect competitive forces as they cater to niche markets. FBs are known to bring in superior technological advancements, innovation in financial products and better risk management.

For the IBS as a whole, unlike what is found in the literature (Beck and Hesse [1]), the impact of structural changes on the time trend of NIM is found to be more pronounced than on cross-bank group NIM. The NIM for the IBS reduced from 3.96 in the 1996 to 2.84 in the year 2016, a fall of 39 percent.

CONCLUSIONS

The analysis of the IBS shows that significant structural changes have happened in the sector. The level of concentration in the IBS sector has increased over time largely on account of mergers within the PSB group. As the IBS is highly dominated by the PSBs, the structural changes are the combined outcome of market forces and policy decisions guided by targeted banking structure. Nonetheless, they do comprise responses to competition. The increased level of competition in the IBS is indicative in the decline in NIM over the period.

Consolidation in the PSB segment and further concentration of banking with them can be expected to spurt competitive response from PVBs as they seek to expand their presence in the sector. This would lead to intensification of the level of competition in the banking sector. Competition would spur innovation in financial services with greater role for financial technology and novel products to bring the unbanked people in to the folds of formal banking. Improvement in the implementation of the IBC and in governance of banks over time will further support robust growth of the banking sector. The findings of this study need to be appreciated in the context of the aggregative nature of the sector-wide and bank group-wide data used for the analyzing the level of competition based on NIM. The true nature and dimensions of inter-bank competition would emerge by evaluating bank-specific strategies and practices, particularly of the top five banks in each group. However, it is beyond the scope of this study. Nonetheless, the preliminary analyses of the structural dimensions of the Indian banking sector in the present study provide a base for further research on performance of the sector in relation to the evolving structure and the kind of banking structure that would be most effective in the Indian context.

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REFERENCES

- [1] Beck, T. and Hesse, H., (2006). "Bank Efficiency, Ownership and Market Structure: Why Are Interest Spreads So High in Uganda?" World Bank Policy Research Working Paper 4027.
- [2] Claessens, S. A., Demirgüç-Kunt, and Huizinga, H., (2001). "How Does Foreign Entry Affect Domestic Banking Markets?" Journal of Banking and Finance, 25: 891–911
- [3] Barajas, A., Steiner, R. and Salazar, N., (2000). "The Impact of Liberalization and Foreign Investment in Colombia's Financial Sector," Journal of Development Economics, 63(1):157–96.
- [4] Laeven, L., Levine, R., and Demirguc-Kunt, A., (2004) "Regulations, Market Structure, Institutions, and the Cost of Financial Intermediation", Journal of Money, Credit and Banking 36(3):593-622.
- [5] Claessens, S. A. and Laeven, L., (2004). "What Drives Bank Competition? Some International Evidence," Journal of Money, Credit & Banking, 36(3)Part 2:563-583
- [6] Dabla-Norris, E., Floerkemeier, H., (2007). "Bank Efficiency and Market Structure: What Determines Banking Spreads in Armenia?" IMF, Working Paper 07/134.
- [7] Berger, A.N., Hasan, I., Kalpper, L.F., (2004). "Further Evidence on the Link between Finance and Growth: An International Analysis of Community Banking and Economic Performance", Journal of Financial Services Research 25:169-202.
- [8] Chen, C., (2009). "Bank Efficiency in Sub-Saharan African Middle-Income Countries", IMF Working Paper, African Department.
- [9] Hassan, K., M., Sanchez, B., and Safa, F., M., (2013). "Impact of Financial Liberalization and Foreign Bank Entry on Islamic Banking Performance", International Journal of Islamic and Middle Eastern Finance and Management.
- [10] Houssain, M., (2010). "Financial Reforms and Persistently High Bank Interest Spreads in Bangladesh: Pitfalls in Institutional Development?" Paper No. 24755.
- [11] https://mpra.ub.uni-muenchen.de/24755/ MPRA
- [12] Dong, Y., Guariglia, A., and Hou, W., (2013). "Impact of Foreign Bank Entry on the Performance of Chinese Banks", Developing China's Capital Market pp 128-145
- [13] Lao, D., (2016). "Foreign Penetration and Its Impact on the Chinese Banking Sector", The Development of the Chinese Financial System and Reform of Chinese Commercial Banks pp 142-180
- [14] Bhanawat, S. and Kothari, S., (2013). "Impact of Banking Sector Reforms on Profitability of Banking Industry in India", Pacific Business Review International, 6(6):60-65.

- [15] Arumugam, A., and Selvalakshmi, G., (2014). "Impact of Banking Sector Reforms in India in the Post-Reforms Era", Paripex Indian Journal of Research, 3(4):14-18.
- [16] Shivagami, G., and Prasad, R. T., (2016). "Impact of Banking Sector Reforms An Analysis", Shanlax International Journal of Economics, 4(3)
- [17] Balayya, T., (2017). "Impact of Economic Reforms on Banking Sector vis-a-vis Liberalization", IOSR Journal of Business and Management, pp 62-66
- [18] Chadha, N., (2017). "An Analytical Study of Reforms and their Impact on Indian Banking Sector", International Journal of Business Administration and Management, 7(1).
- [19] Chandanani, P., Singh, K., and Majumdar, S., (2017). "Market Structure and Competition in the Banking Industry: A Review of Literature", Indian Journal of Finance, 11(3)
- [20] Mohan, Rakesh (2005): 'Financial Sector Reforms in India: Policies and Performance Analysis', Economic and Political Weekly, 40 (12): 1106–21.
- [21] Mohan, R., and Ray, P., (2017). "Indian Financial Sector: Structure, Trends and Turns", IMF Working Paper, Asia and Pacific Department.
- [22] RBI, Department of Banking Operations and Development (DBOD) and Department of Economic and Policy Research (DEPR), Discussion Paper "Banking Structure in India The Way Forward", 2013
- [23] Detragiache, E., Tressel, T., and Gupta, P., (2008). "Foreign Banks in Poor Countries: Theory and Evidence", Journal of Finance, 63(5):2123–2160.
- [24] Beck, T., and Martinez Peria, M. S., (2010). "Foreign Bank Participation and Outreach: Evidence from Mexico." Journal of Financial Intermediation, 19(1): 52–73.
- [25] Claessens, S., and Van Horen, N., (2013). "Impact of Foreign Banks", Journal of Financial Perspectives, 1(1)
- [26] Mian, A., (2006). "Distance Constraints: The Limits of Foreign Lending in Poor Economies", Journal of Finance, 61(3):1465–1505.
- [27] Sarma, M. and Prashad, A. (2014). "Do Foreign Banks in India Indulge in Cream Skimming?" Discussion Paper 14-01, CITD, School of International Studies, JNU.
- [28] Gormley, T. A., (2010). "The Impact of Foreign Bank Entry in Emerging Markets: Evidence From India", Journal of Financial Intermediation, 19(1), 26-51.

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