Global Journal of Management and Business Research
Volume 12 Issue 8 Version 1.0 May 2012
Type: Double Blind Peer Reviewed International Research Journal
Publisher: Global Journals Inc. (USA)
Online ISSN: 2249-4588 & Print ISSN: 0975-5853

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*GJMBR-B Classification: FOR Code: 150203 JEL Code: G02, P52, L22*

CONCENTRATION AND COMPETITION IN THE NON- BANKING SECTOR EVIDENCE FROM BANGLADESH

# Concentration and Competition in the Non-Banking Sector: Evidence from Bangladesh

S. M. Sohrab Uddin[α] & Anupam Das Gupta[σ]

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## I. Introduction

The financial system is the ultimate engine for achieving economic prosperity of a country, and is involved in the mobilization of financial resources from the surplus to the deficit sector. Primarily the major responsibility is assigned to banks for the channelization of funds in most of the countries, particularly in developing countries. However, the development of both banks and non-bank financial institutions (henceforth NBFIs) are necessary for assuring a strong and stable financial system for the country as a whole (Pirtea, Iovu, & Milos, 2008; Raina & Bakker, 2003). In addition, NBFIs add power to the economy in such a way that enhances the resilience of the financial system to economic crisis (Carmichael & Pomcerleano, 2002). These NBFIs offer wide range of products and services to mitigate the financial intermediation gap and thereby, play an important complementary role of commercial banks in the society (Shrestha, 2007; Sufian, 2008; Vittas, 1997). According to Ahmed and Chowdhury (2007), the fundamental limitations existed in the banking sector are, in fact, laid down the foundation of the accelerated development process of NBFIs. Firstly, the regulations adopted by the central bank of a country do not allow banks to embrace financial services for all areas of business; secondly, banks always face a mismatch in maturity intermediation since they have to fulfill the long-term financing needs with short-term resources; and finally extending the operational horizon through product innovations is not always possible for banks. These areas create new opportunities for the NBFIs to grab with utmost success. As a result, the NBFIs are nowadays treated as an important sub-sector of the financial system, which has been expanding rapidly and attaining importance on a continuous basis due to their ability to meet the diverse financial requirements of business enterprises (Islam & Osman, 2011).

The degree of concentration and competition and their changes over time have been analyzed by many researchers to evaluate the structure of the banking industry. Various changes in the banking industry initiated by the financial liberalization policy make the analysis even more important to the policymakers. However, the research on various issues of NBFIs remains substantially scarce (Sufian, 2008), in spite of the fact that recent emergence of NBFIs as financial intermediaries is noticeable not only in developed countries but also in developing countries. Empirical evidence to evaluate the concentration and competition of the non-banking sector stays even more insignificant, particularly in the context of developing countries.

Although both direct and indirect forms[1] of financial intermediation are available in Bangladesh, similar to many developing countries the indirect form dominates the other form in the financial market to a great extent (Beck & Rahman, 2006; Uddin & Suzuki, 2011). The journey of NBFIs was started in 1981, ten years after the independence of the country. A private sector NBFI, namely, Industrial Promotion and Development Company (IPDC) was the pioneer in the sector in Bangladesh. Over the years, the non-banking sector has grown in numbers as many state-owned, private, and joint-venture firms started to join the sector, and by the end of 2010 a total of 35 firms were reported by the Ministry of Finance as NBFIs. The size of the non

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[1] In case of direct finance, deficit budget units collect funds from surplus budget units through stock market, whereas in case of indirect finance, banks and NBFIs play the role of financial intermediaries between deficit budget units and surplus budget units.

banking sector in respect of both absolute and relative terms has also expanded over time. For instance, the absolute size of the non-banking sector, measured in terms of assets, was BDT[2] 62.35 billion in 1997 and by the end of 2010 it became BDT414.11 billion. On the other hand, the relative size of the non-banking sector, measured in terms of assets relative to gross domestic product (GDP), increased to 5.98 per cent in 2010 from 3.45 per cent in 1997. Moreover, the importance of non-banking sector has been accelerated rapidly due to the development of new areas of business operations like leasing, term lending, housing and real estate financing, merchant banking, factoring, and so on by NBFIs (Ahmed & Chowdhury, 2007; Debnath, 2004; Hossain & Shahiduzzaman, 2002; Nasreen & Jahan, 2007). But the research on concentration and competition of the non-banking sector remains entirely unexplored. At this backdrop, this study is undertaken to assess the degree of concentration and competition and their changes over time and thereby, looked at fulfilling the demanding gap with regard to the issue.

The contribution of this paper can be expressed in three different ways. Firstly, it addresses to analyze the structure of the non-banking sector of Bangladesh, and by doing this it shows the scenario of other developing countries with similar financial structure. Secondly, the findings of this study will generate some guidelines for the policymakers to formulate policies and strategies with regard to the structure of the non-banking sector. Finally, it also raises some issues to deal with through further research.

The later part of this paper is organized in the following manner: section two describes the available literature concerning the dynamics of concentration and competition. It also focuses on the previous studies carried out in Bangladesh to tackle the issues relating to the non-banking sector. Section three elaborates the overview of the non-banking sector of Bangladesh. Section four introduces the data and methodology adopted for the study. Section five displays the empirical results of the study and section six concludes with creating some future research opportunities.

## II. Review of the Literature with Regard to Concentration and Competition

Concentration and competition have been regarded as two distinct aspects of an industry by the literature and the researchers express their views in favor of either concentrated or competitive market structure. Beck, Demirguc-Kunt, and Levine (2006) opine that the possibility of occurring financial crisis in a concentrated market is less likely. This is due to the fact that financial institutions in a concentrated market delegate proper monitoring and screening functions as desired by the central bank of an economy. In addition, increased competition is always accompanied by less incentive for monitoring credit, which can badly harm the financial soundness of an economy as a whole (Casu, Ferrari, & Zhao, 2010). Hellmann, Murdock, and Stiglitz (1997) stress on the importance of achieving optimal scale in a market and according to them accomplishing the objective is more realizable in a concentrated market than in a competitive market.

On the contrary, according to Berger, Demirguc-Kunt, Levine, & Haubrich (2004), government decision to foster concentrated market in a country leads to adverse affects and corresponding miserable economic efficiency. This is because market concentration produces higher revenues for the lenders in a financial market whereas lower benefits for the consumers (Abbasoglu, Aysan, & Gunes, 2007). Ratnayake (1999) also opines that competition assures consumer benefit along with utmost utilization of available scarce resources. Similarly, Acs and Audretsch (1988) and Mitton (2008) favor the competitive market structure by arguing, respectively, that higher level of concentration discourages the innovation process to a great extent, and the degree of economic volatility increases with the rise of market concentration. Calem and Carlino (1991) and Barth, Caprio, and Levine (2004) also report similar opinion like Mitton (2008) in their respective studies.

Although there is no agreement in the literature in favor of either of the two available industrial structures, it is still advisable to analyze the structure of a market to adopt welfare oriented public policies (Bikker & Haaf, 2002). Moreover, the structure of an industry influences both resource allocation and distribution of economic benefit (M'Chirgui, 2006) and thus, examining the structure of an industry is really crucial in evaluating its nature and behavior (Dunning, 1974). The measurement of concentration and competition during a particular year and their changes over time provide a clear indication about the structure of an industry.

With regard to the literature concerning the non-banking sector, limited number of studies has been conducted so far in Bangladesh. Hossain and Shahiduzzaman (2002) focus on the importance of non-banking sector as a vehicle for the economic development of the country and identify the underlying problems existed within the sector. Ahmed and Chowdhury (2007) deal with different features, contribution, and challenges faced by NBFIs in Bangladesh. At the same time they also focus on performance analysis of NBFIs by adopting traditional financial indicators like current ratio, debt-equity ratio, productivity ratio, return on equity, etc. and report that in spite of the presence of several constraints existed in the sector NBFIs have been performing considerably well. Nasreen and Jahan (2007) conduct a research on

[2] BDT stands for Bangladesh Taka, and Taka is the local currency of the country.

leasing companies only regarding their accounting practices. However, none of the above mentioned studies analyze the industrial structure of the non-banking sector of Bangladesh, which creates an opportunity to deal with through an investigation.

## III. Overview Of The Non-Banking Sector Of Bangladesh

The financial sector of Bangladesh encompasses of bank financial institutions, NBFIs, insurance companies, and stock markets, and at present 47 scheduled banks[3] and two stock exchanges are operating under the bank-based system and the market-based system respectively. Bangladesh Bank is the central bank of the country and therefore, is responsible for regulating and supervising the bank-based system. At the same time, as a supreme authority of the indirect form of financial intermediation, Bangladesh Bank is also responsible for controlling the activities of all NBFIs. On the other hand, the stock exchanges are operated under the guidance and monitoring of Securities and Exchange Commission (SEC), Bangladesh.

During the initial stage of development, the NBFIs were governed by Bangladesh Bank as per the provision stated in Chapter V of the 'Bangladesh Bank Order 1972'. Later on, a new order was promulgated by Bangladesh Bank in the name of 'Non Banking Financial Institutions Order' in 1989 with a view to assuring better regulation and supervision of the sector. However, regulatory deficiencies of this order with regard to the activities of NBFIs and statutory liquidity requirement urged the central bank to announce a new act in 1993 in the name of 'Financial Institutions Act' (Ahmed & Chowdhury, 2007; Barai, Saha, & Mamun, 1999). From then on, all NBFIs in Bangladesh have been licensed and controlled under this act.

Although the major business of most of the NBFIs is lease financing, still a handful number of NBFIs involves in different financing activities, namely, term lending, house financing, merchant banking, equity financing, venture capital financing, project financing, financing to pilgrimage, etc. NBFIs also extend services to various sectors like textile, agriculture, small and cottage, chemicals, trading, pharmaceuticals, transport, food and beverage, leather products, and construction and engineering.

Table 1 represents the position of different types of NBFIs in Bangladesh in the year 2010. The total number of NBFIs is 35 in 2010 out of which 10 are domestic and foreign joint venture NBFIs, 20 are privately owned NBFIs, and 5 are state owned NBFIs. In 1997, the total number was 19 out of which 7 were domestic and foreign joint venture NBFIs, 9 were privately owned NBFIs, and 3 were state owned NBFIs. Among all NBFIs, privately owned NBFIs hold the majority of the market share by capturing 74.74 per cent, 57.43 per cent, and 60.27 per cent of deposits, loans and advances, and assets respectively. State owned NBFIs collectively retain higher market share than joint venture NBFIs in terms of deposits and assets, but lower market share in terms of loans and advances.

*Table 1 :* Position of Different Types of Non-banks in 2010 (Amount in million BDT except no. of non-banks and no. of employees)

| Type of Ownership | Deposits | | Loans and Advances | | Assets | |
|---|---|---|---|---|---|---|
| | Amount | % | Amount | % | Amount | % |
| Joint Venture | 24,216 | 11.32 | 61,222 | 22.13 | 76,986 | 18.59 |
| Privately Owned | 159,903 | 74.74 | 158,880 | 57.43 | 249,561 | 60.27 |
| State Owned | 29,835 | 13.94 | 56,548 | 20.44 | 87,561 | 21.14 |
| Total | 213,954 | 100.00 | 276,650 | 100.00 | 414,108 | 100.00 |
| Type of Ownership | Income | Expenditure | No. of Non-Banks | | No. of Employees | |
| Joint Venture | 7,371 | 4,699 | 10 | | 876 | |
| Privately Owned | 21,270 | 16,050 | 20 | | 27,255 | |
| State Owned | 9,287 | 4,785 | 5 | | 2,740 | |
| Total | 37,928 | 25,534 | 35 | | 30,871 | |

*Source : Constructed by the Authors based predominantly on Ministry of Finance publication, few missing data are collected from the annual reports of respective NBFIs.*

## IV. Data And Methodology

In order to compute concentration and competition, both the asset and loan figures are used in this study to ascertain the market shares of the NBFIs with a sample period of 14 years from 1997-2010. The data are collected from various issues of 'Bank and Financial Institutions' Activities', a yearly publication of the Ministry of Finance of the government of Bangladesh, and is published in local language in the name of 'Bank O Arthik Pratisthansamuher Karjaboli'. All NBFIs reported in this publication in a particular year are considered for that year by the present study.

This study adopts both discrete and cumulative measures of concentration for addressing the level of concentration in the non-banking sector of Bangladesh.

[3] According to Article-2 of the Bangladesh Bank Order-1972, a scheduled bank means a bank which is included in the list of banks maintained under sub-clause (1) of clause (2) of Article 37 (Debnath, 2004).

The fundamental difference between discrete and cumulative measures is that the former usually consider the market share of the largest non-bank (s) only whereas the latter consider the market share of all non-banks operating in an industry. K-non-bank concentration ratios (one-non-bank, two-non-bank, four-non-bank and six-non-bank) are the discrete measures, and Herfindahl-Hirschman index (HHI), Comprehensive Industrial Concentration index (CCI), Hall-Tideman index (HTI), and Entropy measure are the cumulative measures of concentration. Both discrete and cumulative measures focus on assigning weights and the present study follows the method provided by Bikker and Haaf (2002) for allocating weight for entropy measure, and the methods provided by Marfels (1971) for assigning weights for K-non-bank concentration ratios, HHI, HTI, and CCI.

Table 2 provides a comparative analysis of the different concentration measures adopted by the present study. The measure following a particular one overcomes the limitation of the preceding measure. For instance, HHI overcome the limitation of K-non-bank concentration ratio by considering the market share of all non-banks operating in a particular year; HTI assigns more focus on number of non-banks and thus, overcomes the limitation of HHI; and CCI overcomes the limitations of the former measures by assuring both absolute and relative concentration instead of focusing entirely on absolute measurement.

*Table 2 :* Comparative Analysis of the different Concentration Measures

| Name of concentration measures | Focus of the measure | Mathematical form | Range |
|---|---|---|---|
| K-non-bank concentration ratios | The market share of the k largest non-bank (s) depending upon the arbitrary selection process. Does not consider all non-banks operating in an industry in a particular year. | $CR_k = \sum_{i=1}^{k} s_i$ where, $s_i$ is the market share of the largest non-bank (s) and k is the number of largest non-bank (s). | Zero and 1 |
| HHI | The market share of all non-banks. Less responsive to the total number of non-banks operating in an industry. | $HHI = \sum_{i=1}^{n} s_i^2$ where, $s_i$ is the market share of each non-bank, and n is the total number of non-banks. | 1/n and 1 |
| HTI | Assign more focus on number of non-banks in an industry. | $HTI = 1/\left(2\sum_{i=1}^{n} is_i - 1\right)$ where, $s_i$ is market share of each non-bank, i represents the rank of a particular non-bank assigning in such a way the largest non-bank corresponds to a rank of 1, and n means total number of non-banks. | Zero and 1 |
| CCI | Accommodate both absolute and relative concentration with equal importance. | $CCI = s_1 + \sum_{i=2}^{n} s_i^2(1+(1-s_i))$ where, $s_1$ is the market share of the leading non-bank, $s_i$ is the market share of each non-bank, and n is the total number of non-banks. | Decimal fraction (which is usually greater than the absolute market share of the largest non-bank) and 1 |
| Entropy measure | Smaller absolute weight is assigned to the largest non-banks with higher market share. | $E = -\sum_{i=1}^{n} s_i \log_2 s_i$ where, $s_i$ is the market share of each non-bank, and n is the total number of non-banks. | Zero and $\log_2$ n |

*Source: Constructed by the Authors based on Bikker and Haaf (2002)*

With regard to the measure of competition, two types of approaches are commonly available: structural approaches and non-structural approaches. This paper relies on the structural approaches for assessing the competition. According to the structural approaches, a market with a high level of concentration is associated with a lower level competition and vice versa (Deltuvaite, Vaskelaitis, & Pranckeviciute, 2007; Wanniarachchige & Suzuki, 2010). Thus, these structural approaches usually link competition to concentration (Bikker & Haaf, 2002).

## V. Empirical Results

The results generated by all concentration ratios based on the asset figures during the sample period are reported in table 3. It also displays the change in the number of institutions reported by the Ministry of Finance as NBFIs due to the emergence of new firms in the non-banking sector. The table states that the market share of the largest NBFI is reduced from 43.91 per cent in 1997 to 27.76 per cent in 2010. Similarly, two-non-bank, four-non-bank, and six-non-bank concentration ratios also report similar changes in the non-banking sector. For instance, the two-non-bank concentration ratio has reduced by 49.82 per cent, the four-non-bank concentration ratio has decreased by 41.43 per cent, and the six-non-bank concentration ratio has lessened by 37.02 per cent during the period under study. However, two, four, and six largest NBFIs are still collectively maintaining a substantial percentage of the market share by reporting 37.95 per cent, 50.93 per cent, and 59.62 per cent correspondingly of the total non-banking sector's assets.

The score provided by the HHI has reduced from 0.3034 to 0.1083 during the period 1997-2010, which indicates a reduction of concentration in the non-banking sector. Concerning the HHI, the non-banking sector of Bangladesh can be evaluated by using the horizontal merger guideline provided by the US Department of Justice. The guideline of the department considers an index of 10,000 as a symbol of monopoly and the score generated by HHI can be represented in terms of 10,000 to identify the nature of the market structure of an industry. A market with an index less than 1,000 can be represented as a very low concentrated market, a market with an index of 1,000-1,800 can be categorized as a moderately concentrated market, and a market with an index exceeding 1,800 can be reported as a highly concentrated market (Deltuvaite, et al., 2007; Park, 2009). According to this guideline, the non-banking market of Bangladesh was related to an index of 3,034 in 1997, and hence it was a highly concentrated market during that time. However, in 2010 the index becomes 1,083, which means that the market has converted into a moderately concentrated market from a highly concentrated market over the years.

Other concentration ratios also indicate similar trend of change in the non-banking sector. For instance, the HTI and the CCI have reduced to 0.0701 and 0.3380 respectively in 2010 from 0.2665 and 0.6279 in 1997. In contrast, the entropy measure has increased to 4.1017 in 2010 from 2.2538 in 1997. The increase in entropy measure also testimonies a reduction in the level of concentration as it is conversely associated with the concentration.

Table 4 displays all concentration ratios computed on the basis of loan figures during the period under study. It reports that the share of the one, two, four, and six largest non-banks have reduced to 22.59, 31.95, 45.40, and 56.01 per cent respectively in 2010 from 53.05, 80.74, 90.15, and 96.37 per cent in 1997. Similar to the asset based calculation, the HTI, CCI, and entropy measure indicate a reduction in the level of concentration. The scores generated by the HTI, CCI, and entropy measure are 0.3215, 0.6761, and 1.9825 correspondingly in 1997, and by the end of 2010 they become 0.0646, 0.2909, and 4.2754. However, according to the HHI index, the non-banking sector of Bangladesh has switched to a very low concentrated market from a highly concentrated market as the index has reduced to 846 in 2010 from 3,650 in 1997.

Thus, all concentration techniques adopted in this study based on assets and loans report a reduction in the level of concentration in the non-banking sector of Bangladesh, and the loan figures portray a relatively higher level of declination than the asset figures. Linking this finding to competition by focusing on the structural approaches of measuring competition, it can be opined that there has been an increase in competition in the non-banking sector during the sample period.

*Table 3 :* Concentration Ratios based on Assets during 1997-2010

| Year | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CRk1 | 0.4391 | 0.4338 | 0.4136 | 0.3839 | 0.3372 | 0.3164 | 0.2541 | 0.2230 | 0.2553 | 0.3181 | 0.2799 | 0.2936 | 0.2852 | 0.2776 |
| CRk2 | 0.7563 | 0.7203 | 0.6985 | 0.6335 | 0.5539 | 0.5189 | 0.4786 | 0.4296 | 0.4297 | 0.4575 | 0.4039 | 0.4026 | 0.3750 | 0.3795 |
| CRk4 | 0.8695 | 0.8386 | 0.8180 | 0.7735 | 0.7340 | 0.7029 | 0.6472 | 0.6150 | 0.5822 | 0.5992 | 0.5568 | 0.5531 | 0.5208 | 0.5093 |
| CRk6 | 0.9467 | 0.9186 | 0.9016 | 0.8634 | 0.8193 | 0.7867 | 0.7330 | 0.6973 | 0.6634 | 0.6638 | 0.6333 | 0.6308 | 0.6038 | 0.5962 |
| HHI | 0.3034 | 0.2814 | 0.2641 | 0.2260 | 0.1866 | 0.1689 | 0.1409 | 0.1196 | 0.1184 | 0.1396 | 0.1160 | 0.1198 | 0.1119 | 0.1083 |
| HTI | 0.2665 | 0.2274 | 0.2106 | 0.1749 | 0.1413 | 0.1262 | 0.1056 | 0.0937 | 0.0837 | 0.0833 | 0.0757 | 0.0747 | 0.0714 | 0.0701 |
| CCI | 0.6279 | 0.5961 | 0.5760 | 0.5246 | 0.4702 | 0.4429 | 0.3933 | 0.3519 | 0.3550 | 0.3912 | 0.3520 | 0.3583 | 0.3445 | 0.3380 |
| Entropy | 2.2538 | 2.4609 | 2.5705 | 2.8473 | 3.1489 | 3.3093 | 3.5630 | 3.7621 | 3.8739 | 3.8030 | 3.9888 | 3.9888 | 4.0698 | 4.1017 |
| No of Non-Banks | 19 | 24 | 27 | 28 | 32 | 33 | 34 | 34 | 34 | 35 | 35 | 35 | 35 | 35 |

*Source : Calculated by the Authors*

*Table 4 :* Concentration Ratios based on Loans during 1997-2010

| Year | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CRk1 | 0.5305 | 0.4545 | 0.4581 | 0.4209 | 0.3713 | 0.3462 | 0.3074 | 0.2630 | 0.2124 | 0.2239 | 0.2139 | 0.2278 | 0.2344 | 0.2259 |
| CRk2 | 0.8074 | 0.7093 | 0.6712 | 0.6157 | 0.5397 | 0.4978 | 0.4760 | 0.4449 | 0.4238 | 0.4009 | 0.3621 | 0.3530 | 0.3416 | 0.3195 |
| CRk4 | 0.9015 | 0.8261 | 0.7918 | 0.7384 | 0.6911 | 0.6399 | 0.6052 | 0.5681 | 0.5457 | 0.5113 | 0.4813 | 0.4842 | 0.4817 | 0.4540 |
| CRk6 | 0.9637 | 0.9066 | 0.8775 | 0.8161 | 0.7852 | 0.7371 | 0.7029 | 0.6526 | 0.6315 | 0.5892 | 0.5662 | 0.5782 | 0.5782 | 0.5601 |
| HHI | 0.3650 | 0.2837 | 0.2689 | 0.2297 | 0.1873 | 0.1637 | 0.1424 | 0.1213 | 0.1087 | 0.0998 | 0.0885 | 0.0904 | 0.0906 | 0.0846 |
| HTI | 0.3215 | 0.2318 | 0.2029 | 0.1580 | 0.1333 | 0.1109 | 0.0982 | 0.0864 | 0.0783 | 0.0706 | 0.0671 | 0.0681 | 0.0676 | 0.0646 |
| CCI | 0.6761 | 0.5916 | 0.5659 | 0.5178 | 0.4640 | 0.4291 | 0.3975 | 0.3604 | 0.3294 | 0.3169 | 0.2953 | 0.3018 | 0.3033 | 0.2909 |
| Entropy | 1.9825 | 2.4473 | 2.6185 | 2.9411 | 3.2259 | 3.4738 | 3.6508 | 3.8378 | 3.9696 | 4.1024 | 4.2107 | 4.1968 | 4.2049 | 4.2754 |
| No of Non-Banks | 19 | 24 | 27 | 28 | 32 | 33 | 34 | 34 | 34 | 35 | 35 | 35 | 35 | 35 |

*Source : Calculated by the Authors*

## VI. Conclusion

The operations of NBFIs not only provide an alternative source of financing besides bank financial institutions but also facilitate a sound environment in the financial market. At the same time, the role of the sector is also vital in an economy particularly at the moment of financial crisis at it exhibits a cushion of safety for the economy as a whole. The limitations of the banking sector in designing products for all areas of business create the vacuum for the NBFIs to widen their activities through developing customized and quick-tailored non-conventional range of financial products.

The increasing number of NBFIs over the period indicates the popularity and acceptability of the sector within the financial market of Bangladesh. In view of this, the purpose of this paper is to have a close look at the structure of the non-banking sector and its change over the period in Bangladesh through adopting concentration and competition measures, which has been remained highly unexplored in the existing available literature. It is reported by the findings that the degree of competition has been intensified in the sector due to the reduction of concentration to a great extent. Seemingly, the liberalization policy adopted by the central bank for increasing the competitiveness of the financial sector is reflected in the results generated by all concentration measures used in this study. However, there is a substantial room for the regulator to improve the competitive position of the non-banking sector, since the largest non-banks still collectively hold a sizeable portion of the total market share. This can be done either through encouraging new participants or by expanding the branch network of the existing NBFIs.

This study can be extended in two ways. Firstly, instead of focusing only on traditional financial indicators, as it is done in most of the existing studies, the performance of NBFIs can be addressed by adopting both conventional financial indicators and frontier measures of performance to grab a clear picture; and secondly, a subsequent investigation can be done to identify the impact of competition on the performance of NBFIs.

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