RESEARCH PROJECT

on

An Analysis on the Impact of Shadow Banking in India

Submitted in partial fulfilment of the requirements for the award of the
Degree of Bachelor of Commerce (Honours) of CHRIST (Deemed to be University)

By

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DECLARATION

We hereby declare that the report of the research paper entitled "An Analysis on the Impact of Shadow Banking in India", under the guidance of **Dr Natchimuthu N**, which is being submitted to the Department of Commerce, Central Campus, in partial fulfilment of the requirements for the award of the Degree of Bachelor of Commerce (Honours), is a bonafide report of the work carried out by us. The materials contained in this report have not been submitted to any University or Institution for the award of any degree, and we are the only author of this complete work, and no sources other than those listed here have been used in this work

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ABSTRACT

Non-Banking Financial Companies also known as Shadow Banks have been existent in India since early 1960s. They have a significant impact on the economy as they providing credit to consumers as well. Through this paper, we study the impact NBFCs have on the Indian economy. We have made use of secondary data which is largely available on the Reserve Bank of India's website as well as other government reports.

In this paper we also study the sectoral distribution of credit extended by NBFCs, including their exposure to various industries such as real estate, agriculture, and infrastructure.

Through our study, we found out that NBFC plays a huge positive role in the growth and development of the economy. It was also seen that the sectoral distribution of credit reached sectors which were neglected by traditional banks.

Keywords: Shadow Banking, Non-Banking Financial Companies, GDP Growth, Sectoral Distribution, India.

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INTRODUCTION

Background:

In India, non-banking financial companies come under the scope of shadow banking system. These companies provide the same services regular traditional banks provide besides the fact that they operate outside the regulatory framework. These banks cannot accept deposits as well. These companies provide credit facilities to sectors and customers who are underserved or neglected by traditional banks. However, this increase in NBFC credit lending has raised concerns about the risks involving financial stability as NBFCs are not subject to the same regulations as traditional banks are.

Even though, NBFCs do not have the same penetration level as traditional banks, credit from NBFCs forms a crucial part of credit circulation in the economy and has a significant contribution level to the growth of the country's GDP. It is important to understand and analyze the impact of NBFC credit on the country's economic growth as we can have a picture of how much of the country's GDP growth is fueled by companies that have more risk than regular traditional banks

Extensive research is needed to understand the impact and role of non-banking financial companies in India and the measures taken to reduce the risks associated with these companies. Furthermore, there is a requirement to study the penetration level of NBFC credit as well as distribution of credit to various sectors in our economy.

Objectives:

- To assess the current state of the shadow banking sector in India
- To understand the role of the shadow banking sector in the Indian economy
- To assess potential risks associated with the shadow banking sector in the country

Problem Statement:

Even though there is a noteworthy contribution of NBFCs credit to India's economy, the role they play in the shadow banking system as well as their impact on India's GDP growth is highly underreported and needs detailed research. Over and above that, there is an incomprehension regarding the credit facilities provided by NBFCs and the sectors which majorly benefit from it. Therefore, there is a need to research and study the impact of NBFC credit on GDP growth and sectoral distribution of credit.

Scope of Project:

The proposed research aims to study in depth the following aspects of NBFCs in our country:

- Sectoral distribution of credit given by NBFCs
- Comparison of NBFCs with traditional banks
- Assessing the growth of NBFC lending and Bank lending, and comparing them to the growth in GDP

LITERATURE REVIEW

Shadow banking has always played a part in India to meet credit needs not catered to by the formal banking sector. Financial liberalization and deregulation have seen shadow banking institutions in both countries. The system is becoming more interconnected and important. Basel Accords III play a very important role in define the structure of shadow banking in the country. India's shadow banking sector largely consists of NBFCs. This includes companies that give out loans and advances sale and purchase of securities/bonds as well as rotating savings and credit association or chit funds as they are called in India. The NBFC sector has grown since the opening up of the economy in 1991. The share of credit by NBFCs are much lesser than that of banks in the country. The sector has also incurred a lot of systematic risks since liberalization. This ended up in a crisis with the collapse of IL&FS, a large and significant shadow bank. (Sherpa, 2013) (Sivaramkrishna, Gune, Kandalam, & Advait, 2019)

As of 2020, the shadow banking sector is the third largest sector after commercial banks and insurance in India. Among the listed shadow banks, several small investors direct their capital towards investments to get higher returns. The main difference between efficient and inefficient firms is largely due to the deterioration of asset quality. Risk and asset quality factors also appear to 'matter' in efficiency. Therefore, the proper analysis of the factors that influence efficiency can help investors make informed decisions. Efficiency leads to stability, so investors can be vigilant in making better decisions. (Bhattacharjee & Patil, 2021)

Regulating the shadow banking system is essential as this sector helps fund a lot of industries. They have the ability to lower transaction costs, make quick decisions and promptly assist customers. They play a crucial role in broadening access to financial services, and enhancing competition and diversification of the financial sector. NBFCs complement the banking sector. However, they are exposed to several risks such as liquidity risks, leverage risks, regulatory arbitrage and contagion risks. Globally, US has the largest shadow banking system. Shadow banks in India, as of 2013, had very less assets compared to banks. The growing demand for NBFCs and other shadow banking activities such as mutual funds have called for a need for regulation. (Sinha, 2013) (Gorton, Metrik, Shlefier, & Tarulo, 2010)

NBFCs/NBFIs play many vital roles that banks fail to act upon. They provide complementary services to the economy. Indeed this 'shadow banking' industry running hand-in-hand with the Banking industry provides a bigger challenge for the Regulator. According to the RBI Financial

Stability Report, 2018, the Non-Banking Financial Services is the Biggest single most entity that owes money. In the last two decades, NBFCs have survived many financial crises. The future of Shadow banks post Covid 19 depends on investors' trust in this sector. (Dutta, 2020) (Acharya, Khandwala, & Öncü , 2013)

Shadow banking sector plays an important role in other countries too. Shadow banks generally make better profits when loans are repaid rather than claiming assets kept as collateral. The shadow banking system cannot be perceived as threat to the formal banking system because of its high liquidity maintenance in times when formal banks are facing liquidity crunch. The findings suggest that NBFCs represent a completeness of credit allocation in non-metropolitan areas of the Indian economy by banks with less than fully-developed branching networks. Shadow banking in emerging markets may look quite different from that in developed economies: well-capitalized, potentially filling in gaps of inadequate intermediation, and affected during crises by the flight of deposits to state-owned banks in such economies. (Mugabo & Mutize, 2012)

Major elements of shadow banking system such as Money Market Mutual Funds, Repurchase Agreements and Asset-Backed Commercial Papers can cause financial market distress. Shadow banks have major contribution towards the great US financial crisis of 2007-2008 in the form of structural securities of SDOs due to lack of effective regulatory system and If the regulatory mechanism levied by Securities and Exchange Commissions and a stable monetary and fiscal strategies of central bank would be properly practiced, it can provide assistance to overcome the distressing situation of financial market. (Khan & Rana)

P2P Lending is also a part of shadow banking in India. India is relatively new to the crowdlending business model of P2P lending. However, it has been quick in adopting it. The RBI's regulations have also instilled confidence in the various stakeholders of P2P lending. It led to an increase in the number of P2P platforms in India. The lenders/investors on the platforms have also been on the rise since then. (Sankar & Bhattacharya, 2020)

Shadow banking in China denotes an extensive array of financial activities that occur outside the conventional banking system or off-balance sheets. These comprise prominent components of the shadow banking landscape, such as trust products, bankers' acceptances, entrust loans, and wealth management products (WMPs). However, the interdependence between shadow financing and commercial banks represents a significant risk to China's heavily bank-centric financial framework. Regulatory reforms have emerged in response to legal and regulatory alterations that have reshaped the financial industry. The Basel III accord, the Dodd-Frank Act, and the SEC have implemented a range of reforms impacting the economics of shadow banking activities. These encompass four broad categories, including capital and liquidity standards, safe harbour from FDIC receivership authority, and regulatory capital. (Huang & Bosler, 2014) (Adrian & Ashcraft, 2012)

Shadow banking is an intricate financial system that closely resembles the traditional banking industry but is bereft of regulations. In essence, these institutions are unable to create deposits under US law, prompting them to seek alternate means of financing, such as repurchase agreements, commercial paper, and money market mutual fund shares. These substitutes, which are worth a staggering $10 trillion, have surpassed the total deposits held by banks. The precarious aspect of deposit substitutes is their similarity to bank deposits, including the exposure to a highly infectious and destructive bank run. In the 2007-2008 financial crisis, a prominent money market mutual fund fell, inducing a chain of events that compromised the entire financial system. The unregulated nature of shadow banking and its susceptibility to bank runs presents an imminent and critical problem. (Jackson, 2013) (Plantin, 2015)

The shadow banking sector, akin to its traditional counterpart but devoid of the same regulatory constraints, has experienced an astronomical surge from $27 trillion to $60 trillion, constituting approximately a quarter to a third of the global financial system. While the advantages of the shadow banking industry are manifold, such as providing alternatives to traditional banking, mobilizing resources towards their most needed areas, and serving as a vital cog in the economic machinery, the risk associated with this enigmatic realm is concerning. The ominous prospects of self-reinforcing cycles and potential cataclysms following a major upheaval are only a few among many anxieties that regulators harbour. In India, Non-Banking Financial Companies (NBFCs) have established themselves as integral players in the country's economic scenario by providing financial services to the rural and semi-urban areas, focusing on employment opportunities as well as infrastructure development. (Meade, Biddle, & Merritt, 2012) (Öncü , 2013)

The present discourse delves into the pivotal role of regulatory mechanisms in the realm of traditional and shadow banking. Traditional banking practices comprise direct debt issuance to investors and are subjected to strict regulatory constraints like capital requirements weighted on the basis of risk. Conversely, shadow banking practices involve the issuance of debt-like securities that operate beyond the purview of such constraints. The discussion further alludes to the equilibrium set and the participation of banks with differential access to superior and inferior risk-laden assets in each activity. In this regard, the analysis unveils that an equilibrium with absolute separation is non-existent, while an equilibrium with complete pooling in either traditional or shadow banking exists solely under particular off-equilibrium beliefs. The discourse concludes with a discussion on how the government can deploy its superlative technological prowess to enhance welfare and optimize outcomes by adopting a direct revelation mechanism that confers upon banks the liberty to opt for regulation or nonregulation. (Ordoñez , 2018)

The growth of shadow banking systems in developing economies such as China and India has become a matter of great concern. Commercial banks in China have found WMPs to be profitable because they come under the domain of incognito leverage. Growth of shadow banking system in China has had a positive impact on its economy. In India, the growth of shadow banking system has gathered a lot of attention from regulatory authorities as well as from areas of reforms. The asset-liability composition of India's non-banking financial companies (NBFCs) has been compared with global standards, highlighting potential improvements in the sector. Insights from these studies have contributed to a better understanding of shadow banking worldwide and the challenges associated with it. Shadow banking is an intricate system that requires detailed analysis and research. The existence and growth of shadow banking in developing countries such as China and India play a vital role when it comes to growth of the country's GDP. (Shah, Fu, Abbas, & Arshad, 2021) (Gabrieli, Pilbeam, & Shi , 2018) (Kothari, 2019) (Nandini & Jeyanthi, 2014)

In China, WMPs are a major part of the shadow banking system, with commercial banks seeing them as highly remunerative. Shadow banking in China is seen to have had an advantageous effect on the economy. However, India's shadow banking landscape has faced regulatory difficulties, particularly concerning the comparison between NBFCs and SCBs in terms of deposit increase. The study concludes that both entities will experience deposit growth, but NBFCs will exhibit higher growth in the future. A strengthened regulatory framework will be crucial in ensuring a safe environment for investors and boosting the growth of NBFCs. These findings show the need for regulation to ensure a stable financial environment as shadow banking continues to evolve. (AĞIRMAN, SERÇEMELİ, & ÖZCAN, 2013) (Mohanty, Gopalkrishnan, & Mahendra, 2021)

The global economy is facing significant challenges due to the complexity and evolving nature of the shadow banking sector, as discussed in a research paper on the danger posed by shadow banking systems to the global financial system, with a focus on the Indian case. Scholars are addressing these challenges by examining the latest innovations in the finance industry. A particular concern is the joint exposure that Indian banks face through their balance sheets, including direct lending, investment, and stand-by letter of credit (SBLC) transactions for commercial paper issued by Indian non-banking finance companies (NBFCs). Additionally, banks have an indirect exposure to the same NBFC through its asset management divisions. The study emphasizes the need for effective regulation to manage the risks posed by shadow banking and ensure a stable financial environment, particularly in emerging economies such as India. (Jain, 2014) (Gandhi, 2014) (Nath & Chowdhury , 2021) (Bawa, Basu, & Saha, 2018)

METHODOLOGY

This study particularly focuses on systematically important deposit and non-deposit taking Non-Banking Financial Companies (NBFCs). The data used for the study is secondary data available in the RBI Website (Handbook of Statistics on the Indian Economy).

The study is divided into two parts:

- Analysing the effect of NBFC and Bank Credit on the Indian Economy
- Analysing the sectoral distribution of NBFC credit in the Economy

For the purpose of both parts of the study, data available on the RBI Website have been relied upon. The most recent data available on the RBI website is for the year 2021-22.

The first part of the study contains an analysis of the effect that NBFC and Bank Credit to commercial sector have on the Indian Economy. In order to conduct this study, Multiple Linear Regression has been conducted. The regression model has been generated using the following variables:

- GDP at CURRENT PRICES for the last ten years (2012-13 to 2021-22) as the dependent variable
- Bank Credit to COMMERCIAL SECTOR for the last ten years (2021-13 to 2021-22) as the first independent variable
- Systematically Important Deposit and Non-Deposit Taking NBFC Credit to the COMMERCIAL Sector for the last ten years (2012-13 to 2021-22) as the second independent variable

The purpose of conducting this regression is to assess whether the GDP (an indicator of economic growth) is impacted by Bank Credit and NBFC Credit. Although the study must focus on NBFCs, we have taken Bank Commercial Lending as an independent variable to compare the impact of Bank and NBFC credit on the GDP (Thereby this study also compares NBFCs with traditional banks). GDP is taken at current prices as the data available for Bank and NBFC credit is at current prices.

Prior to conducting a regression analysis, a unit root test was conducted to test whether the data was stationary or non-stationary. For the purpose of this, Dickey-Fuller Test was conducted.

The result of this test displayed that all 3 variables were non-stationary data. As regression can only be conducted using stationary data, non-stationary data was converted to stationary data. This was done by data differencing of the first order, after which it became stationary. The regression model was run using this stationary data.

The second part of the study contains an analysis of the sectoral distribution of NBFC credit in the Indian Economy. For this purpose, Data available on the RBI website on NBFCs have been relied upon. The data provided on the website are collected, compiled and analyzed to understand the penetration of NBFC credit into the various sectors of the economy.

FINDINGS AND ANALYSIS

"Analysis on Effect of Bank Credit and NBFC Credit on GDP"

Regression Model		
Variables		
Dependent Variable:	GDP Current Prices	
Independent Variable/s:	Bank Credit	
	Systematically important non-deposit taking NBFCs and deposit taking NBFCs (net of bank credit)	
Results		
	Bank Credit	NBFC Credit
Coefficient	1.65779	-3.23654
Standard Error	1.77916	4.92358
p-value	0.3825	0.532
Uncentered r-squared	0.215446	
Centred r-squared	-1.580628	

The coefficients and p-values indicate the strength and statistical significance of the relationship between each independent variable and the dependent variable. As our original dataset was non-stationary in nature, using differencing method on Gretl software and using the first differences of these variables, we were able to arrive at stationary variables which help us carry out this regression model. We can observe that the coefficient of Bank Credit is 1.65779, indicating that for every unit increase in Bank Credit, GDP increases by 1.65779 (all other variables held constant). The coefficient of NBFC lending is -3.23654, which means that for every unit increase in NBFC lending, GDP growth slows down by -3.23654 (all other variables held constant), this shows that NBFC credit impacts GDP growth negatively(as per our data). The standard error values of Bank Credit and NBFC credit are 1.77916 and 4.92358 respectively, suggesting that the impact of Bank Credit on GDP is more accurate than NBFC credit's impact on GDP. The p-value of 0.3825 indicates that the relationship between Bank credit and GDP is statistically insignificant at a 5% significance level, showing there's only a 38.25% chance it's due to randomness. The uncentered R-squared value of 0.215446 suggests 21.55% of growth in GDP is affected by changes in Bank Credit and NBFC Credit; however, the centred R-squared value of -1.580628 may indicate multicollinearity exists between independent variables, which might affect interpretation of coefficients. This model implies that while Bank credit is a strong factor influencing GDP, NBFC lending may not be a significant factor influencing it; additionally there could be some degree of multicollinearity between independent variables as NBFCs generally raise funds from their own sources that include issuing bonds/debentures/commercial papers & even raising funds from banks/financial institutions (even deposits). However, bank credit has a stronger impact on GDP than NBFCs since the amount of credit extended by them in the economy is significantly lesser than banks'. The negative value of the centred R squared may suggest that there is a relationship between Bank Credit and NBFC credit. NBFCs mainly rely on their own resources to acquire funds (i.e. bonds, debentures, commercial papers, etc.), as well as through banks and other financial institutions. When banks become stricter with their lending policies, borrowers tend to turn to NBFCs for additional credit needs; however, if NBFCs experience liquidity issues, then borrowers would seek alternative sources of credit from banks.

This model suggests that Bank credit has more of an effect on GDP than NBFC lending, as the amount of credit extended by NBFCs is significantly smaller than that of banks'. It is also possible that there is a certain degree of multicollinearity between the independent variables in this model.

"Analysis on Sectoral Distribution of NBFC Credit"

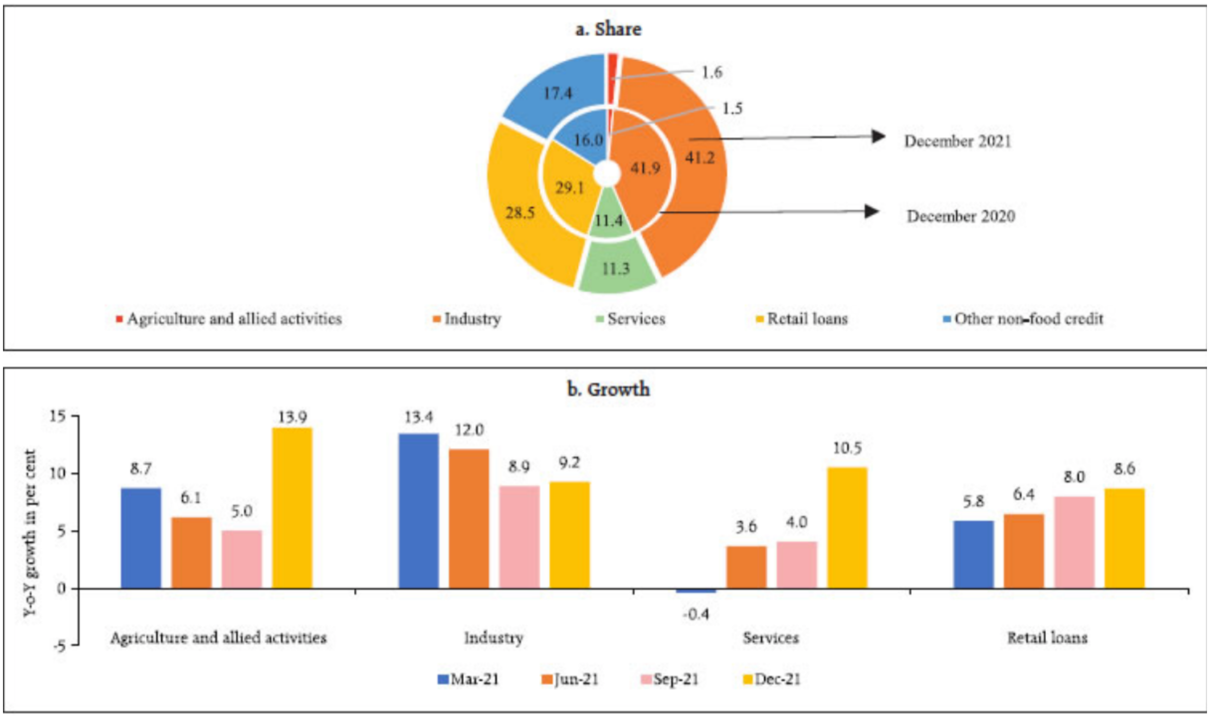

FIGURE 1: SECTORAL DEPLOYMENT OF CREDIT OF NBFCs

Source: RBI Website

Industries in which NBFCs extended loans have changed. Industrial customers made for about 55%–60% of all NBFC lending between FY2016 and FY2019. Credit to consumers and business real estate increased significantly (such as loans for buying items like white goods and cars). From FY2015 to FY2017, NBFCs' growth in infrastructure credit outpaced that of the banking industry, which recorded a decline in lending to infrastructure. 4 Other NBFCs received more than 15% of the NBFC loans. This is an example of more significant, more established NBFCs lending to newer, smaller NBFCs and doing so with higher credit ratings. NBFCs continued to lend the most from their balance sheets to the industrial sector, followed by retail, services, and agriculture. In 2021-22 (up to end-December 2021), the sectoral credit distribution remained unchanged from end-December 2020. All sectors experienced rapid growth due to the base effect and the resumption of economic activity following the end of the pandemic's second wave. The industrial sector, particularly the micro, small, and large industries, which were among the hardest hit by the pandemic, began to recover. Credit growth in the services sector has steadily improved over the last three quarters. Transport operators, trade, and commercial real estate (CRE) increased in the services sector. Credit to farming and related industries continued to perform well, rising by 13.9% in December 2021 and December 2020.

Although NBFCs, in terms of absolute numbers, give out much lesser credit than traditional banks, it can be observed, from the above figure extracted from the RBI Website, that the lending is diversified, just like Bank Lending. NBFC credit has been able to penetrate almost all the major sectors of the economy.

"Comparison Between Sectoral Distribution of Bank Credit and NBFC Credit"

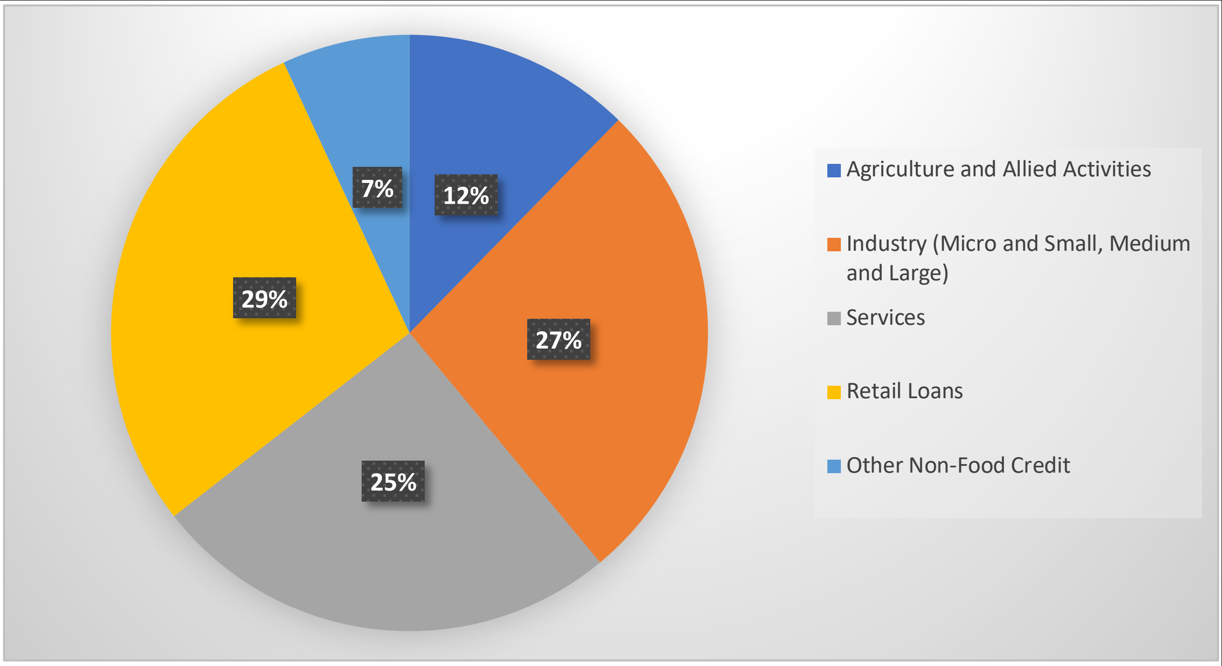

FIGURE 2: SECTORAL DEPLOYMENT OF CREDIT OF BANKS FOR 2021

Source: RBI Websit

Comparing the sectoral distribution of bank and NBFC credit for 2021 shows that NBFCs lend a greater percentage of total credit to industries. On the other hand, banks lend more or less equally to Industry, Services and Retail Loans. Banks lend a greater proportion of credit to agriculture and allied activities. This is due to the requirements by RBI for banks to lend to specific priority sectors. As NBFCs have no such guidelines they must follow, the proportion of credit lent to the agricultural sector by them is the least (It can be inferred that this sector generates the most NPAs in general, as many farmers are often unable to pay back loans. Since NBFCs do not need to comply with priority sector lending requirements, they can focus on getting better returns by lending more loans to other sectors).

Banks lend a more significant proportion of credit to the services sector compared to NBFCs. This implies that the services sector relies more on bank credit than credit by NBFCs. This can be due to the systematic risks posed by NBFCs due to a lack of adequate supervision (there is less trust in the stability of NBFCs in this sector).

Overall, we can observe that NBFC credit has penetrated almost all sectors into which bank credit has penetrated. This implies that NBFCs indeed act complementary to banking services.

CONCLUSION

NBFCs, compared to traditional banking systems, have a much lower penetration level; however, it forms a crucial part of the economy's credit circulation that significantly impacts the country's overall growth in GDP. Despite the impact that NBFCs have, there is quite an understudy about the same. This paper focuses on a detailed interpretation of how the NBFCs have impacted our economy. It encircles the sectoral distribution of credit and an in-depth comparison between traditional banks and NBFCs.

Based on this, with reference from various research journals regarding P2P lending and how shadow banking functions within multiple countries like China, the USA as well as India from noteworthy research scholars, we were able to draw conclusions that further helped our research paper in coming up with the appropriate methodology required to understand further the impact of shadow banking in India and how this affects the GDP of India.

As a result, we went ahead with a methodology focusing on systemically important deposits and non-deposit, taking Non-Banking Financial Companies with the help of secondary data accessible on the RBI website. A multiple linear regression model was chosen as NBFCs are also subjected to risks with GDP as the dependent variable, bank credit to the commercial Sector as the independent variable, furthermore, Deposit and Non-Deposit Taking NBFC Credit to the Retail Sector as the second independent variable.

This helped us conclude that NBFC has quite an impact on the economy. The lending is considerably less than that of banks, and bank credit has a more significant effect on GDP than NBFC lending, giving the traditional banks an upper hand over NBFCs in India.

Concerning how NBFCs impact the sectoral credit of NBFCs, banks lend a more significant percentage of credit to the services industry than NBFCs. This suggests that banks are the primary source of praise for the services industry, unlike NBFCs. This may be a result of the systemic risks NBFCs pose as a result of inadequate oversight. NBFC credit has generally reached almost all the same industries as bank credit. This suggests that NBFCs supplement banking services in some way.

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