

DVARA RESEARCH

FUNCTIONING ON AN UNEVEN KEEL: CAPITAL REGULATION OF CREDIT INTERMEDIARIES IN INDIA

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Abstract

India is a bank-dominated financial system with most of the financial assets belonging to the banking sector. However, it is yet to match the size and outreach of banking sectors as prevailing in various other emerging economies. Even after 20 years of liberalisation, close to 70% of the banking sector assets belong to Public Sector Banks (PSBs). The interesting development, however, has been the rise in the popularity of non-deposit taking NBFCs (NBFC-ND) as sources of credit. While the size of the NBFC sector is still relatively small compared to that of banks, these entities have gained market share and are the predominant source of credit in certain niche segments. In this paper, we discuss the role of non-deposit taking NBFCs in the Indian system as credit intermediaries and the regulatory regime that applies to these entities. Specifically, we reflect on the existing micro-prudential regulations that apply to NBFC-ND and highlight that the current framework violates the principle of institutional neutrality of regulation. With regulatory capital for poorly performing banks set lower than relatively well-performing NBFCs, the current regulatory regime seems imbalanced in its application of prudential requirements. The paper concludes with a set of recommendations to re-design the micro-prudential regulatory framework of non-deposit taking NBFCs in India.

Notes on the Indian Financial System
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1. Introduction

The fundamental role of finance is to enable the efficient allocation of capital in an economy. In a complete market for capital (also known as the Arrow-Debreu complete market) savers and borrowers of capital can find each other effortlessly because they possess complete information on each other's preferences at no cost to transact. In such a market, the present value of any economic activity is well-defined, market parties have homogeneous expectations and instruments are constructed and traded without any cost such that they match the expectations of both parties perfectly. In other words, for any two parties (saver and borrower) participating in a complete market, there exists a unique financial instrument that satisfies the requirements of both parties at any point in time (Arrow 1954). While this is arguably an elegant definition and wondrous end state to aspire for, the possibility of current markets evolving to this perfect state of completeness is extremely ambitious at best.

Early literature in neo-classical economics explains² the existence of financial intermediaries through various paradigms. Most dominant of these paradigms is that which suggests that intermediaries exist because they bridge gaps created by certain market imperfections. As the market moves to eliminate these imperfections, intermediaries would become redundant creating an Arrow-Debreu complete market. In a world with perfect information, savers and borrowers would find and transact with each other at negligible cost. Yet, the information asymmetry in markets creates the use case for an intermediary such as a bank which can be thought of as a coalition of depositors and delegated monitors of the investments made (Diamond 1984) (Leland and Pyle 1977). These intermediaries are useful to bring savers and borrowers together and to create instruments that meet their needs.

(Bhattacharya, Boot and Thakor 1998) classify these intermediary services as asset and liability services. On the liability side, (Diamond and Dybvig 1983) posit the idea by looking at identical risk-averse investors (depositors) who are uncertain about future consumption needs. These investors can invest directly in long-term projects through illiquid instruments. These investments provide high yields to investors who opt to hold risk for longer while they provide relatively lower returns for investors who consume prematurely. An intermediary provides liquidity and risk sharing facilities to manage the risk preferences for all types of investors. On the asset side, the selection of investment projects, the monitoring and the verification of cash flows are services provided by the intermediary which result in the efficient allocation of capital (Leland and Pyle 1977). The intermediary can allocate this capital in diversified investments as well as match the temporal requirements of capital for both the investor and borrower which bilateral non-intermediated contracts often cannot offer (Diamond 1984).

Intermediaries play a role in the financial system in reducing the transaction costs associated with the delivery of financial services. As informational agents and delegated monitors of the investors and liquidity providers for the borrowers, intermediaries play an important role in creating markets for the investor and the borrower. The informational advantage also comes in the form of specialisation in not just knowing the borrowers but also their nature of the business, capital requirements, level of risk inherent to the economic activity of borrower and a relationship with the borrower. This informational advantage allows them to perform specific

² A comprehensive survey of various theories of financial intermediation is provided in (Scholtens and Wensveen 2003)

financial functions for both the investors and borrowers to fulfil their requirements. In other words, intermediaries provide liquidity to the borrower and diversification opportunities to the saver while covering any maturity mismatches between the investors and borrowers (Scholtens and Wensveen 2003). The typical functions can be classified as:

- **Qualitative asset transformations:** the process of transforming liquid capital from savers to invest in ill-liquid securities of the borrower.
- **Risk diversification:** the process of pooling capital to enable savers to invest in multiple assets which they would not have the opportunity to invest in individually.

Robert Merton provides a broader and more comprehensive set of functions for a financial system³. These functions include the creation and management of a payments system, to provide mechanisms for the pooling of funds to undertake projects, to manage uncertainty and to control risk and provide accurate price information. Furthermore, he suggests that financial functions remain stable while the intermediaries and their business models may evolve or dissolve based on their performance (Merton 1995). In a competitive market, intermediaries would have to continuously innovate to provide these functions to succeed thus engaging in the Schumpeterian process of “creative destruction”.

As the size of the intermediary sector grows larger and the economy becomes increasingly dependent on the functions provided by the intermediaries, the management of liquidity and risk, as well as the efficient functioning of the payments system, become pivotal to every economic agent. Thus, it becomes the responsibility of the state to exercise its authority, through delegation of responsibility to regulators, to prevent excessive risk-taking and protecting small and uninformed consumers (Moloney and Payne 2015). The existence of regulation is essential for the functioning of the financial system. It plays an important role in maintaining the stability of the system and protecting customers from adverse outcomes. While regulation and the functioning of regulators account for some direct administrative costs, the most significant regulatory costs are the distortions that are generated from prudential regulation (Scholtens and Wensveen 2003). While regulation plays an important role in maintaining the stability of the system and protecting customers from adverse outcomes, there is a scope for regulatory factors to cause market disruption. Keeping the functional approach posited by Merton, any regulatory design must ensure that the treatment of each participant in the financial system is strictly institution neutral. It must also ensure that regulatory design is entirely determined by the function performed by an intermediary and not by its specific institutional character. It is essential that regulation must be comprehensive so that the domain of the regulator will be the same as the domain of the market to prevent regulatory arbitrage. Historically, regulatory structures have often been designed separately for each type of institution. Entity-centric or institutional regulation is a natural form of regulation because the identification of entities under regulation will be based on the license that the entity acquires. Thus, regulation is informed by corporate governance norms which characteristically centres around the entity and its internal functions (Krug 2013).

Given this context, the objective of this paper is to study the regulatory regime for credit intermediaries in India. We concentrate on questions on the application of prudential norms on non-deposit taking Non-Bank Finance Companies (NBFC-ND) and whether it maintains the

³For the full set of functions, please see Appendix A.

principle of institutional neutrality in the Indian banking system. The paper is structured as follows: Section 2 discusses the structure of banking system in India, which discusses the existence of NBFCs and classifies them based on the nature of the activity as well as on size and liability structure. The section also discusses the role of non-deposit taking NBFCs in the Indian system as credit intermediaries between banks and typically excluded regions and sectors. Section 3 discusses the principle of institution neutrality and its relevance in the case of NBFC regulation. Here, the paper brings to light the performance of NBFC-ND sector and highlighting the arguments for the application of capital regulation on NBFCs and makes a case for why current regulatory regimes fail the principle of institution neutrality. In this section, we also discuss the inability of the NBFC sector to allocate capital efficiently due to market-driven constraints. Section 4 concludes the paper by consolidating our thoughts about nature and inconsistencies in the regulation of NBFC in India.

2. The Structure of the Indian Banking System

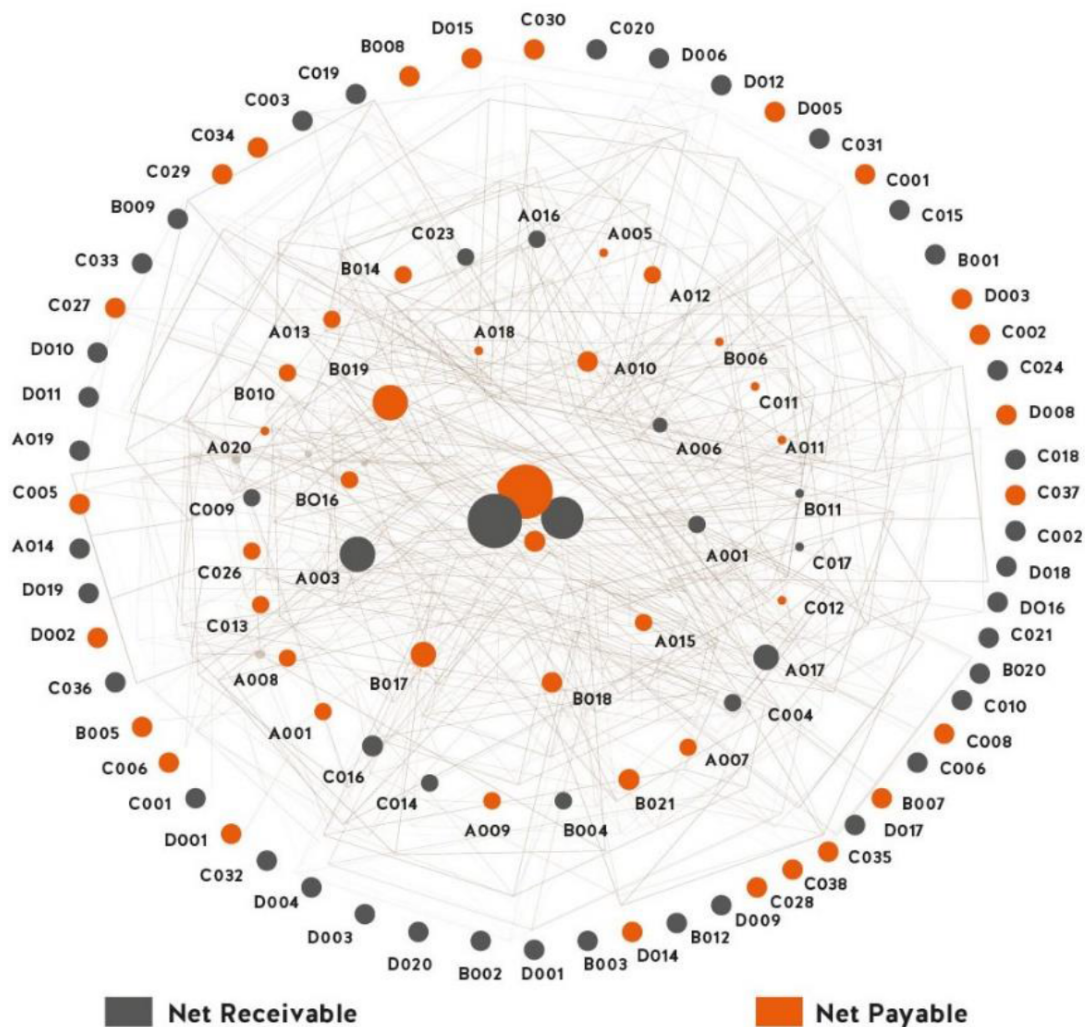
While India is a bank dominated financial system with 64% of financial assets belonging to the banking sector, the size and outreach of the sector ranks poorly in comparison to other emerging economies. Given the existence of a large informal economy and that a large section of population remain underserved by the banking system, there is considerable scope for the expansion of India's banking sector (Reserve Bank of India 2013). Several regulatory interventions facilitated the changes to keep up with the economic environment as well as the functioning of markets in India. The Report of the Narasimham Committee on Financial System (CFS) (Committee on Financial System 1991) proposed that the banking sector should evolve into a system that resembles a core-periphery network structure⁴. The CFS envisaged broadly a structure that consisted of:

- 3 or 4 Large Banks that have an international presence;
- a set of 8 to 10 national banks with a network of branches throughout the country engaged in general or universal banking;
- Local banks whose operations would be confined to specific regions and
- rural banks whose operations would be confined to rural areas.

The committee also identified that NBFCs also have a useful role to play as purveyors of credit across different segments. NBFCs have been able to fill part of the financing gap that banks have been unable to fill. The role envisaged for NBFCs by the committee was to go forth into regions, sectors and customer segments that are too risky for banks to service, and thereby to promote risk-taking by individuals and businesses for the overall economic development of the nation (Basu 2008). Thus, it was necessary to have regulatory design approaches that enabled the development of linkages between banks and NBFCs. The complementarity between the two will allow the efficient channelling of credit at a reduced cost owing to the large network of agents and informational advantages that NBFCs held. Big banks are usually expected to create standardised mass-market financial products. A viable way for these institutions to extend marketing reach and enhance their customer-base is by developing linkages with smaller specialist entities (Dymski 2005). Over the years the existing banking structure in India has evolved with multiple layers to cater to the specific and varied requirements of the economy. Currently, the banking sector consists of 27 public sector banks, 22 private sector banks, 44 foreign banks, 56 regional rural banks, 1,589 urban cooperative banks and 93,550 rural cooperative banks and a total of 11522 non-bank finance companies.

⁴Core-periphery network structures are formed organically in nature. We typically see them occurring in cellular functions, species adaptation, social and market changes. Properties and stability of core-periphery networks are studied (Peter Csermely 2013)

FIGURE 1: Core-Periphery structure of the Banking System



Source: (Reserve Bank of India 2018)

Banking sector credit depth is about 54% (Reserve Bank of India 2018) in India which is quite low in comparison to other economies. The NBFC sector credit depth ratio was even lower at 15.5 per cent in March 2017. These figures provide further cause for concern when considering the evidence that most of the banking sector credit is concentrated in parts of the country and within certain sectors⁵. While banking sector policy has focused efforts on expanding access to credit to rural and excluded regions, individuals and sectors for several decades, the extent of exclusion is still vast. The NBFC sector has grown considerably in size over the past few years accounting for about 9 per cent of the total assets of the financial sector — the third largest segment after scheduled commercial banks or SCBs (64 per cent) and insurance companies (14 per cent) (Reserve Bank of India 2017). The share of NBFCs in the total credit granted by NBFCs as well as Banks rose from 9.5% in 2008 to 15.5% as of March 2017, thus showing the increasing popularity of NBFCs as a source of finance (Reserve Bank of India 2017). This is evident as NBFCs hold a competitive advantage in various segments. While the size of the sector is considerably

⁵A study of credit depth in Tamil Nadu revealed that 52% of all bank credit outstanding in Tamil Nadu was concentrated in the district of Chennai and the credit to GDP ratio for the Chennai district was 561% whereas districts such as Thiruvallur and Vellore were at 15% and 27% respectively. See (Kumar and Baby 2016)

smaller than that of banks in terms of assets, (CRISIL Research 2016) shows us that NBFCs have the majority of market share in segments such as microfinance, durable consumer loans, construction equipment finance and auto finance. NBFC sector is also gaining market share in MSME finance and educational loans where their exposure is currently very limited⁶. India also ranks really low with credit to GDP ratio of less than 10%, much below other comparable markets such as Brazil, China, South Africa and Russia (Reserve Bank of India 2017). Given that a high proportion of socially and economically underprivileged sections of society in India is concentrated in informal economic activities, the growing interlinkages between the formal and informal economies means that the financial system needs to bridge the access gaps to foster economic development (Reserve Bank of India 2013).

NBFCs are particularly crucial for intermediation of risk. While NBFCs are often considered shadow banks by definition (International Monetary Fund 2008), they are considerably different from the shadow banks in other regions. The Reserve Bank of India regulates these entities with specific conduct and prudential regulations. The term 'shadow bank' was coined in 2007, by and large, in the context of US non-bank financial institutions engaging in maturity transformations. The Financial Stability Board (FSB) defined 'shadow banking' as the "credit intermediation involving entities and activities (fully or partially) outside the regular banking system". In a speech delivered in 2014 (Gandhi 2014), the former deputy governor of the RBI defined shadow banking to be credit intermediation (any kind of lending activity where the saver does not lend directly to the borrower, and at least one intermediary is involved), and liquidity transformation (investing in illiquid assets while acquiring funding through more liquid liabilities) & maturity transformation (use of short-term liabilities to fund investment in long-term assets) that take place outside the regulated banking system. Research by Claessens and Ratnovski (Classens and Ratnovski 2012) have described shadow banking using factors that are requisite for the sustenance for shadow banking. It is defined as "as all financial activities, barring traditional banking, which require a private or public backstop (in the form of franchise value of a bank or insurance company, or in the form of a Government guarantee) to operate". NBFCs have been under the regulation for more than 50 years; they serve the economy by playing a complementary and supplementary role to mainstream banks and also in furthering financial inclusion. Under these definitions, it would be amiss to classify NBFCs as shadow banks and thus employ a narrative that broadly classifies the sector as a threat to economic stability.

2.1 Classification of NBFCs

NBFCs are classified by the types of activities they undertake, on the size of their balance sheet and based on their liability structure.

- **Classification based on activity:** The Reserve Bank of India defines a principal business criterion to classify NBFCs based on the primary segment of interest and imposes business restrictions. For example, an Asset Finance Company (AFC) is a financial institution carrying on, as its principal business, financing of physical assets supporting productive/economic activity such as automobiles, tractors, lathe machines, generator sets, earth-moving and material-handling equipment, and general-purpose industrial

⁶See Appendix B for the complete comparison

machines. An AFC's principal business is financing physical assets to support economic activity and its assets and income from financing physical assets must amount to not less than 60% of its total assets and total income respectively. In terms of categorisation based on activity, NBFCs can be classified into 12 types⁷. Loan Companies account for the largest type of NBFCs in the current environment which consists of entities that specialise in a variety of sectors.

TABLE 1: Share of NBFCs classified by activities in total assets of the NBFC sector

| Category | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 |
|----------------|------|------|------|------|------|------|
| Loan Companies | 31.2 | 28.9 | 28.6 | 28.0 | 33.2 | 36.2 |
| NBFC-IFC | 30.8 | 32.1 | 34 | 35.4 | 27.1 | 31.5 |
| AFC | 12.6 | 14.2 | 14.3 | 13.9 | 13.2 | 13.7 |
| IC | 22.3 | 21.4 | 19.7 | 17.7 | 22.4 | 12.6 |
| NBFC-MFI | 1.6 | 1.9 | 1.9 | 2.4 | 2.8 | 3.0 |
| CIC-ND-SI | 1.0 | 1.2 | 1.2 | 2.2 | 0.9 | 2.2 |
| NBFC-Factor | 0.5 | 0.3 | 0.3 | 0.2 | 0.2 | 0.1 |
| IDF-NBFC | 0.0 | 0 | 0.0 | 0.1 | 0.3 | 0.6 |

Source: (Reserve Bank of India 2017)

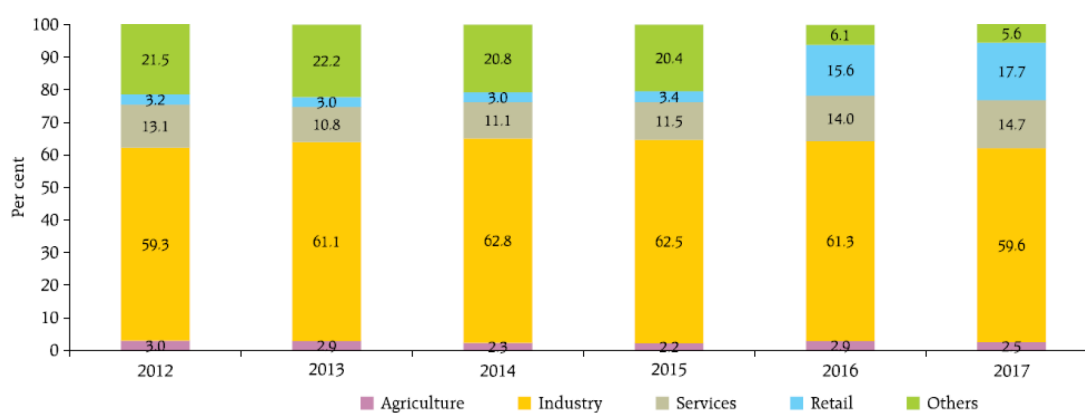
- **Classification based on Liability Structure:** NBFCs are decomposed into deposit-taking NBFC (NBFCs-D) which accept and hold public deposits and non-deposit taking NBFC (NBFCs-ND), which do not accept public deposits. Among NBFCs-ND, those with an asset size of Rs. 500 crores or more are classified as non-deposit taking systemically important NBFCs (NBFCs-ND-SI). In our analysis, we limit our discussions to Non-deposit taking Non-Banking Finance Companies (NBFC-ND)⁸. There are a total of 11,522 NBFCs in India among which there are 220 NBFC-ND-SI as of March 2017 (Reserve Bank of India 2017), 11,126 NBFC-ND and 178 NBFC-D. The NBFC-ND-SI category has about 86% of total NBFC assets and accounts for credit to GDP ratio of 8% (out of the total NBFC sector credit depth ratio of 15.5%).

Within the NBFC-ND-SI category, Infrastructure finance companies account for 40% of total assets. This points to the fact that the NBFC sector consists of a few very large market players that account for most assets. It is currently the case that many small NBFCs are operating in niche segments within the retail sector. A large portion of these assets is flowing towards the commercial sector which has typically been dependent on bank finance in the past. By breaking down the NBFC credit to the Industry sector, we find that credit to Micro, small and medium enterprises accounts for less than 5% of all NBFC credit with rest flowing towards the large enterprises.

⁷A summary of each category and the type of activity they pursue is provided in the Table 5.

⁸This is because deposit-taking NBFC (NBFC-D) licenses (certificate of registration) have not been issued since 1997 and it is no longer seen as a viable function for NBFCs entering the market.

FIGURE 2: Sectoral distribution of credit of NBFC-ND-SI

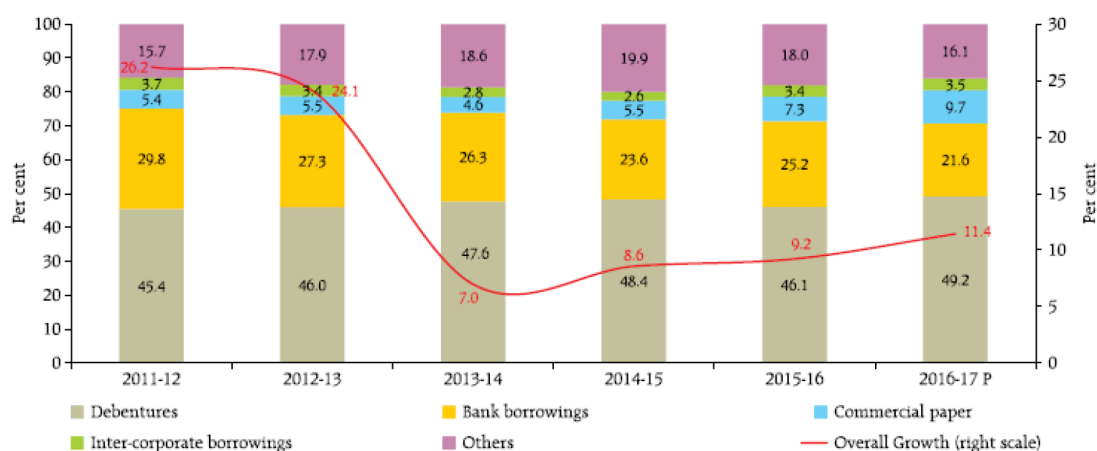


Source: (Reserve Bank of India 2017)

2.2 The Role of NBFC as On-lenders of Credit

International comparisons show that economies with lower per capita income tend to have a smaller range of equity-type claims and a smaller market share of NBFCs relative to banks (Basu 2008). Credit depth in India is relatively low when compared internationally. From a credit intermediation perspective, the NBFCs (NBFC-ND) are the periphery nodes that connect regions, business sectors and population groups that are covered by the traditional (core nodes) banks. As defined in the previous section, NBFC-ND are typically smaller firms that engage in credit intermediation in niche and typically high-risk segments. With the increasing size and relevance of the NBFC sector which accounts for 9% of all financial assets (Reserve Bank of India 2017), the regulation of these entities is at the forefront of banking regulation in India. NBFCs provide services not well suited for banks. While traditional banks offer a range of functions including low-cost credit intermediation, payment services and liquidity services are offerings that are unique to them. In contrast, NBFCs can finance riskier borrowers and thus offer a wider range of risks to investors, which encourages investment and savings, and creates a market for risks (Basu 2008). Through informational advantage and specialisation in niche markets, NBFCs can gain informational advantages over banks in their narrowly-defined areas of operation. At a systemic level, NBFCs offer an avenue for diversification of assets in the financial system that is typically concentrated with lending to corporate sectors. The liability profile of the NBFC-ND-SI sector is dominated by borrowings in the form of banks loans, debentures and commercial paper. While banks have been the primary source of borrowings for NBFCs-ND-SI, they have been increasingly replaced with market-based instruments in recent years. In 2016-17, NBFCs-ND-SI mostly borrowed through debentures, which constituted nearly half of their total borrowings. Borrowing through commercial paper too has increased over time, reflecting the lower cost of raising funds through these instruments. For the NBFC-ND-SI sector, borrowings constituted about 71 per cent of total liabilities in 2017. Over the last 4 years, the average proportion of borrowings to total liabilities is 70%, and the average ratio of lending to total assets is 72%.

FIGURE 3: Liability profile of NBFC-ND-SI



Source: (Reserve Bank of India 2017)

The primary function of NBFC-ND is to provide credit, and these figures suggest that NBFC-ND, even the large ones, are dependent on borrowings to lend to their customers. Table 2 below indicates most of the bank funding is in the form of term loans and debentures to the NBFC-ND-SI. These instruments have a fixed maturity period, unlike the demand liabilities which are the predominant funding source for banks.

TABLE 2: Bank Exposure to NBFC-ND-SI

| Bank group | Term Loans | Working Capital Loans | Debentures | Commercial Paper | Others | Total |
|----------------------|------------|-----------------------|------------|------------------|--------|--------|
| Public Sector Banks | 25.3% | 10.6% | 8.4% | 6.7% | 3.0% | 54.0% |
| Private Sector Banks | 14.6% | 2.7% | 19.1% | 4.1% | 2.1% | 42.6% |
| Foreign Banks | 1.3% | 0.1% | 0.1% | 1.8% | 0.1% | 3.4% |
| Total | 41.2% | 13.4% | 27.6% | 12.6% | 5.1% | 100.0% |

Source: (Reserve Bank of India 2017)

Given that these are not typically demand liabilities, the function of asset transformation becomes simple. NBFC-ND would be required to perform only size transformation as maturity mismatches can be managed quite easily. Being small firms that are typically concentrated in specific geographies and asset classes, it may be unrealistic to expect them to be performing the function of risk diversification of originated assets. Banks, on the other hand, may be better equipped to diversify the risk across geographies and asset classes. However, it would be less profitable for banks to offer smaller ticket size credit as the underlying operating expenses would be high. Hence, it can be argued that NBFC-ND predominantly performs agency functions and on-lend the funds borrowed from banks and other lenders using their business model advantage to reduce transaction costs.

3. Institution Neutrality Principle and the Regulation of NBFCs

Financial regulation must be neutral to achieve an optimal balance between enhancing efficiency, protecting against systemic risks and consumer protection. This means that institutions providing the same or similar services should be subject to identical regulatory requirements. Regulatory neutrality fosters efficiency-enhancing competition between institutions as each service will be provided by the institution which can deliver it at the lowest cost. If differences in regulatory requirements are significant, less regulated institutions may drive out more efficient ones. The Report of the Committee on Financial Sector Reforms (Committee on Financial Sector Reforms 2011) states that “In an efficient financial system, there is a level playing field so that - different institutions compete to provide a function; no institution dominates others because of the privileges it enjoys; competition results in resources being allocated efficiently and society gets the maximum out of its productive resources.”

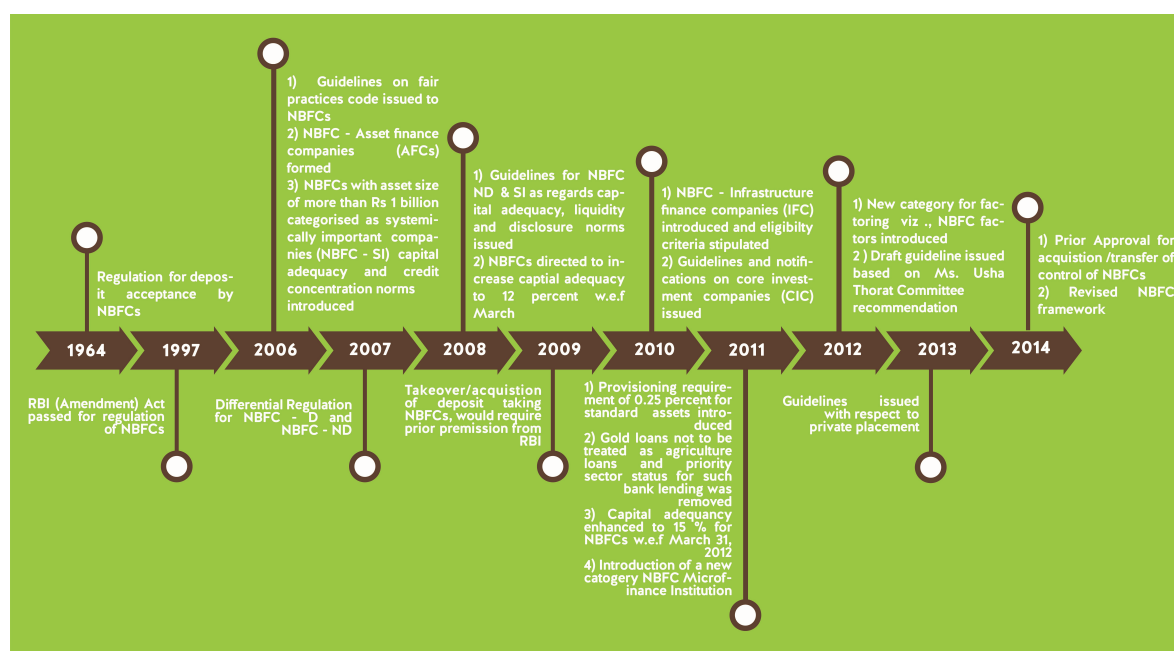
Any design must ensure that the treatment of each participant in the financial system is strictly neutral. Regulation must be entirely determined based on the financial function that is performed and not by the type of institution that performs it. The need for functional regulation to overcome the lack of institutional neutrality is of paramount need in the case of credit intermediation in India. Formal credit intermediation is channelled through scheduled commercial banks (SCB), cooperative banks, small finance banks and Non-banking finance companies (NBFCs) besides societies and trusts. Although these institutions provide the function of credit intermediation, the way some of the micro-prudential rules have been designed so far are inadvertently skewed against smaller institutions and certain institution types. After being subjected to varying standards of prudential regulations in the past decades, there has been recent trends towards harmonising of these regulations across all credit institutions.

The supervision of NBFCs was earlier limited to the prescription of prudential norms and thus the structure of NBFC assets. With the increasing relevance of NBFCs, highlighted by the failure of certain large NBFCs⁹, a more comprehensive and enhanced framework was put into place by the RBI in the years 1996 and 1997¹⁰. In 2006, non-deposit accepting NBFCs were further classified into systemically important NBFCs (NBFC-ND-SI) and non-systemically important NBFCs (NBFC-ND) based on their asset size. Additional prudential norms were imposed on such systemically important NBFCs (NBFC-ND-SI). The chart below provides a chronological view of the evolution of regulation of NBFCs in India (CRISIL Research 2016).

⁹Arguably, the biggest of these failures was that of CRB Capital Markets which was registered as an NBFC and whose license had later been revoked. See *Crb Capital Markets Limited vs Reserve Bank Of India* on 24 January, 2006

¹⁰As the focus of the RBI shifted towards the proper functioning of non-deposit taking NBFC sector, entry capital requirements for a fresh registration was enhanced from 25 lakh INR to 200 lakh INR in 1999. In addition, every NBFC was also required to hold a minimum capital adequacy ratio of 12%.

FIGURE 4: Evolution of Regulation of NBFCs in India



Source: (CRISIL Research 2016)

The RBI conducted a comprehensive review of the NBFC regulations in 2014. The revised regulatory framework (Reserve Bank of India 2014) is designed to focus supervisory attention to those NBFCs which genuinely can pose risks to the financial system and bring operational freedom to smaller NBFCs. More specifically, the revised regulatory framework outlines two classes of regulatory actions, the application of which will depend upon the satisfaction of well-defined conditions.

- **Prudential Regulation:** NBFCs that access public funds, either directly or indirectly through public deposits, commercial papers, debentures, inter-corporate deposits and bank finance, shall be subject to prudential regulation in the form of capital adequacy requirements, minimum net owned funds and exposure norms.
- **Conduct Regulation:** NBFCs that have a customer interface would be subject to conduct of business regulations in the form of governance and oversight requirements such as Fair Practice Codes and anti-money laundering rules.

The revised regulatory framework for NBFCs is an attempt at introducing a functional approach to the application of the regulation. Due to their size, NBFC-ND-SI would be subject to both prudential and conduct regulations regardless of whether they satisfy the above conditions. Due to a large number of entities under the NBFC-ND category, these entities have been subject to light touch regulations in the past. Entities that accept public funds are under limited prudential regulation in the form of a maximum leverage ratio of 7. The entities that interface directly with the consumer would be faced with governance requirements, such as the Fair Practices Code (FPC) and anti-money laundering processes.

There have been various attempts to harmonise regulations across banking and non-banking firms in recent years¹¹. Regulatory attention towards harmonisation of asset classification

¹¹Based on the recommendations of the Thorat Committee and Mor Committee

norms, enabling the raising of money through privately placed debentures of NBFCs, providing the eligibility for external commercial borrowings (either through track I or track III), amending the SARFAESI act to enable easier recovery of assets has reduced the imbalances in regulatory treatment between NBFCs and Banks (See Figure 4: Evolution of Regulation of NBFCs in India). Yet, certain aspects of the current regulatory regime violate the institutional neutrality principle. A typical example of where institutional neutrality fails can be seen if we look at the laws governing income tax. Under section 43D of the income tax act, any interest income received on bad or doubtful debt is chargeable to tax either in the previous year in which it is credited (to the profit and loss account) or the year in which it is received, whichever is earlier. The exemption from this clause is provided to financial institutions such as Scheduled Commercial Banks, Cooperative banks. Banks can claim a deduction on both provisions for bad debts at 7.5% of total income or write off bad debts. In the case of NBFCs though, the provision for such bad or doubtful debts was not allowed as a deduction, but only on actual write off. Since FY 2016-17, such benefit is allowed for NBFCs at 5% of the total income.

As mentioned earlier, the said benefit is not extended to NBFCs in the same manner that they are offered to banks, although NBFCs are subject to the prudential norms and are mandatorily required to defer income in respect of their doubtful non-performing advances in the books of accounts. Under the section 194A of the income tax act, the interest payments to banks are excluded from the Tax Deducted at Source (TDS) while for NBFCs they are not. NBFCs must deduct tax at the source which increases operational hardships while banks are exempt from this.

Another instance of the uneven application of rules among credit intermediaries is to do with the classification of assets as priority sector lending (PSL). In addition to fulfilling the eligibility criteria for PSL, any asset originated or purchased through direct assignment or securitisation should also satisfy an interest rate criterion. The all-inclusive interest charged to the ultimate borrower by the originating entity should not exceed the Base Rate of the investing bank plus 8 per cent per annum. The only exemption here is for assets originated by NBFC-MFIs, given that these assets are risky and would have to be priced at a rate above this limit. This regulation, however, distorts the market for bank funds among NBFCs. NBFCs engaging in businesses where the risk premiums are low would benefit from relatively cheaper funds from banks. As shown in the previous section, bank borrowings constitute a significant portion of funding for NBFCs. While this may apply functionally across all institutions, there is a definite violation of institution neutrality as certain types of NBFCs are benefited more than others.

3.1 Important Aspects in the Design of Regulatory Capital Requirement

While the aspects described above about the tax regulation and priority sector designations are important instances of contraventions of the institutional neutrality principle, the central thesis of this paper rests on the application of micro-prudential capital requirements. The principle is violated in the context of NBFCs and Banks, who as intermediaries perform the function of credit intermediation while holding capital against credit and market risks. These intermediaries act almost like an agent of the bank, performing size transformations and on-lending resources using informational advantages about the borrower. In this context, the

question is about the extent of capital adequacy requirements that should be made applicable for NBFC-ND.

Regulators of financial institutions attempt to minimise the effects of institutional failure to prevent negative spill-over effects on the real economy, by requiring these institutions to set aside capital to protect themselves against unexpected losses. Financial institutions have been required to keep an adequate level of capital by the market, comprising the suppliers of funds (creditors), at levels which are usually above those minimum capital levels prescribed by regulators. The rationale for capital adequacy requirements can be traced by looking at reasons behind why the market and the regulators demand capital. A firm with no capital will become insolvent upon an unexpected loss event, potentially leading to bankruptcy proceedings and consequent losses to some or all its creditors. When the firm is a financial institution, its failure not only causes potential losses for its creditors and shareholders but may also hurt the local economy. The monetary and non-monetary externalities that emerge from the failure of lending institutions, large or small, may provide a theoretical case for the regulation of financial (credit) intuitions of all sizes by the regulator. These are broadly summarised as:

1. Disincentive for excessive risk-taking by shareholders and management

The level of risk-taking by the institution increases as its equity base shrinks¹². Capital requirements assure that the management of the bank holds the incentive to keep it well monitored. Regulators and many academics now seem to accept the proposition that well-conceived capital requirements will generally discourage undue risk-taking (Santos 2001)¹³.

2. Reduce Non-monetary social costs of institutional failure

Regulators might justify requiring higher levels of capital as an effort to align the social benefits and costs of the bank's operations more closely. The argument for capital requirements because of systemic risk concerns becomes rather weak in the context of smaller banks or marginal credit institutions. However, the failure of these institutions can still have monetary and non-monetary effects that are not internalised to the institution and its stakeholders. There exists evidence of non-monetary social costs associated with the failure of these institutions. The failure of a lending institution in an area with relatively low access to formal credit can hurt its borrowers. The abrupt loss in access to credit for low-income households in such areas can hurt the welfare of these households through reduced consumption (food and education) and higher consumption volatility (Sane and Thomas 2013) (Breza and Kinnan 2018). This can have a compounded effect on the funding sources and capital for stable institutions of similar sizes or in the same geographic region because the creditors and potential investors became wary of higher levels of perceived risk.

3. Prevent loss of informational assets

Another important non-monetary social cost is in the loss of informational assets and expertise as a result of the failure of financial institutions. Small credit institutions, whose services are confined to a small geographic region or a particular asset class, develop a

¹²Rochet J.C., 2004, Macroeconomic shocks and banking supervision, *Journal of Financial Stability*, 1, 93-110.

¹³Allen Berger; Richard J. Herring and Giorgio P. Szego, (1995), The role of capital in financial institutions, *Journal of Banking & Finance*, 19, (3-4), 393-430

sound understanding of borrowers and their creditworthiness. They develop information on potential borrowers and borrower projects that allow them to distinguish good loans from ill-advised ones. The failure of such institutions can lead to the dissipation of this wealth of information. Often mid or large sized bank failures result in the regulator-encouraged acquisition by a bigger bank which preserves these informational assets. However, this risk of informational asset losses is elevated if the institution operates in a region with relatively low credit penetration. With the increasing importance of credit bureaus and regulatory directives for credit bureau reporting, this risk of information loss is becoming less prominent (Tarullo 2008).

The establishment of such a minimum standard requires a trade-off between the stabilising effects of maintaining minimum capital levels and the opportunity costs of restricting the use of scarce capital. High levels of capital requirements often come at a cost. Financial institutions face a stability-opportunity cost of capital tradeoff and high market-driven capital requirements are having adverse effects on the performance and growth of such institutions. This could occur if the institution's cost of financing were to increase significantly due to holding more equity capital as opposed to debt. It is important to note here that there is a difference between economic capital and regulatory capital. Financial institutions set aside economic capital to protect themselves against the risk inherent in their books using their own models of assessing risk while regulatory capital is the minimum level of capital prescribed by the regulator for a class of institutions. Economic and regulatory capital is not entirely collinear. In theory, economic capital depends on the intermediation margin and the cost of capital, while the regulatory capital depends on the confidence level set by the regulator. The shareholders and management of an institution would prefer to leverage as much capital as they can to increase lending operations and their capacity to make profits. Hence, there would be a market-determined optimal capital beyond which the cost of additional equity is greater than the anticipated benefit in reduced risk which aids the easy access and low cost of borrowings (Berger and Szego 1995). However, the biggest drawback of leaving capital requirements to be determined by the market is that it does not consider the non-internalized social costs associated with the failure of the institution, the losses over and above those to its shareholders. This would be one of the most fundamental reasons for the regulator to set minimum capital requirements for financial institutions. To precisely define the opportunity cost of capital-stability trade-off from the regulators perspective, we would need to estimate how stable the institution will be with an additional unit of capital (Estrella 1995).

3.2 Uneven Capital Adequacy Regulations for Credit Intermediaries

The revised regulatory framework applies capital adequacy requirements to NBFC-ND-SIs as well as to those NBFC-NDs that hold public funds. Here, public funds are not the same as public deposits. Public funds¹⁴ include public deposits, inter-corporate deposits, bank finance, and all funds received, whether directly or indirectly from outside sources. These funds raised could be through the issue of Commercial Papers, debentures etc.

It should be noted that in this section, NBFC-NDs would include NBFC-ND-SIs as well. While the non-systemically important NBFC-NDs do not have a capital adequacy requirement, the

¹⁴See FAQs on NBFCs at rbi.org.in.

maximum leverage restriction of 7 imposed on them is approximately the same as 15% of capital to total assets (non-risk-weighted). By comparison, the Financial Sector Legislative Reform Commission (FSLRC) uses a clear functional test for the application of prudential regulation, which is based on whether an institution holds public deposits. All the regulator has to test is whether an entity is taking deposits callable at par (Bhagwati, et al. 2016). Banks may have unsophisticated consumers on both sides of the balance sheet, and therefore the regulations may have to address the consumer protection issues on both sides of the balance sheet. NBFC-NDs, on the other hand, have unsophisticated consumers only on the borrower side. There are no depositors in an NBFC in the same sense as banks. FSLRC recommends that financial firms which do not do this activity should not be regulated like banks.

It was noted earlier that one of the reasons behind the prominence of capital requirements regulation was that it proved to be the most flexible tool to monitor and protect banks against failure as the breadth of their operations grew bigger and more complex. In India, the scale of complexity of operations of NBFC-NDs does play a role in the higher capital requirements. The Report of the RBI working group on issues and concerns in the NBFC Sector (Reserve Bank of India 2011) claimed that ***“CRAR for NBFCs is higher at 15 per cent compared to 9 percent for banks taking into account their size, concentration risk and lighter touch regulation in other areas”***. With their primary function being lending, there is an over-arching question of whether these high capital requirements could be substituted (partially) by using other regulatory and supervisory tools and suitable regulatory support that could protect these institutions from failure. This would enhance the possibility of growth for NBFCs and would help these institutions optimise their capital structure and therefore their stability-opportunity trade-off¹⁵.

The following table gives the capital requirements for various types of financial institutions. Apart from Banks and NBFC-Ds, all institutions in the table below are pure credit intermediaries who do not accept public deposits. The arguments given above may warrant the existence of some capital adequacy requirements for NBFC-NDs. However, the application of differential limits for intermediaries performing the same function violates the institution neutrality principle. Banks pose a much more significant threat to the system because of the collection of public deposits, and yet, banks are subjected to lower capital requirements than entities that perform on-lending functions. This violates the principle of functional regulation.

¹⁵Stress tests conducted by the RBI for the NBFC sector also suggests that the sector is well capitalised for any shocks.

TABLE 3: Types of FIs and capital requirements

| Institutions | CRAR (in %) | Tier-1 CRAR (in %) | Leverage ratio |
|------------------|-------------|--------------------|----------------|
| Banks | 9 | 6 | 4.5 |
| NBFC-D | 15 | 10 | - |
| NBFC-ND-SI | 15 | 10 | - |
| NBFC-MFI | 15 | Should be greater | 7 |
| NBFC-MFI | 15 | than Tier-2 CRAR | 7 |
| Other NBFC-ND | - | - | 7 |
| IFC | 15 | 10 | - |
| Gold Loan - NBFC | 15 | 12 | 7 |
| HFC | 12 | Should be greater | - |
| HFC | 12 | than Tier-2 CRAR | - |

Capital regulation has traditionally relied on risk-weighting schemes to account for differing levels of portfolio credit risk. Interestingly, it is currently the case that NBFC-ND-SIs, banks and other credit intermediaries are prescribed different risk weights for similar asset classes. These differences limit the comparability of capital adequacy across institutions, and in some cases poses significant challenges for the latter in its use of capital. Since the existence of collateral, or any other credit risk mitigant, would reduce the Loss Given Default (LGD) of any exposure¹⁶, it is only appropriate that risk weights for loan categories are differentiated based on the existence of credit risk mitigants, and the comfort offered by those mitigants. Under the Standardised approach¹⁷, adopted for banks, differential risk weights are assigned to different asset classes. For example educational loans, consumer credit loans, MSME loans with and without credit enhancements, gold loans etc. are categorised as different asset classes, and each is assigned a risk-weight.

On the other hand, NBFC-ND-SIs are assigned a risk weight of 100% for all retail asset classes¹⁸. Under the Internal Ratings Based approach, the RBI currently requires banks¹⁹ to account for the existence of these mitigants, for them to factor into the risk weighting function. However, the existence of credit enhancements such as guarantees, that reduce the credit risk, are not accounted for. Differences in risk weights provide an opportunity for banks to select their assets to minimise their regulatory capital level, while NBFCs have a 100% capital charge on every

¹⁶Credit risk mitigants increase recovery rate. This reduces Loss Given Default(LGD), which in turn, reduces Unexpected Loss

¹⁷Housing Finance Companies, under the purview of NHB, also have differential risk weights for housing loans.

¹⁸Master Circular — “Systemically Important Non-Banking Financial (Non-Deposit Accepting or Holding) Companies Prudential Norms (Reserve Bank) Directions, 2015”

¹⁹Based on guidelines in RBI Notification: Capital Adequacy - The Internal Ratings Based (IRB) Approach to Calculate Capital Requirement for Credit Risk (<https://rbidocs.rbi.org.in/rdocs/Content/PDFs/WEB100911.pdf>)

retail asset. Regulatory consistency in risk weighting is essential. The differences in capital requirements between banks and NBFC-ND-SIs are explained by the inherent differences in the nature of the assets held, as well as the concentration of assets in a particular asset class. The allocation of risk weights for the calculation of capital adequacy should take into consideration the credit risk associated with the different asset classes, regardless of the type of entity originating the risk.

1. Increase in intermediation costs

Setting different regulatory capital requirements for institutions that perform the same function signals lower regulatory confidence in a class of institutions to the market, which in turn increases their economic capital requirements. There exists evidence to suggest that the cost of such high market-driven capital requirements results in additional costs for the customer through higher lending rates (Hellmann, Murdock and Stiglitz 2000). Santomero & Watson gave a guiding principle for setting the capital adequacy requirements in 1977 (Santomero and Watson 1977). It was recommended that capital requirements should be in such a way that the marginal returns from keeping adequate capital that could be used to mitigate risks (marginal returns on stability) should be equal to the marginal opportunity cost of this capital. In other words, the social benefits of reduced risk of failure should be equal to the cost of reduced financial intermediation resulting from higher capital requirements. However, it is quite difficult to quantify the marginal non-internalized social costs or the systemic risk concerns that emanate from institution failure. In fact, there is still a lot of doubt regarding the accuracy in quantifying the risks faced by banks and financial institutions internally (Hansen and Peter 2013). For these reasons, it is important to consider how the market determines the adequate levels of capital for an institution. Creditors lending to financial institutions expect that a certain amount of capital is set aside to provide security against default in the event of failure. The amount of capital held as a contingency should ideally play a role in determining the interest charged by the creditor, to optimise his risk-adjusted return. Hence, the market (creditors) determines the amount of capital that institutions should hold in reserve to lend to them at a given price. For example, if a FI held enough capital in reserve such that the probability of failure is 0.1%, the approximate level associated with an "A" rating from a credit rating agency, then credit to such an institution would be priced as an A-rated bond would be. As the risk of failure increases, the cost of credit also increases. Evidence from a regulatory impact assessment of the Credit Risk Directive IV in the EU suggests that increased capital requirements have an impact, albeit modest, on the cost of capital and interest rates in the short run (Policy Department - Economic and Scientific Policy 2011).

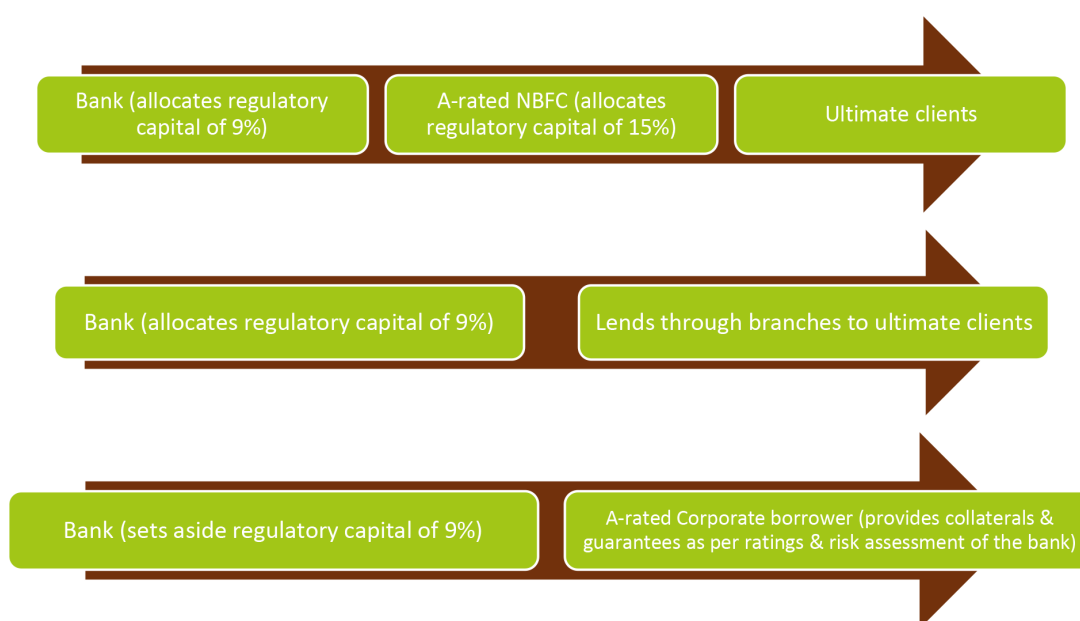
2. Inefficient allocation of capital in the system

The major function of NBFC-NDs is the on-lending of funds from large banks to small high-risk consumer segments. Bank lending to NBFCs accounts for a 100% risk weight, in which case banks must keep aside capital against the credit risk of the NBFC-NDs, as well as provisions for the same. The existence of capital adequacy requirements for NBFC-NDs creates redundancies, eventually leading to the "pancaking" of capital, where both institutions set aside capital for the same quantum of risk²⁰. This is a classic case of regulation distorting the efficient allocation of capital. A bank lending to a retail borrower

²⁰See Figure 5 for a visual representation

will set aside Rs. 9 of capital for every Rs. 100 it lends, whereas NBFC-ND-SI lending may account for up to Rs. 24 of capital set aside across the system. This is not an argument to say NBFC-ND-SIs should not have any capital adequacy requirements. Relaxing capital adequacy norms would create severe moral hazard problems and significant levels of risk-taking behaviour, which may prove to be disastrous. On the other hand, it is also important to understand that NBFC-NDs do not take public deposits (as per the FSLRC definition stated above); hence arguments typically made for capital regulations over and above that of banks do not hold. The higher levels of capital adequacy offer protection to the creditors of NBFCs, usually banks or institutional lenders, who should be capable of risk-based pricing of debt to NBFC-ND-SIs and negotiating a reasonable level of capital cushions based on the rating and performance of the entity. While it may be argued that the capital set aside by the bank is against the credit risk of the NBFC itself, this is already captured by the institutional rating of the NBFC, which is used in determining the capital that the bank allocates. Also, in cases where the credit-worthiness of the end-borrower is superior to that of the NBFC, there is every incentive for the bank to use the NBFC to originate for the bank rather than to lend to the NBFC directly. Also, this arrangement would be cheaper for the NBFC than if it was seeking funding based on its credit-worthiness.

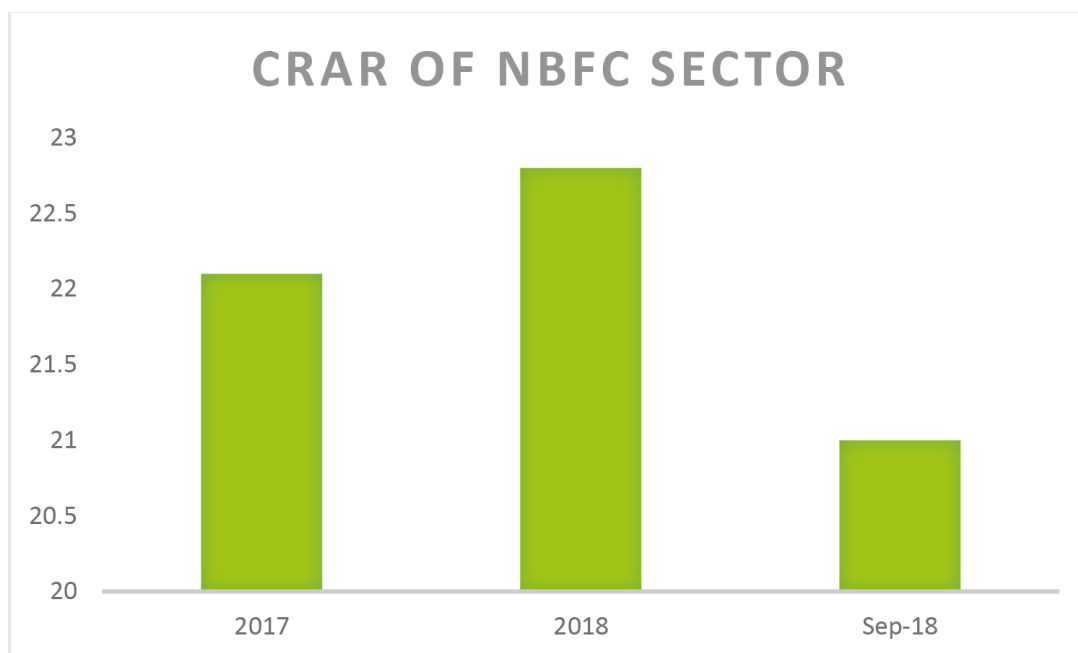
FIGURE 5: “Pancaking” of Capital



3. **Negative risk signals and lack of diversification avenues leading to excess capitalisation**
Regulatory capital requirements are higher for NBFCs than for banks. From the table 3, we can see that NBFCs are required to keep a capital adequacy ratio of 15%. However, it is currently the case that the CRAR of the NBFC sector is close to 23% - much higher than the regulatory requirement. There could be several factors that could lead NBFCs to hold such high levels of capital. One possible reason could be that creditors “demand” such high levels of capital to ensure that the firm is sufficiently capitalised, to protect against the risks of failure. The risks of NBFC failure may also be enhanced by the fact that the regulator does not offer protection against socio-political risk or any regulatory safety nets for NBFCs. The higher capital requirements for NBFCs may also have an indirect

effect on the perception of creditors regarding the relatively higher risk of failure even though the quality of assets of NBFCs are in aggregate better than that of banks²¹.

FIGURE 6: CRAR of the NBFC Sector



Source: (Reserve Bank of India 2018)

This excess capitalisation of NBFCs may be due to inadequate access to diversified funding sources. NBFCs rely on wholesale funding while banks have access to a diversified set of sources to meet their funding needs, such as retail and wholesale deposits and debt capital markets. Since retail demand deposit-taking is from unsophisticated individuals and small investors, and this has significant implications for the larger economy in the event of a systemic run on banks, banks additionally enjoy Lender of Last Resort (LOLR) facility from the RBI, as well as have access to inter-bank borrowing lines. Deposits constituted about 30% of banks' funding sources and given that the banking sector forms a significant part of the funding for NBFCs, they are prone to sudden stops in funding flows from banks. Many a time these have been because of new regulatory requirements. For instance, a stipulation permitting RIDF deposits of banks to be considered as indirect agriculture under priority sector lending targets can have the effect of reducing the flow of funds to NBFCs. The lack of regulatory support, as well as relatively higher capital adequacy requirements for NBFCs, may play a significant role in the market-driven capital requirements for the NBFC Sector²². Banks have held a capital adequacy ratio of 12-13%, just above the regulatory minimum of 9%. This difference between regulatory capital requirements and the market-driven capital is significantly large in the case of NBFCs than in the case of Banks. While the CRAR of the NBFC sector²³ is gradually reducing, it is still quite high at 23% when the prescribed regulatory capital is 15%.

²¹See Figure 7 for a comparison of NPA between Banks and NBFCs

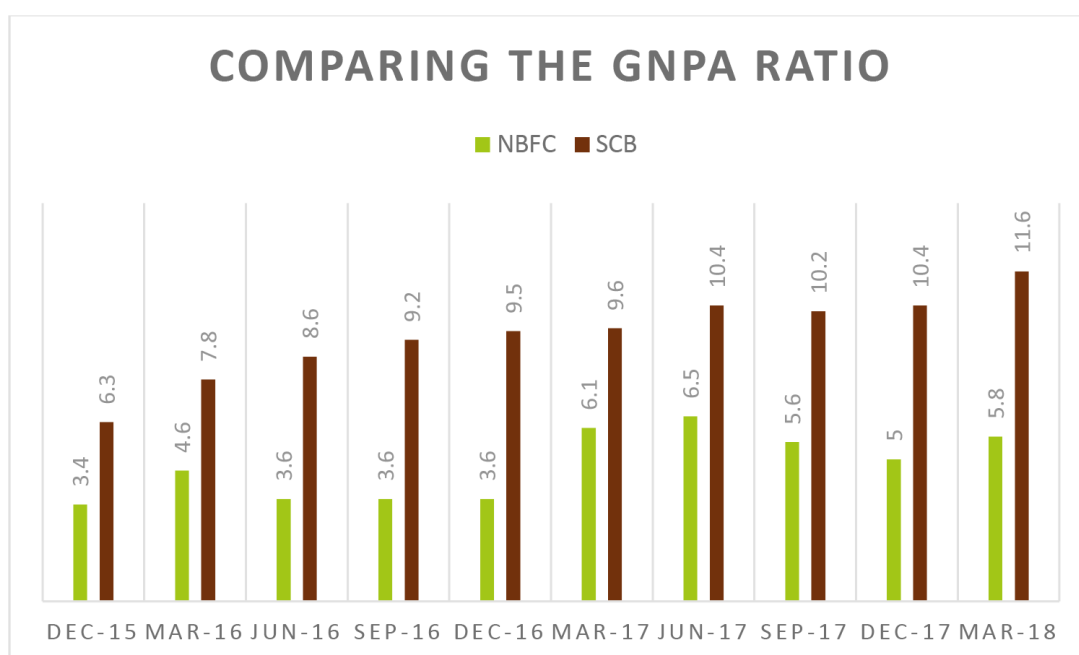
²²Ratings Criteria for finance companies, CRISIL: https://www.crisil.com/Ratings/BusiAreaMethodology/MethodologyDocs/criteria_finance.pdf

²³See Figure 6 for the CRAR position of different categories of NBFCs

The higher levels of economic capital which are much in excess of regulatory capital, driven by the perception of “riskiness” of NBFCs, is quite intriguing. Let us consider two aspects of NBFC-ND-SI and banks in this context:

1. **Asset Quality:** The asset quality considerations suggest that the NBFC sector has been much more resilient in times of stress, which is quite evident from the statistics in the Financial Stability Report provided by the Reserve Bank of India (Reserve Bank of India 2018). The Gross NPA as a percentage of total advances suggests that the asset quality of banks is much more of a concern than that of NBFCs, which has been the case for more than 5 years. The results of stress tests conducted by the regulator also suggest that the NBFC-ND-SI sector is more resilient than the banking sector in withstanding shocks. Results from a reverse stress test show that it requires a shock of 4.15 standard deviations (SD) to bring down the system-level CRAR of banks to 9%, whereas a 3 SD shock to NBFC-ND-SI sector would bring the CRAR of the entire NBFC sector to approximately 15%. However, bank-level stress test results show that 18 banks having a share of 31.7% of SCBs’ total assets might fail to maintain the required CRAR under a shock of a 2 SD increase in GNPA ratio. PSBs were found to be severely impacted, with the CRAR of 16 of the 21 PSBs likely to go down whereas only 8% of the NBFC-ND-SI sector would go below the regulatory minimum under the same scenario (Reserve Bank of India 2018).

FIGURE 7: Comparing the GNPA ratio of NBFCs and SCBs



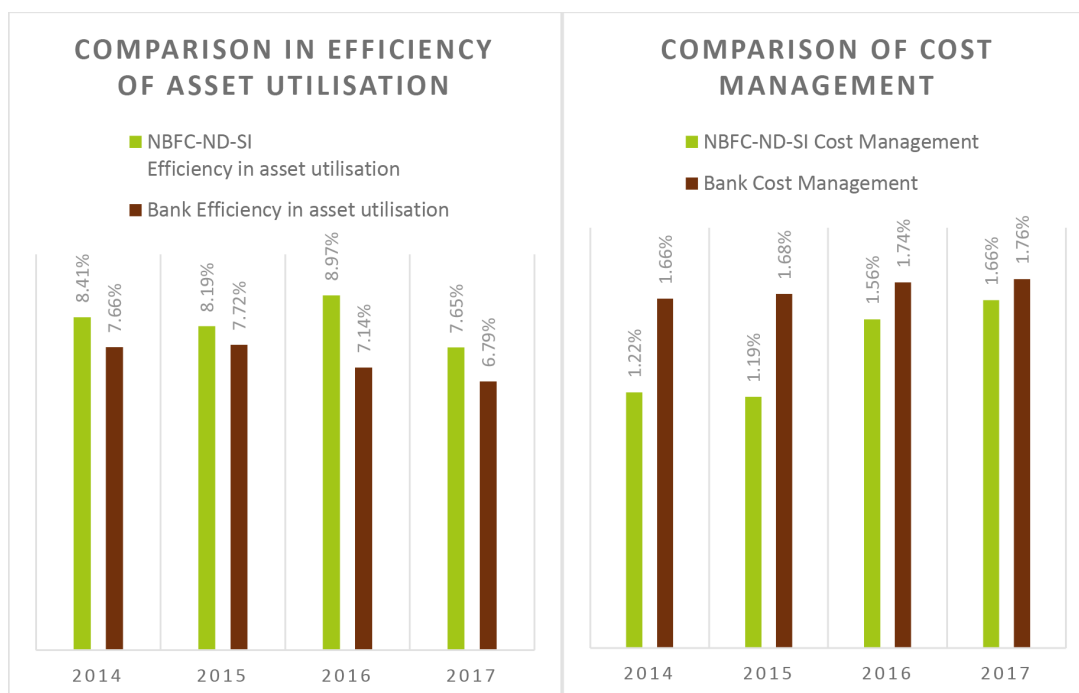
Source: (Reserve Bank of India 2018)

2. **Profitability Indicators:** A DuPont analysis decomposes the drivers of profitability between efficiency and increased leverage²⁴. We use the DuPont analysis to understand and compare the efficiency in the utilisation of assets and cost management of banks

²⁴The profitability metric of return on equity (RoE) is a composite of the return on assets (RoA) (also a qualifier of financial performance) and an indicator of the debt-equity composition in the banks’ funding structure — leverage ratio or the equity multiplier. RoA, in turn, is the sum total of the quality of asset utilisation and cost management by the banks. These two form the basis of the DuPont identity.

and NBFCs. More conventionally, we also use DuPont analysis to look at the drivers of profitability for both types of institutions.

FIGURE 8: DuPont Analysis comparing Banks and NBFC-ND-SI



Source: (Reserve Bank of India 2017)

The DuPont Identity: Return of Equity \equiv Return on Assets \times Leverage

Decomposing this identity, we get

$$\frac{NetProfit}{AverageEquity} = \frac{NetProfit}{AverageAssets} \times \frac{AverageAssets}{AverageEquity} \quad (1)$$

$$\frac{NetProfit}{AverageAssets} = \frac{NetIncome - ProvisionsandContingencies}{AverageAssets} - \frac{OperatingExpenses}{AverageAssets} \quad (2)$$

The first and the second terms in decomposition (2) stand for asset utilisation and cost management, respectively. Applying this to compare NBFC-ND-SI and Banks, we can see that NBFCs are capable of earning more income per unit of an asset than banks at a lesser cost. This suggests that NBFCs are a cost-effective channel to provide credit.

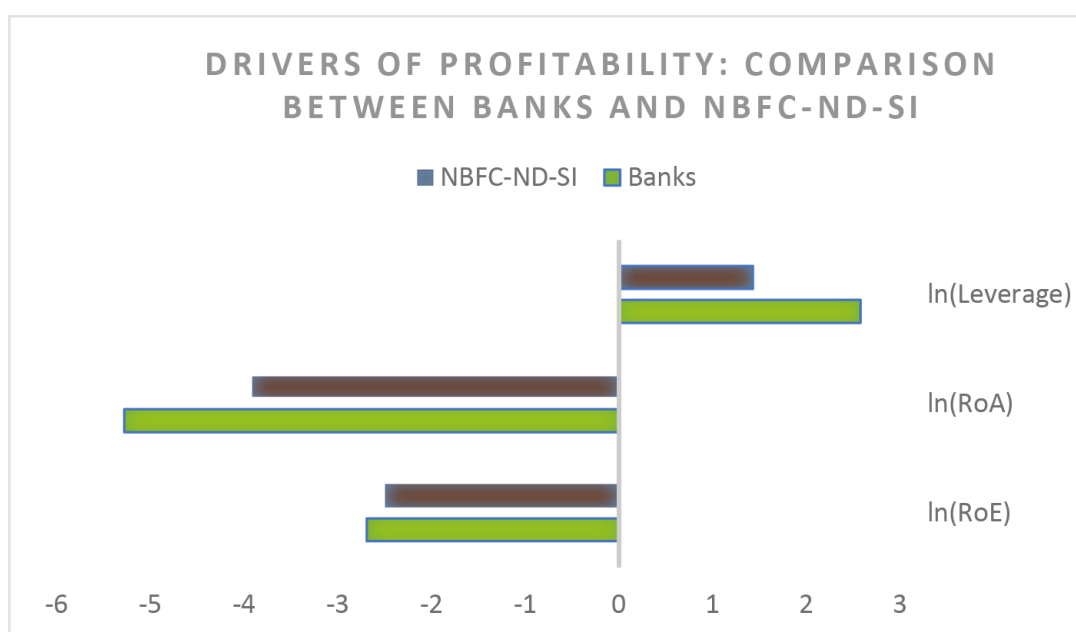
The cost of debt remains the same across all channels because it is only the source bank, whether private or public, that is raising this money in the form of retail deposits. The specific channel chosen by the bank does not change the cost at which it raises money. (Sahasranaman and George 2013), measuring the differences in total cost of delivery of credit to a rural customer directly through Public and Private Sector bank branches and through an NBFC-MFI, find there are significant differences. Delivering an Rs. 10,000 loan directly through public and

private branches would cost 42% and 37% of loan amount respectively. While it would cost 17% if channelled through an NBFC-MFI. Total cost comprises of the cost of debt, the cost of equity and the transaction costs. This conforms to the theory that suggests intermediaries exist because of the lower transaction costs. The interesting part in this analysis is that lending through the NBFC channel not only lowers the transaction costs for banks, but it also brings down the costs of equity to cover unexpected losses as well. Using the equation of the DuPont decomposition, we can look at what drives the return on equity for banks and NBFCs. The table below shows us the average values of the return on equity, return on assets and leverage of SCBs and NBFCs. NBFC-ND-SI are profitable because they generate more income per unit of an asset as shown in the previous analysis. The striking point in this analysis is that the predominant driver of profitability in banks is their ability and willingness to leverage capital whereas NBFCs have depended on asset utilisation efficiency to get better profits. The leverage ratio for the NBFC sector has been about 4 for the last 4 years whereas it has been between 11 and 12 for banks.

TABLE 4: Average Financial Ratios of Banks and NBFC-ND-SI between 2014-2017

| Ratios | Banks | NBFC-ND-SI |
|----------|-------|------------|
| RoE | 6.8% | 8.3% |
| RoA | 0.5% | 2.0% |
| Leverage | 13.16 | 4.18 |

FIGURE 9: Dupont Analysis²⁵



Source: Statistical Tables related to Banking in India, Reserve Bank of India

²⁵The figure 9 represents the log values of the elements of the DuPont identity. The log transformation allow us to read the identity in additive terms.

4. Recommendations and Conclusions

To conclude, a paper by Allen and Santomero published in 1997 (F. A. Santomero 1997) emphasises the role of financial intermediaries as reducers of market imperfections. This perspective is supported by the reduction of transaction costs and asymmetric information driven either by the increase in competition or by the advances in cost-effective technology. In India, NBFCs play the role of facilitators of risk transfer and deal with the challenges of retail finance requirements by using their proximity to the consumer and their specialisation in asset classes. Hence, it is imperative to promote the growth of NBFCs by removing redundant capital requirements.

It is important to note that the results of this analysis do not suggest that NBFCs should have relaxed regulatory and supervisory requirements. On the contrary, the underlying motivation is to direct these efforts more efficiently. As shown by the results in the above section, addressing solvency concerns only through capital regulation of the NBFC sector, is an inefficient approach to addressing the risks posed by these entities. While the idea of high concentration risk motivates these concerns, it must be understood that these concerns are a product of the design of regulations themselves. NBFC licenses and asset composition regulations are based on a “principal business criteria” requirement, which stipulates that a significant portion of assets is to be of a particular asset class. For example, NBFC Factors are those that fulfil the principal business criteria, i.e. whose financial assets in the factoring business constitute at least 75 percent of its total assets.

Additionally, the income derived from the factoring business is to be not less than 75 percent of its gross income. Companies that are not registered as an NBFC-Factor cannot conduct the business of factoring. Similarly, NBFCs that are not registered as NBFC-MFI shall not have more than 10% of their total assets as loans meeting “Qualifying Assets” criteria, as defined in the directions (Reserve Bank of India n.d.).

Recommendation 1: The many categories of Non-Deposit taking NBFCs should be subsumed under two categories: Loan companies and Core-Investment Companies. The principle business criteria must be eliminated, therefore allowing a loan company to participate in all asset classes.

This was also one of the recommendations of the Mor Committee on Comprehensive Financial Services for Small Businesses and Low-Income Households (Committee on Comprehensive Financial Services for Small Businesses and Low Income Households 2014). The Committee also recommended that the benefits that were previously available to specific NBFC types, such as tax benefits, bank limits, and priority sector benefits, should continue to be available even after consolidation, on a pro-rata asset basis. The current (and any future) consumer protection regulations and fair practice codes that apply to NBFCs should also be extended to banks under this harmonisation.

TABLE 5: Classification of NBFCs based on Activity

| Type of NBFC | Activity |
|--|--|
| 1. Asset Finance Company (AFC) | Financing of physical assets supporting productive/economic activities including automobiles, tractors and generators. |
| 2. Loan Company | Providing of finance whether by making loans or advances or otherwise for any activity other than its own but does not include an asset finance company. |
| 3. Investment Company | Acquiring securities for purpose of selling. |
| 4. NBFC- Infrastructure Finance Company (NBFC-IFC) | Providing infrastructure loans. |
| 5. NBFC-Systemically Important Core Investment Company (CIC-ND-SI) | Acquiring shares and securities for investment mainly in equity market. |
| 6. Infrastructure Debt Fund-NBFC (IDF-NBFC) | For facilitating flow of long-term debt into infrastructure projects. |
| 7. NBFC-Micro Finance Institution (NBFC-MFI) | Extending credit to economically disadvantaged groups. |
| 8. NBFC-Factor | Undertaking the business of acquiring receivables of an assignor or extending loans against the security interest of the receivables at a discount. |
| 9. NBFC- Non-Operative Financial Holding Company (NOFHC) | For permitting promoters / promoter groups to set up a new bank. |
| 10. Mortgage Guarantee Company (MGC) | Undertaking mortgage guarantee business. |
| 11. NBFC-Account Aggregator (NBFC-AA) | Collecting and providing information about a customer's financial assets in a consolidated, organised and retrievable manner to the customer or others or others as specified by the customer. |
| 12. NBFC-Peer to Peer Lending Platform (NBFC-P2P) | Providing an online platform to bring lenders and borrowers together to help mobilise funds. |

Source: (Reserve Bank of India 2017)

The revised regulatory framework for NBFCs defined a clear and comprehensive framework of classification of NBFCs into three categories: NBFC-D, NBFC-ND-SI and NBFC-ND. The rationale for regulation of these NBFCs would depend on the acceptance of “public funds”, consumer interface, and size of the institution. Systemically important NBFC-NDs are those with asset size more than Rs. 500 crores. The application of a capital adequacy framework only for systemically important NBFCs is progressive, given that smaller institutions do not have to go through these compliance requirements. As a result, the prudential regulation and supervisory attention gain can be focussed more on institutions whose solvency may have a systemic impact. However, the definition of systemically important being limited to just the size of the institutions is not robust. The BASEL III framework suggests the use of a combination of four indicators for the identification of domestic systemic importance: size, interconnectedness, substitutability and complexity (Reserve Bank of India 2014). A similar multiple criterion-based identification of systemically important NBFC-ND must be employed.

Recommendation 2: The identification of systemically important NBFC-NDs must be based on size, interconnectedness, substitutability and complexity. Further, the capital adequacy requirements for NBFC-ND-SIs must be harmonised with that of banks at 9%, along with a standardised risk-weighting framework for both banks and NBFC-ND-SIs.

As stated in the report of the Financial Sector Legislative Reforms Committee (FSLRC) (Bhagwati, et al. 2016), “micro-prudential regulation will diminish, but not eliminate, the failure of financial firms. A specialised resolution capability is required, which swiftly and efficiently winds down stressed financial firms, and protects the interests of small customers”. In the case of NBFC-NDs, micro-prudential regulation exists to protect the interests of institutional creditors (typically banks). The Insolvency and Bankruptcy Code (Ministry of Law and Justice 2016) excludes ‘financial service providers’ from the definition of ‘corporate person’, and so financial service providers cannot be made to undergo corporate insolvency resolution processes under the provisions of the code. It would be more efficient to replace the higher capital adequacy requirements with a resolution framework for NBFC-NDs.

Recommendation 3: As prescribed by the FSLRC, a resolution mechanism for NBFCs would provide a pathway for exit or resolution of these firms.

Along with the pathways for exit or resolution of NBFC-NDs, there is also a need to create active pathways for the growth of large and well-functioning NBFC-ND-SIs. India has a relatively low credit-GDP ratio of about 52% (Reserve Bank of India 2018), with the regional disparity of credit to GDP being extremely high (CRISIL 2018).

The table in Appendix C provides an analysis of the maturity profile of assets and liabilities of Scheduled Commercial Banks and NBFC-ND-SIs²⁶. Over the last year, there have been significant concerns over the liquidity positions of NBFC-ND-SIs. While the maturity profile of NBFC-ND-SIs is relatively better than that of banks, we must note that banks have regulations that govern their liquidity position through the recently implemented Liquidity Coverage Ratio (LCR), as well as existing tools such as Statutory Liquidity Ratio (SLR) and Cash Reserve Ratio (CRR) regimes. While the analysis in the previous section suggests that the banking sector forms a significant part of the funding to NBFCs, banks are free to stop their sudden funding flows. To address this concern, the regulator can allow for the creation of a pathway that allows large NBFC-ND-SIs to avail access to the lender of last resort function of the Reserve Bank of India. The Mor Committee (Committee on Comprehensive Financial Services for Small Businesses and Low Income Households 2014) envisaged the creation of these licensees to function like universal banks on their asset side, but with access only to wholesale deposits (of minimum Rs. 5 crores) and other wholesale funding instruments. This would ensure that the system is protected against liquidity shocks to NBFC-ND-SIs, as well as provide an incentivised pathway for large entities to graduate towards full-service banking eventually.

Recommendation 4: There should be a clear regulatory roadmap for large NBFC-ND-SIs to transition to Wholesale Banks so that there are clear avenues for these entities to protect themselves against funding shocks.

The Mor Committee (Committee on Comprehensive Financial Services for Small Businesses and Low Income Households 2014) also suggests these wholesale banks would have a low net owned funds (NOF) requirement of Rs. 50-100 crore. Based on the nature of assets originated, the Committee proposes two categories of specialised banking institutions: wholesale consumer banks and wholesale investment banks. The wholesale consumer bank would originate retail loans, while investment bank would originate infrastructure and/or corporate loans.

²⁶Data representing NBFC-ND-SI here is from the financial statements of 33 listed NBFC-ND-SI aggregated and analysed in November 2018. Also, assets of banks here refer only to Loans and Advances and Investments and liabilities cover only borrowings and deposits of all SCBs (including small banks)

In April 2017, the Reserve Bank of India released a consultation paper on wholesale long term finance (WLTF) banks (Reserve Bank of India 2017). However, the design discussed in the consultation paper is quite limiting, with entry capital requirements of Rs. 1000 crores, which is double that of universal banks, and restrictions that disallow retail lending (George and Srinivas 2018).

References

- Arrow, K. Debreu, G. 1954. "Existence of an equilibrium for a competitive economy." *Econometrica* 265-290.
- Bank of International Settlements. 2011. "BASEL III: A global regulatory framework for more resilient banks and banking systems."
- Basu, Kaushik. 2008. *The Oxford Companion to Economics in India*. Oxford University Press.
- Berger, Allen, and Richard Herring| Giorgio Szego. 1995. "The Role of Capital in Financial Institutions." *Center for Financial Institutions Working Papers* (Wharton School Center for Financial Institutions, University of Pennsylvania).
- Bhagwati, Jaimini, Shuheb Khan, and Ramakrishna Reddy Bogathi. 2016. "The report of Financial Sector Legislative Reforms Commission (FSLRC) & Financial Sector Regulation in India."
- Bhattacharya, Supdito, Arnoud Boot, and Anjan Thakor. 1998. "The Economics of Bank Regulation." *Journal of Money, Credit and Banking* (Ohio State University Press) 30 (No. 4): 745-770.
- Boston Consulting Group. 2015. "NBFC 2.0: Enormous Potential in Non Bank Finance and ways to make it happen." http://image-src.bcg.com/Enormous-Potential-Non-Bank-Finance-Dec-2015-India_tcm21-28746.pdf.
- Breza, Emily, and Cynthia Kinnan. 2018. "Measuring the average impacts of credit." *National Bureau of Economic Research* (24329).
- Classens, Stijn, and Lev Ratnovski. 2012. "What is Shadow Banking?" *Shadow Banking: Economics and Policy*, 12(12) 1-36.
- Committee on Comprehensive Financial Services for Small Businesses and Low Income Households. 2014. *Report of the Committee on Comprehensive Financial Services for Small Businesses and Low Income Households*. Reserve Bank of India.
- Committee on Financial Sector Reforms. 2011. *Report of the Committee on Financial Sector Reforms*. Reserve Bank of India.
- Committee on Financial System. 1991. *Report of the Committee on Financial System*. Reserve Bank of India.
- CRISIL. 2018. *CRISIL Inclusix Report*. CRISIL.
- CRISIL Research. 2016. *NBFC Overview*. CRISIL.
- CRISIL Research. 2016. *NBFC Overview*. CRISIL.
- Diamond. 1984. "Financial intermediation and delegated monitoring." *Review of Economic Studies* 393-414.

- Diamond, D.W., and P. Dybvig. 1983. "Bank runs, deposit insurance and liquidity." *Journal of Political Economy* 401-419.
- Dymski, Gary A. 2005. "Financial Globalization, Social Exclusion and Financial Crisis." *International Review of Applied Economics Vol 19* (4): 439-457.
- Estrella, Arturo. 1995. "A Prolegomenon to Future Capital Requirements." <https://www.newyorkfed.org/research/epr/95v01n2/9507estr.html>.
- Europe Economics. 2009. *Study on Credit Intermediaries*. DG Internal Market and Services. http://ec.europa.eu/internal_market/finservices-retail/docs/credit/credit_intermediaries_report_en.pdf.
- Gandhi, R. 2014. "Danger posed by shadow banking systems to the global financial system - The Indian case." *International Conference on Governance & Development: Views from G20 Countries*. Mumbai: Bank of International Settlements.
- George, Deepti, and Madhu Srinivas. 2018. "Is it time to introduce wholesale banks in India?" *LiveMint*, 26 October.
- Hansen, and Lars peter. 2013. "Challenges in Identifying Measuring Systemic Risk." *Working Paper* (Becker Friedman Institute for Research in Economics).
- Hellmann, Murdock, and Stiglitz. 2000. "Liberalization, Moral Hazard in Banking, and Prudential Regulation: Are Capital Requirements Enough?" *The American Economic Review*, 90 (1).
- International Monetary Fund. 2008. *System of National Accounts*. International Monetary Fund.
- Krug, Anita K. 2013. "ESCAPING ENTITY-CENTRISM IN FINANCIAL SERVICES REGULATION." *Columbia Law Review* pp. 2039-2115.
- Kumar, Nishanth, and Irene Baby. 2016. "Determining Optimal Credit Allocation at a District Level." *Working Paper Series* (Dvara Research).
- Leland, Hyne E., and David H. Pyle. 1977. "Informational Asymmetries, Financial Structure and Financial Intermediation." *The Journal of Finance* (Blackwell Publishing for the American Finance Association) 32 (No. 2): 371-387.
- Merton, Robert C. 1995. "A Functional Perspective of Financial Intermediation." *Financial Management* 24 (No. 2): 23-41.
- Ministry of Law and Justice. 2016. *The Insolvency and Bankruptcy Code*. The Gazette of India.
- Moloney, Niamh, and Eilis Ferran and Jennifer Payne. 2015. *The Oxford Handbook of Financial Regulation*. Oxford University Press.
- Peter Csermely, Andras London, Ling-Yun Wu, Brian Uzzi. 2013. "Structure and dynamics of core/periphery networks." *Journal of Complex Networks* 93-123.

- Policy Department - Economic and Scientific Policy. 2011. *Impact Assessment of different measures under capital adequacy in CRD IV*. Directorate General for Internal Policies, European Parliament.
- Reserve Bank of India. 2013. *Banking Structure in India - The Way Forward*. Discussion Paper, Mumbai: Reserve Bank of India.
- Reserve Bank of India. 2017. *Discussion Paper on 'Wholesale & Long-Term Finance Banks'*. Reserve Bank of India.
- Reserve Bank of India. n.d. *FAQs on Non-Bank Finance Companies - Micro Finance Institutions*. Reserve Bank of India.
- Reserve Bank of India. 2018. *Financial Stability Report*. Reserve Bank of India.
- Reserve Bank of India. 2014. *Framework for Dealing with Domestic Systemically Important Banks (D-SIBs)*. Reserve Bank of India.
- Reserve Bank of India. 2018. "Master Direction - Priority Sector Lending - Targets and Classifications."
- Reserve Bank of India. 2017. "Non-Banking Finance Companies in India's Financial Landscape." *RBI Bulletin*, October.
- Reserve Bank of India. 1998. *Report of the Committee on Banking Sector Reforms*. Reserve Bank of India.
- Reserve Bank of India. 2014. *Report of the Committee on Comprehensive Financial Services for Small Enterprises and Low-Income Households and* . Reserve Bank of India.
- Reserve Bank of India. 2018. *Report on Trend and Progress of Banking in India*. Reserve Bank of India.
- Reserve Bank of India. 2017b. *Report on Trends and Progress of Banking in India*. Reserve Bank of India.
- Reserve Bank of India. 2014. *Revised Regulatory Framework for NBFCs*. Reserve Bank of India.
- Reserve Bank of India. 2011. *Working Group on the Issues and Concerns in the NBFC Sector*. Reserve Bank of India. <https://www.rbi.org.in/scripts/PublicationReportDetails.aspx?UrlPage=&ID=647#A4>.
- Sahasranaman, Anand, and Deepti George. 2013. "The Cost of Delivering Rural Credit in India." *Notes on financial system* (Dvara Research).
- Sane, Renuka, and Susan Thomas. 2013. "The real cost of credit constraints: Evidence from micro-finance." (Indira Gandhi Institute of Development Research).
- Santomero, Anthony, and Ronald Watson. 1977. "Determining an Optimal Standard for Banking Industry." *The Journal of Finance* (American Finance Association) 32 (4).

- Santomero, Franklin Allen and Anthony M. 1997. "The theory of financial intermediation." *Journal of Banking & Finance*, 21(11-12) 1461-1485.
- Santos. 2001. "Bank Capital Regulation Contemporary Banking theory: a review of literature." (Bank of International Settlements).
- Scholtens, Bert, and Dick Van Wensveen. 2003. *The theory of financial intermediation: an essay on what it does (not) explain*. SUERF Studies.
- Tarullo, Daniel K. 2008. *Banking on BASEL: the future of international financial regulation*. Washington DC: Peterson Institute for International Economics.

Appendix A

Arrow-Debreu Completeness Conditions (Arrow 1954): In the neoclassical model of a perfect market, e.g. the perfect market for capital, or the Arrow-Debreu world, the following criteria usually must be met:

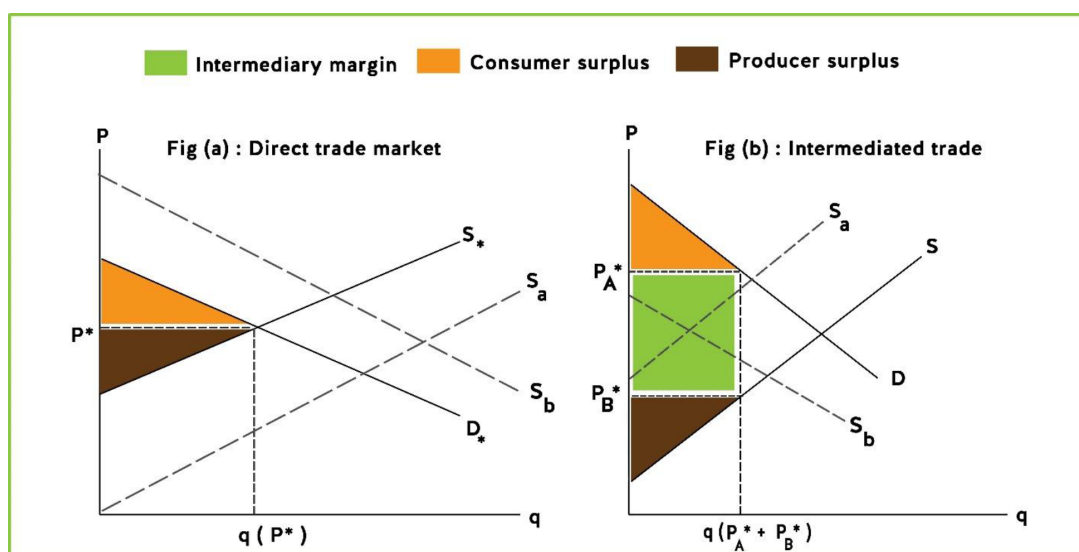
1. no individual party on the market can influence prices;
2. conditions for borrowing/lending are equal for all parties under equal circumstances;
3. there are no discriminatory taxes;
4. the absence of scale and scope economies;
5. all financial titles are homogeneous, divisible and tradable;
6. there are no information costs, no transaction costs and no insolvency costs;
7. all market parties have *ex-ante* and *ex-post* immediate and full information on all factors and events relevant for the (future) value of the traded financial instruments.

Appendix B

Entry of intermediary increase the welfare of savers and borrowers unambiguously

The figure below describes a situation when the consumer and producer surpluses from intermediation are larger than those that arise in the direct market due to the significant decrease in transaction costs caused by the intermediary activity. In this situation, the exact values of p_A^* and p_B^* depend on the elasticity of demand and the elasticity of supply. The consumers' and producers' surpluses increase as a result of intermediation activity. Scope for such an intermediary to enter the market, and the consequent positive effects on welfare are unambiguous: the aggregate surplus always increases, and an increase of surplus may also be observed at the individual consumer and supplier level (Europe Economics 2009).

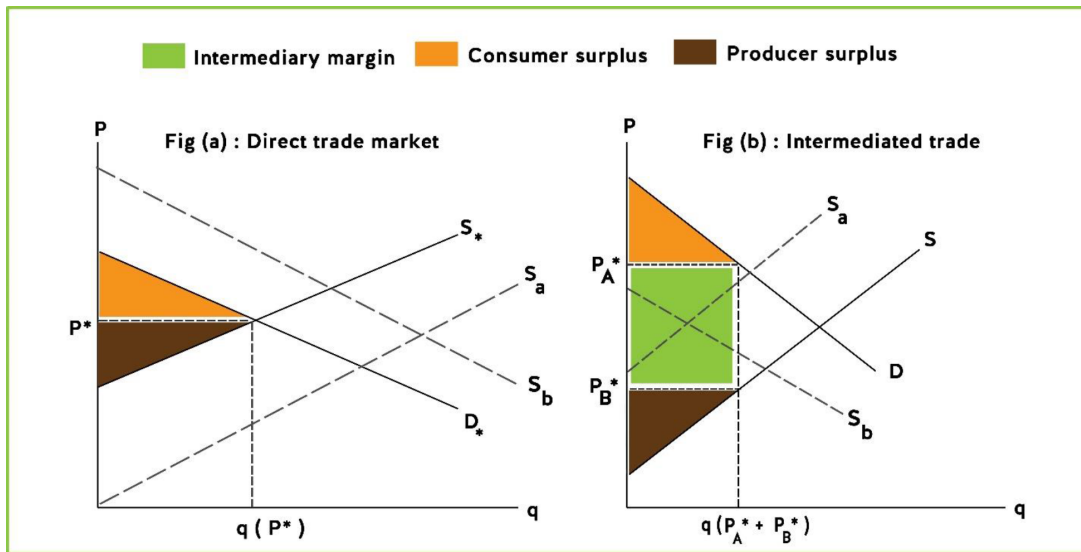
FIGURE 10: Equilibrium in an Intermediated Market



A Competitive market for intermediaries further increases surplus for savers and borrowers.

An increase in downstream or upstream competition leads to higher consumer and producer surpluses. This is because intermediaries compete more aggressively to attract consumers, they charge them less, eventually ending up with more customers. Intermediaries also may innovate to serve customers better instead of reducing the costs. In order to satisfy the larger demand, they must also ensure access to a larger supply of credit products, and therefore reduce the costs of the intermediation activity to the lenders.

FIGURE 11: Intermediaries with Competition



Appendix C

TABLE 6: *Maturity Profile of Assets and Liabilities of Banks and NBFC-ND-SI*

| Institution | Item | Upto 1 Year | Over 1 Year & upto 3 Years | Over 3 Years & upto 5 Years | Over 5 Years |
|--------------------|---------------------------|------------------------|---|--|---------------------|
| NBFC-ND-SI | % of Assets Maturing | 21% | 19% | 15% | 45 |
| | % of Liabilities Maturing | 26% | 33% | 17% | 24% |
| Banks | % of Assets Maturing | 33% | 24% | 12% | 31% |
| | % of Liabilities Maturing | 46% | 23% | 10% | 21% |