

# The Growth and Performance of Affordable Housing Finance Lenders in India

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## Abstract

Anecdotal studies have highlighted the recent rapid growth of so-called affordable housing finance companies across India. These new lenders are reported to be using a high-touch approach common to microfinance to provide mortgages to households that are newer to credit, have irregular incomes, and live in smaller urban centers. As there is no specific license type for these lenders, this paper uses detailed credit bureau data to identify which lenders could be tagged as affordable housing finance companies. Using several classification techniques, the paper then assesses their growth and performance. The results vindicate the anecdotal studies and show that this nascent sector grew at an average annual compound growth rate of 27–32 percent between 2016 and 2020. Affordable housing finance

companies have been able to lend to more marginalized borrowers who are newer to credit and do so in a markedly different way than other lenders. Delinquencies at affordable housing finance companies are higher only for smaller loans, while risk-adjusted lending spreads are higher for all affordable housing finance company loan sizes. This suggests that, thus far, the approach is profitable and sustainable. Looking forward, this lending model could be useful for other countries to explore given the incipient success in India, although there are crucial capital market and institutional features that are unique to India. The paper also discusses demand-side subsidies for mortgages in India and identifies opportunities to improve the targeting of the program.

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## 1 Introduction

Microfinance emerged as a viable business lending technology that leveraged the principles of traditional bank lending and adapted it for small-value loans in developing countries in the 1990s. Over the past decade, India has witnessed the growth of so-called ‘affordable housing finance companies’ (AHFC) that purportedly offer mortgages to those on the fringes of the formal housing finance market. There have been several anecdotal studies describing this new type of housing finance lender in terms of understanding their credit underwriting processes, typical borrower profiles, and the geographic footprint. However, there is less research on the quantitative growth and performance—through a banking lens—of these lenders. This paper seeks to fill that void by leveraging a unique credit reporting data set. This is undertaken in two steps. First, through a classification exercise of tagging lenders and housing loans into several categories, including a proposed AHFC lender and loan characteristic classification types. Second, using these derived AHFC classification types, assessing the quantitative mortgage portfolio characteristics. This assessment is both in terms of AHFC borrower profiles as well as the growth and performance of AHFC mortgage portfolios.

The implications of this new type of lender are critical for housing finance policies in other developing countries. Having a sound understanding of the actual growth and performance of AHFC lenders in India can help design better housing finance policies to lend to those beyond the reach of traditional housing finance institutions in developing countries, provided there is evidence of incipient AHFC success. This is especially important given the large housing needs across the developing world and the market imperfections in many housing finance markets in these countries (Chiquier and Lea 2009, McKinsey Global Institute 2014).

The paper's main finding is that the anecdotal evidence of high and sustainable growth of AHFC lenders is confirmed through the available data. These AHFC loans are: (a) smaller than loans from private lenders in Tier 1 cities (or in megacities), (b) more concentrated in smaller towns and rural areas, and (c) more likely than other mortgages to cater to those with irregular income and those that are new to credit. Although AHFC interest rates are higher, the performance of these loans has been better for larger AHFC loans and slightly worse for smaller AHFC loans compared to the rest of the mortgage portfolio. Given these positive results, it is important to appreciate the unique institutional and regulatory context in which AHFC have emerged in India—

the role of local capital market development, the National Housing Bank (NHB), and specialized state-sponsored retail housing finance institutions. These latter institutions witnessed rapid regulatory reform starting in the late 1980s, as the Indian economy increasingly embraced market mechanisms. The paper's annex provides a detailed history for those readers interested in understanding the precise policy context in India where AHFC have emerged. The institutional and political economy narrative in the annex allows one to evaluate whether other developing countries could also benefit from similar reforms.

The paper also leverages the credit bureau data to undertake a light assessment of the current mortgage interest rate subsidy program in India, to the extent that credit bureau data allows an assessment of a recent large government housing program. The current mortgage interest rate subsidy program is called the Pradhan Mantri Awas Yojana Credit Linked Subsidy Scheme (PMAY-CLSS) and its main mortgage vertical is an up-front subsidy of the net present value of a portion of the monthly mortgage payments, paid to accredited housing finance lenders for eligible borrowers. The paper concludes that the targeting, risk management, and the rationing of public funding can be strengthened for the PMAY-CLSS. It would be prudent to tighten the eligibility requirements for the PMAY-CLSS and instill processes to ensure compliance is high with regard to any eligibility requirements.

The structure of this paper is as follows: section 2 sketches a brief literature review of housing and types of housing lenders in India, section 3 provides an overview of the data available, section 4 describes loan and borrower characteristics from the credit bureau, section 5 presents the approach to classifying AHFC, section 6 assesses AHFC performance, section 7 undertakes a light assessment of PMAY-CLSS housing loans in the credit bureau data, and section 8 concludes. The annex provides an overview of the history of housing policies in India with a focus on the regulatory environment for housing finance.

## **2 Literature Review**

Since independence, the history of housing policy (including housing finance) in India has evolved through several paradigms with distinct policy stances. It is widely acknowledged that there have been three distinct paradigms of housing policy in India, starting from the government being a provider, to an enabler, and presently to a facilitator of housing (Ghosh 2018).

Although one can synthesize the history of housing policy in India into distinct paradigms, housing in India encompasses several sectors and overlapping ministerial policies: starting from land policy to the provision of water and sanitation, to government housing policy through housing ministries, to financial sector regulation through financial institutions, and then the institutional setup of housing finance lenders and finally taxation. Therefore, housing policy has not been shaped by a single ministry or institution over time, but rather through a patchwork of programs and policies. A detailed annex covers this history to provide a framework to understand the growth of AHFC within the panorama of housing policies over time.

The overarching setup of housing finance in India is dual—scheduled commercial banks (SCB) and Housing Finance Companies (HFC).<sup>1</sup> The latter were seeded from the government’s capitalization of a central housing bank—NHB—and HFC have contributed to the development of local currency capital markets with securities that have long tenors. This is unusual for a country with India’s GDP, as most local currency capital markets in developing countries have yield curves that do not extend to long tenor securities. There is also extensive regulatory scaffolding for housing finance in India, including direct lending requirements and other deposit mandates. The annex provides further details on these parameters. Given the parallels between microfinance and AHFC, it is apt to cover some of the literature on microfinance.

## **2.1 Microfinance and Micro-Mortgages**

At the end of the last century, microfinance emerged as a viable new business model to lend small sums of money to low- to middle-income individuals in developing countries (Armendáriz and Morduch 2010, Morduch 1999). Although it has been found that credit constraints are not the only binding constraint for such borrowers to significantly improve their incomes, microfinance has now been established as a viable and profitable business model (or lending technology) in environments where traditional credit information infrastructures are less prevalent (Banerjee, Duflo, et al. 2015, Banerjee, Breza, et al. 2017). The success of microfinance consumer and small business lending has also spurred interest in housing microfinance or micro-mortgages.

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<sup>1</sup> AHFC are not an established type of lender yet. In the classification exercise in section 5 AHFC are part of the HFC grouping.

The canonical loan product offered by microfinance institutions is fairly standard around the developing world—a loan averaging US\$500 at an interest rate around 25 percent for a term of 1–2 years (MIX Market 2021), where the higher interest rate is due to a high-touch underwriting and monitoring to increase repayment probabilities.

Related to microfinance, the term ‘housing microfinance’ most commonly refers to loans for incremental housing construction offered by these same microfinance lenders, with similar loan characteristics to the canonical microfinance product.<sup>2</sup> The uptake of housing microfinance products has been extensive around the world, but the portfolio percentages are still small (Ferguson 2003, Ferguson 2004). This may be because microfinance lending is often fungible. Further, as many potential microfinance borrowers do not either own land or have the property rights to the land they use, microfinance lenders are not able to increase housing microfinance loan amounts as outright mortgages are not feasible. Finally, as most microfinance institutions around the world are non-deposit taking and obtain their funding wholesale in short-term markets in foreign currency, they are not able to offer long term loans in local currency. See the annex on the history of housing finance in India for a perspective on how HFC are funded and the role of the government in these local currency capital markets in India.

On the other hand, reference to micro-mortgage has a longer history of use in the literature and popular press, although its definition is more ambiguous. The use of the term micro-mortgage likely originated in the US in reference to small dollar value mortgages to underserved populations (Sarkar and McKee 2004, McCargo, et al. 2018). In the US, a micro-mortgage is often defined as a mortgage of less than either US\$70,000 or US\$100,000. That is roughly a third of the value of the average mortgage in the US. The term micro-mortgage has been used in the literature for developing countries, for example in Uganda and in Myanmar, though it is not clear how this differs from regular mortgages in these two geographies.<sup>3</sup>

## **2.2 Affordable Housing Finance and Affordable Housing Finance Companies**

In India, what is increasingly referred to as ‘affordable housing finance’ is a slightly different concept from either housing microfinance or micro-mortgages as defined above.

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<sup>2</sup> Examples of incremental housing construction for a dwelling are roof replacement or improving water and sanitation facilities.

<sup>3</sup> See Mayer (2011) and Asian Development Bank (2019).

Although the exact provenance of the term is not clear, a recent study defines it as lending to borrowers who: do not have reliable income documentation, are located in peri-urban areas, use the loan for the construction of a dwelling on an owned parcel of land, and borrow an average of INR 930,000 for construction (Das, Karamchandani and Thuard 2018). This loan size represents two-thirds of the average new mortgage across the whole of India (INR 1,500,000) and two-fifths of the average mortgage size in Tier 1 cities (INR 2,500,000). Das, Karamchandani, and Thuard (2018) trace the beginning of this sector to a pilot study in Gujarat in 2006:

In 2006...the Monitor Group...began to build a new low-income housing industry that would enable thousands of low-income households to own homes in urban India. They were supported by the National Housing Bank, the World Bank Group, the Michael & Susan Dell Foundation, the Rockefeller Foundation, and the United Kingdom's Department for International Development. The genesis of this effort lay in the fact that low-income households, who often lived in rented accommodation, could afford to buy small houses at market prices, but no one was building these houses or financing such customers. The team started with creating supply. Developers intrinsically knew this demand existed, and the inclusive markets team showed them the profitability of serving this market. A few banks and housing finance companies agreed to fund customers in pilot projects, but it was still difficult to convince developers to create supply. After reaching out to more than 600 developers in three cities, the team finally convinced a smaller developer in Ahmedabad. They helped him select a site, refine layouts and pricing, and even sign-up customers in local factories. The 450-unit project was sold out on the day of launch, with a waiting list of 9,000 customers. This led to other developers in Ahmedabad starting low-income projects. The Monitor Inclusive Markets team leveraged this success to get similar projects started in other markets and to get a broader range of players involved - from new participants like Jerry Rao, who founded VBHC, to established corporations like the Mahindra Group.<sup>4</sup>

Anecdotal evidence points to new lenders, AHFC, that have emerged to serve this new market segment. A recent study discusses the lending technologies that AHFC have introduced focusing on outreach, underwriting, and risk management (Bhanot, et al. 2020). Overall, these studies claim that AHFC have been able to go further down-market by developing their own credit profiles of borrowers through diary cash log methods, undertaking more frequent monitoring, and assessing total household income (rather than just individual income).

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<sup>4</sup> Das, Karamchandani and Thuard (2018), p 2.

There have been some attempts to calibrate the size of these new lenders. Das, Karamchandani, and Thuard (2018) estimate that AHFC “have grown from a combined loan book of INR 10.9 billion in March 2013 to over INR 270 billion in December 2017, at an average loan ticket size of INR 930,000 and have facilitated the ownership of more than 230,000 affordable homes.”<sup>5</sup> It is instructive to consider a few vignettes of these households to better understand the context. Broadly, borrowers are more marginal loan candidates and mortgages are smaller than what legacy lenders would normally underwrite in India. Table 1 shows two stylized AHFC borrowers in urban areas. Although monthly debt service ratios are high for these stylized families by international standards, this is often justified by the use of a lower bound estimate of a household’s irregular monthly income and the preference for saving in real estate in India, where savings in other assets is much less common (Badarinza, Balasubramaniam and Ramadorai 2016).

**Table 1: AHFC Borrower Vignettes**

<b>Family I</b>	<b>Family II</b>
<ul style="list-style-type: none"> <li>• Nuclear family of four, the husband is a painting contractor, and the wife is a homemaker.</li> <li>• Monthly household income: ~INR 24,000</li> <li>• Constructing a 1,000 square foot ground+1 story house on a 600 square foot plot               <ul style="list-style-type: none"> <li>– The plot is located on non-agricultural land, and cost INR 540,000 (already owned by family)</li> <li>– Construction cost: INR 1,050,000</li> </ul> </li> </ul> <p>Loan product used:</p> <ul style="list-style-type: none"> <li>• INR 740,000 construction loan (70% LTV)</li> <li>• Tenor: 15 years</li> <li>• Interest rate: 13.95%</li> <li>• Monthly payment (EMI): INR 9,800</li> <li>• Monthly debt service ratio: 41%</li> </ul>	<ul style="list-style-type: none"> <li>• Nuclear family of three, the husband is a vegetable vendor, and the wife runs a tailoring shop.</li> <li>• Monthly household income: ~INR 49,000</li> <li>• Constructing an 1,800 square foot ground+1 story house on a 1,000 square foot plot               <ul style="list-style-type: none"> <li>– The plot is located on the outskirts of city, and cost INR 1,000,000 (already owned by family)</li> <li>– Construction cost: INR 1,800,000</li> </ul> </li> </ul> <p>Loan product used:</p> <ul style="list-style-type: none"> <li>• INR 1,260,000 construction loan (70% LTV)</li> <li>• Tenor: 15 years</li> <li>• Interest rate: 13.5%</li> <li>• Monthly Payment (EMI): INR 16,400</li> <li>• Monthly debt service ratio: 33%</li> </ul>

*Notes:* LTV = loan to value. EMI = equated monthly installment.

*Source:* Adapted from Das, Karamchandani and Thuard (2018).

Part of the challenge is defining which loans and lenders qualify in this ‘new’ affordable category in India. A 2019 report by Deloitte uses a consultative approach to define ‘affordable housing finance’ as: “housing finance to first-time house owners forming part of the LIG [lower income group] and economically viable portion of EWS [economically weaker sections], i.e.,

<sup>5</sup> Das, Karamchandani and Thuard (2018), p 7.

customers with an annual household income of approximately INR 200,000 to 600,000 and loan ticket size ranging from approximately INR 500,000 to 1,800,000.”<sup>6</sup>

As outlined in Karmali and Weng (2022), the definitions for low-income group (LIG) and economically weaker section (EWS) in India are housing specific and are not grounded in any means testing framework. The LIG definition is so broad that it encompasses the top decile of urban household incomes, despite the category name starting with the word ‘low.’ There are also state and national criteria (either from financial sector regulations, building regulations, or housing programs) that impose definitions of what is ‘affordable’ based on the carpet area, building heights, household income, and the price of the unit. These definitions are sometimes in conflict with each other, but are all focused on better targeting state and national support to lower-income segments.<sup>7</sup>

The first goal of this paper is to use data from a credit bureau to understand the segmentation better and to analyze the growth and the performance of this affordable housing finance sector. The second goal is to examine the characteristics of mortgage subsidies under the PMAY-CLSS, a flagship mission of the Government of India. The next section introduces the data, followed by a section that triangulates various sources to arrive at possible definitions for AHFC lenders and loans.

### **3 Overview of Credit Bureau Data**

Housing policy, housing programs, and housing finance in India are spread across several institutions and sectors. This is also the case for lending institutions. As such, there is limited comprehensive financial information about housing finance in India given that SCB and HFC each have a large share of the market. Credit bureaus and now the Reserve Bank of India (RBI), after the recent regulatory change in oversight for HFC, are best positioned to analyze the entire housing finance market. The World Bank collaborated with a credit bureau to obtain anonymized mortgage data to better understand the growth and performance of this new category of affordable housing finance.<sup>8</sup> The goal is to verify the anecdotal evidence in the literature using data.

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<sup>6</sup> Deloitte (2019), p 36.

<sup>7</sup> See for example Knight Frank and CREDAI (2020).

<sup>8</sup> Housing loans were defined as all loans classified as ‘home loan,’ which in India is a personal loan against the pledging of collateral for the purpose of building or acquiring a dwelling. The data also capture ‘home loans’ underwritten by microfinance companies, given the recent regulation to include microfinance companies in the mandatory credit reporting regulations in India. One limitation of credit bureau data is that we are not able to see non-lending financial statement line items, which could have a material impact on lender performance such as capitalization and liquidity.

In doing so, significant attention was placed to understand the underlying credit reporting regulations for mortgages in India and how best to structure the data for analysis. As such, the fields in Table 2 were generated for 2016–2020.<sup>9</sup> The data are aggregated to cells which represent the mortgages aggregated as permutations of each of the fields in Table 2.

**Table 2: Data Fields of Anonymized Housing Loan Database**

<b>Variable</b>	<b>Range or categories</b>
<b>Year</b>	2016–2020
<b>Geography</b>	State and district (2011 census)
<b>Region</b>	Rural, Peri-urban, Urban
<b>Product</b>	Loan, PMAY-CLSS Loan
<b>Lender type</b>	Foreign banks, HFC without permission to accept deposits, HFC with permission to accept deposits, HFC with permission to accept deposits Top 10, HFC with permission to accept deposits with prior written permission, Others, Private sector bank - New, Private sector bank - Old, Private sector bank new - Top 10, Public sector bank - Top 10, Public sector banks, Regional rural banks, Small finance banks
<b>Mortgage size (INR)</b>	[0–200,000), [200,000–500,000), [500,000–700,000), [700,000–1,000,000), [1,000,000–1,500,000), [1,500,000–2,000,000), [2,000,000–2,500,000), [2,500,000–3,000,000), [3,000,000–3,500,000), [3,500,000–4,000,000), [4,000,000–4,500,000), [4,500,000–5,000,000), [5,000,000–7,500,000), [7,500,000–10,000,000), [>10,000,000]
<b>Interest rate</b>	<5%, 5–6%, 6–7%, 7–8%, 8–9%, 9–10%, 10–11%, 11–12%, 12–13%, 13–14%, 14–15%, >15%, NA
<b>Ownership</b>	Co-applicant, Guarantor, Others, Single applicant
<b>Occupation</b>	Self-employed, Salaried, Other, NA
<b>Gender</b>	Male/Female
<b>Age at origination</b>	<18, 18–25, 26–30, 31–35, 36–40, 41–45, 46–50, 51–65, >65, NA
<b>Credit history length</b>	13–24 months, 25–36 months, <12 months, >36 months, NA
<b>Outstanding loans</b>	Number
<b>Outstanding value</b>	Number
<b>Issued loans</b>	Number
<b>Issued value</b>	Number
<b>Loans 90 past due</b>	Number

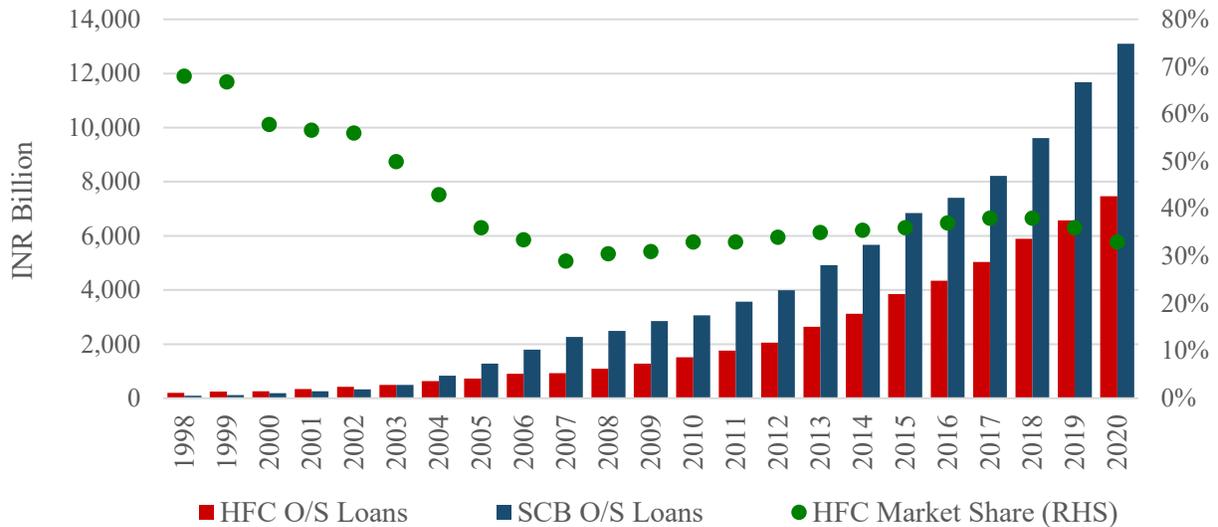
*Notes:* Top 10 is by asset size. NA = not applicable.

The first step is to verify the accuracy of the credit bureau data with the official regulatory returns data. In terms of magnitude, in 2016 there were 10.1 million housing loans in India, and by 2020 this number had grown to 16.8 million. The regulatory returns data are shown in Figure 1. The aggregated credit bureau data display similar patterns to the regulatory returns for the five years of data for both the SCB and HFC outstanding housing loan series. This is shown in Figure 2 and augurs well for using the credit bureau data for sector analysis as the coverage is excellent, and any concerns about differential reporting across lender types are not material. Using 16.8 million as the number outstanding loans in 2020, the average outstanding housing loan amount

<sup>9</sup> All years correspond to March figures which correspond to the end of the fiscal and financial year in India.

stood at INR 1,346,501. The recent regulations incorporating microfinance lenders have arguably helped include smaller HFC into the credit reporting universe.

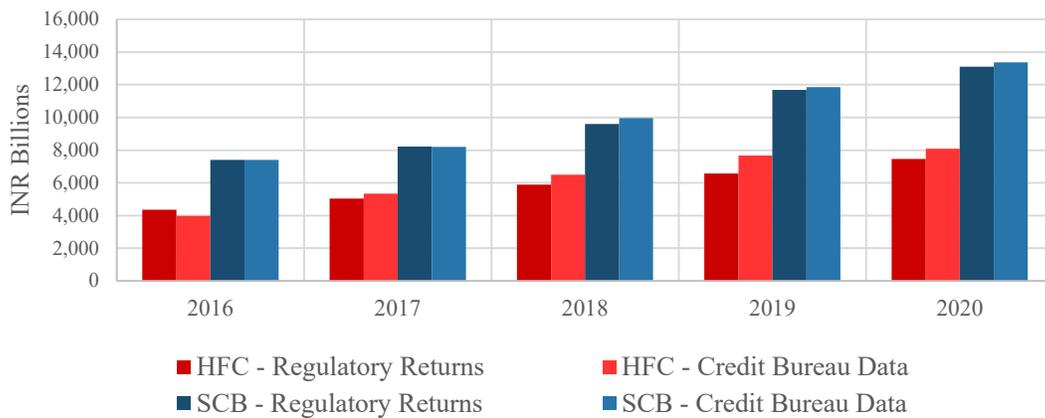
**Figure 1: Outstanding Housing Loans in India from SCB and HFC from Regulatory Returns Data**



Notes: O/S = Outstanding. The HFC Market Share is HFC O/S Loans over the sum of HFS and SCB O/S Loans.  
 Source: RBI and NHB.

Figure 1 and Figure 2 clearly demonstrate the high growth of housing loans in India. Since 2006, housing credit growth has been growing at a compound annual growth rate of almost 15 percent. SCB overtook HFC in 2003 as the largest outstanding housing loan portfolio in levels, but over the past decade HFC growth rates have increased.

**Figure 2: Comparison of Regulatory Return Data and Credit Bureau Outstanding Housing Loans**



Source: Credit Bureau Data, RBI, and NHB.

In terms of overall private credit growth, since 2006 private credit in India has been growing at a compound annual growth rate of 13.4 percent, with credit to gross domestic product

(GDP) reaching just over 50 percent in 2020 (IMF, International Financial Statistics). The housing finance to GDP ratio in India for 2020 is 11.0 percent, therefore housing finance comprises about a fifth of all lending. Having confirmed that the credit bureau data are accurate, the next subsections assess the mortgage market to understand key trends.

#### **4 Mortgage Loan and Borrower Characteristics in India**

Given the breadth of data available from the credit bureau presented in Table 2, it is instructive to begin with an overview of the data by year. This is presented in Table 3 for each of the five years between 2016 and 2020, weighted by the number of loans in Panel A and then by portfolio size in Panel B. The data available from the credit bureau are aggregated up to cells (to protect privacy) that are formed by multiplying out the categories presented in Table 2, as permutations of each field's range of discrete values. For example, data are available by year for loans through foreign banks, district, loan size, interest rate, ownership type, and so on, across all feature categories. Data from Table 3 show that the binned median loan size at inception has remained stable through 2019 at INR 850,000 (the midpoint of the INR 700,000–1,000,000 bin) and in 2020 the median increased to INR 1,250,000 (the midpoint of the INR 1,000,000–1,500,000 bin).

In terms of portfolio-weighted market share by lenders, the 1:2 ratio of HFC to SCB in Figure 1 (the HFC 2020 market share in 33 percent) is further disaggregated by sub-lender type. Within the banking license types, public banks represent two-thirds of all housing finance underwritten by banks, with private banks holding one-third market share within banks. Other banks (rural banks and small finance banks) and foreign banks have a combined mortgage market share of 3 percent of all housing loans. Weighting by number of loans shows that public banks and non-deposit taking housing finance companies (HFC-N) have larger shares than their corresponding portfolio-weighted numbers as the average loans size of these lenders is lower. In terms of geographic distribution, a third of housing loans (by loan size) are in Tier 1 cities and less than 20 percent in rural areas.<sup>10</sup> Average interest rates are just below 10 percent, a third of applicants have at least one co-applicant (usually a spouse), and about a third of mortgage

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<sup>10</sup> The Government of India allocates house rent allowance to public sector employees employed in cities in India based on a classification of city by cost of living. There are three urban categories (X, Y, and Z more commonly referred to as Tier 1, Tier 2, and Tier 3 cities). The remainder are rural areas which are not part of the house rent allowance framework. Tier 1 cities are the eight largest cities: Ahmedabad, Bengaluru, Chennai, Delhi, Hyderabad, Kolkata, Mumbai, and Pune. There are 100 Tier 2 cities. The RBI classifies cities into six tiers, which is different from the three-tier classification. Median loan size is binned.

applicants are female. In line with the results from Badarinza, Balasubramaniam, and Ramadorai (2016), the average age of mortgage applicants in the credit bureau data is high at just over 40 years, which is above the average age in other developed and developing countries.

**Table 3: Housing Finance Loans Across India, 2016–2020**

	2016	2017	2018	2019	2020
<b>Panel A: Weighted by number of loans</b>					
Median loan size (INR, thousands)	850.0	850.0	850.0	850.0	1,250.0
Lender: HFC-D (%)	23.5	26.4	24.4	24.6	23.9
Lender: Public bank (%)	52.0	46.4	46.9	45.1	44.6
Lender: Private bank (%)	14.3	14.0	12.4	12.6	13.1
Lender: HFC-N (%)	6.2	8.4	9.7	10.6	10.6
Lender: Other banks (%)	3.1	4.0	6.0	6.7	7.5
Lender: Foreign banks (%)	0.9	0.8	0.5	0.4	0.4
Tier 1 city (%)	19.9	19.6	18.6	18.2	17.8
Tier 2 city (%)	28.7	28.6	28.2	28.0	27.7
Tier 3 city (%)	27.4	27.1	27.3	27.3	27.6
Rural (%)	23.9	24.7	26.0	26.6	26.8
Average interest rate (%)	10.0	9.7	9.0	9.2	8.9
Co-application (%)	28.1	31.2	29.1	29.4	29.0
Female applicants (%)	24.7	25.5	25.9	26.7	27.1
Age when underwritten (years)	40.3	40.3	40.5	40.5	40.5
Salaried applicants (%)	33.4	33.8	33.7	33.9	34.0
Self-employed applicants (%)	9.3	9.3	9.2	9.3	9.3
New to credit (%)	15.1	14.4	13.4	13.0	10.8
Observations (millions)	3.9	4.4	5.1	5.6	5.9
<b>Panel B: Weighted by portfolio size</b>					
Non-performing loans - NPLs (%)	1.3	1.6	1.9	1.8	2.5
Lender: HFC-D (%)	29.9	32.9	31.7	31.2	30.5
Lender: Public bank (%)	40.6	36.3	37.5	37.8	38.6
Lender: Private bank (%)	20.4	19.9	18.8	18.8	19.2
Lender: HFC-N (%)	5.1	6.5	7.7	8.0	7.2
Lender: Other banks (%)	1.4	2.2	2.7	2.9	3.3
Lender: Foreign banks (%)	2.7	2.3	1.6	1.3	1.1
Tier 1 city (%)	32.9	32.0	31.0	30.1	29.3
Tier 2 city (%)	28.0	28.2	28.2	28.0	27.8
Tier 3 city (%)	23.9	23.9	24.2	24.5	24.9
Rural (%)	15.2	15.9	16.7	17.4	18.0
Average interest rate (%)	9.9	9.6	8.8	8.9	8.6
Co-application (%)	38.6	41.7	40.1	38.8	37.5
Female applicants (%)	27.4	28.3	28.9	29.4	29.5
Age when underwritten (years)	40.0	40.2	40.4	40.4	40.4
Salaried applicants (%)	36.3	36.3	36.2	36.3	36.7
Self-employed applicants (%)	12.8	13.0	13.0	12.9	12.9
New to credit (%)	14.2	13.4	12.6	12.3	10.4
Observations (millions)	3.9	4.4	5.1	5.5	5.8

*Notes:* HFC-D = deposit taking HFC, HFC-N = non-deposit taking HFC. Each ‘observation’ is a cell across lender and borrower characteristics, so observations do not represent number of loans. Interest rates and loan sizes are categorized into bins and are not continuous. Total loans covered for each year are between 10.1 and 16.8 million. Other banks include regional banks and small finance banks. Median loan size refers to size at loan origination.

It has been argued that the wealth and asset accumulation of Indian households is different compared to other countries (particularly China) due to the limited range of savings options and household asset preferences for real estate and gold.<sup>11</sup> In terms of occupation, a third of applicants are salaried and an eighth are reported to be self-employed. It is likely that the occupation field is not well answered as there is a high share of ‘other occupation.’ Just over a tenth of housing finance borrowers are new to credit—which is defined as having either no credit history or less than two years of credit history. The mortgage NPL definition used in Table 3 is the 90 days or higher delinquency portfolio over the gross portfolio value, and this is in line with the regulatory definition. The level and trends of the credit bureau data match those reported by the RBI and NHB. For example, in 2019, the gross non-performing assets (GNPA) ratio of housing loans was 1.8 percent for SCB and 1.3 percent for HFC. Combining these using the shares from Figure 1 yields a total delinquency rate of 1.6 percent, while the number reported in Table 3 is 1.8 percent. The regulatory data also point to a recent increase in delinquency, but the levels remain low.<sup>12</sup>

Table 4 displays the same rows as Table 3, but focuses across lenders within the five-year time window, where each column represents the loans underwritten by a lender type for the five years of data available. Across these lenders there is clear market segmentation. Comparing the first three lenders (HFC-D, public banks, and private banks) that represent 80 percent of the market, HFC-D have higher interest rates, higher loan sizes, higher exposure in Tier 1 cities, and lend more to salaried borrowers. Public banks have lower loan sizes, the lowest interest rates, but also higher delinquency rates, and have their highest share of loans (by portfolio size) in Tier 2 cities. Private banks are the most concentrated in Tier 1 cities, have low delinquency rates, higher loan sizes, and the smallest portfolio of the first three lender types in rural areas. HFC-N and Other banks are more alike, with smaller loan sizes, higher interest rates and lending more to those who are newer to credit. However, Other banks have much higher delinquency rates than HFC-N. Foreign banks have much larger median loan size (with a median three times larger than the market median), are skewed toward larger cities, have lower interest rates, and lend to the most seasoned borrowers in terms of credit history.

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<sup>11</sup> See Badarinza, Balasubramaniam, and Tarun (2016) and Reserve Bank of India (2017).

<sup>12</sup> As a result of COVID-19, the delinquency at HFC for 2021 has been estimated to have increased to 2.7 percent (ICRA 2021).

**Table 4: Housing Finance Loans Across Lender Types 2016–2020**

	HFC-D	Public	Private	HFC-N	Other	Foreign
<b>Panel A: Weighted by number of loans</b>						
Median loan size (INR, thousands)	1,250.0	850.0	1,250.0	350.0	350.0	3,250.0
Tier 1 city (%)	23.9	14.5	27.9	14.5	11.8	58.3
Tier 2 city (%)	31.5	27.9	30.9	22.6	20.7	17.3
Tier 3 city (%)	26.0	30.3	23.3	21.7	28.7	19.7
Rural (%)	18.7	27.4	17.9	41.2	38.7	4.8
Average interest rate (%)	10.0	8.9	10.3	13.3	10.4	8.4
Co-application (%)	64.3	8.1	57.2	13.1	13.9	38.9
Female applicants (%)	32.4	23.6	28.2	19.9	26.8	17.8
Age when underwritten (years)	39.1	41.5	39.0	40.3	41.1	39.3
Salaried applicants (%)	52.1	32.2	29.0	14.4	10.0	45.9
Self-employed applicants (%)	8.6	9.4	11.0	8.5	8.1	19.1
New to credit (%)	12.7	9.2	12.3	29.9	19.1	1.7
Observations	6.4	11.6	3.4	2.0	1.5	0.2
<b>Panel B: Weighted by portfolio size</b>						
NPLs (%)	1.4	2.3	1.3	2.2	6.3	2.1
Tier 1 city (%)	32.1	23.6	38.7	36.6	25.3	60.9
Tier 2 city (%)	28.0	28.6	28.3	28.8	25.6	14.7
Tier 3 city (%)	24.5	27.3	20.4	18.7	26.4	21.0
Rural (%)	15.5	20.5	12.6	15.9	22.7	3.4
Average interest rate (%)	9.7	8.6	9.6	11.8	10.0	7.7
Co-application (%)	69.3	9.3	55.5	22.9	31.2	50.1
Female applicants (%)	34.4	26.5	28.8	20.4	27.1	18.4
Age when underwritten (years)	39.0	41.3	40.1	40.2	41.7	41.8
Salaried applicants (%)	48.8	34.3	27.6	23.6	16.2	40.9
Self-employed applicants (%)	11.5	11.9	14.9	16.3	14.4	25.8
New to credit (%)	14.2	10.2	11.6	17.0	15.9	4.0
Observations (millions)	6.3	11.5	3.4	1.9	1.4	0.2
<b>Panel C: Average loan sizes (2020)</b>						
Outstanding portfolio (INR, thousands)	1,637.6	1,105.3	1,876.4	875.8	549.2	3,891.1
Issuance for 2020 (INR, thousands)	1,839.1	1,126.1	2,193.6	1,210.3	764.4	4,621.8

*Notes:* Observations are cells across borrower and lender categories. Interest rates and loan sizes are categorized into bins and are not continuous. Median loan size refers to size at loan origination and is binned. Public, Private, Other and Foreign are banks (SCB).

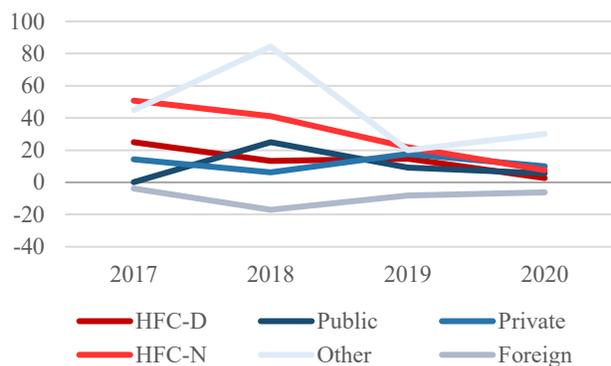
Part of this lender segmentation is borne through regulation, which has been well documented. Historically HFC had access to long-term funding from the NHB at a time when the SCB was less able to borrow at longer tenors. That paradigm changed with the growth of private capital markets in India after deregulation from the early 1990s onwards, during a period when a number of HFC experienced challenges, especially corporate governance challenges. This has been well documented (Manoj 2010, Chadha and Chawla 2013).<sup>13</sup>

<sup>13</sup> This is also covered in the annex.

Between 2018–2019 two non-bank financial institutions with negligible housing finance exposure experienced severe distress: one defaulted and the other was placed under receivership. This led to the strengthening of non-bank regulation in India, including regulation for HFC. More recently there have been discussions about the potential role of securitization to help reduce duration risk in the banking sector, though there are important directed lending quotas (known as ‘priority sector lending’) that create misaligned incentives for banks to transfer their originated mortgages to the capital markets.

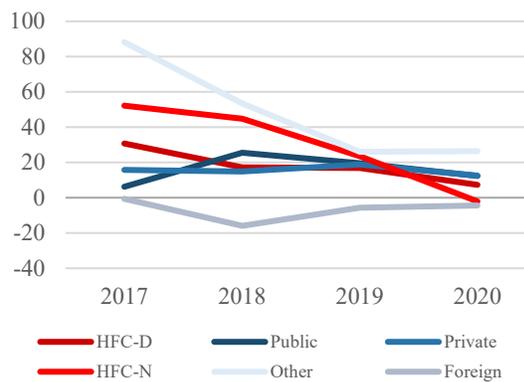
Combining the perspective across time from Table 3 and across lenders from Table 4, an analysis of annual loan growth by lender type can also be undertaken. This is shown in Figure 3 and Figure 4 as the annual growth rate of housing loans by number of loans and value of loans, respectively.

**Figure 3: Annual Growth of Outstanding Housing Loans in Number by Lender Type (%)**



Source: Credit Bureau Data.

**Figure 4: Annual Growth of Outstanding Housing Loans in Value by Lender Type (%)**



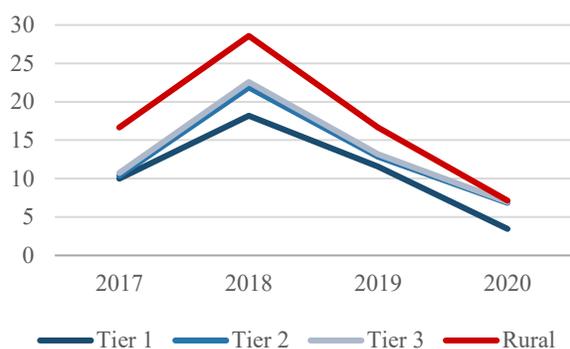
Source: Credit Bureau Data.

It is clear from Figure 3 and Figure 4 that the recapitalization of public sector banks in 2017 led to a sharp increase in lending by these institutions. Also, HFC-N and Other banks have been growing at 22 and 36 percent per year both in outstanding portfolio value and number of loans over the entire time window, but their growth rate has been decreasing. At the same time, foreign banks have shrunk their housing portfolio by 7 percent per year over this time window, or 25 percent between 2000 and 2017. Across HFC-D, public, and private lenders, the annual portfolio value compounded growth rate has been steadier at 12–14 percent per year. Although HFC-N and Other banks started from a low portfolio size, the latter have increased the size of their portfolio by a factor of 4.6 times, while HFC-N by a factor of 2.7. This has not been well

documented at the subsector level, but this high growth could be the reason for an increasing number of anecdotal studies on the growth of smaller-sized housing finance institutions across India.

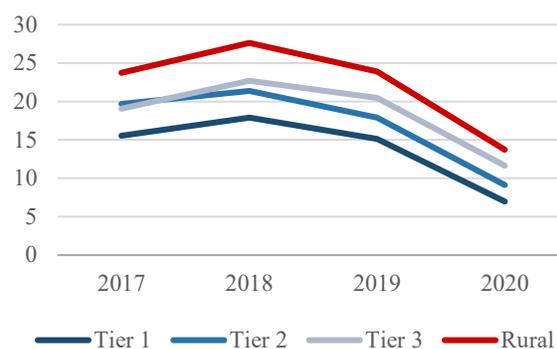
Figure 5 and Figure 6 show the geographic spread of housing loan growth by region— Tier 1 cities, Tier 2 cities, Tier 3 cities, and rural areas. Encouragingly, the largest growth in both portfolio value and number of loans has been in rural areas, followed by Tier 3 and Tier 2, and finally Tier 1 cities. This matches the narrative from Figure 3 and Figure 4, although HFC-N and Other banks have a combined market share of 10 percent by value (split 7:3 in favor of HFC-N).

**Figure 5: Annual Growth of Outstanding Housing Loans in Number by Region (%)**



*Notes:* Tier 1 are the largest eight cities. Tier 2 and Tier 3 correspond to a ranked housing rent allowance categorization for urban agglomerations from the Government of India. Source: Credit Bureau Data.

**Figure 6: Annual Growth of Outstanding Housing Loans in Value by Region (%)**

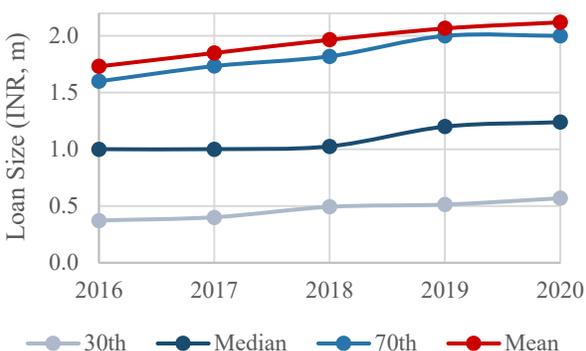


*Notes:* Tier 1 are the largest eight cities. Tier 2 and Tier 3 correspond to a ranked housing rent allowance categorization for urban agglomerations from the Government of India. Source: Credit Bureau Data.

The final analysis of this subsection discusses average loan sizes. Taking simple averages of the outstanding housing portfolio and the outstanding number of loans, one can calculate the outstanding loan size. The average outstanding private sector housing loan in 2020 was INR 1.9 million, while for HFC-D it was 1.6 million and just under 900,000 for HFC-N, as shown in Panel C of Table 4. HFC-N and other banks are lower in the average size spectrum. Instead of a stock calculation, this average can also be calculated as a flow metric at loan origination. This is shown for 2020 in the last row of Panel C of Table 4. The difference in the stock and the flow measure of loan size is muted for the larger lenders, where the difference is about 10 percent. For HFC-N and Other banks there is a larger difference between these measures due to the rapid growth and upscaling of these lenders into larger loans, so that the flow measure is much larger than the seasoned average loan size on the balance sheet.

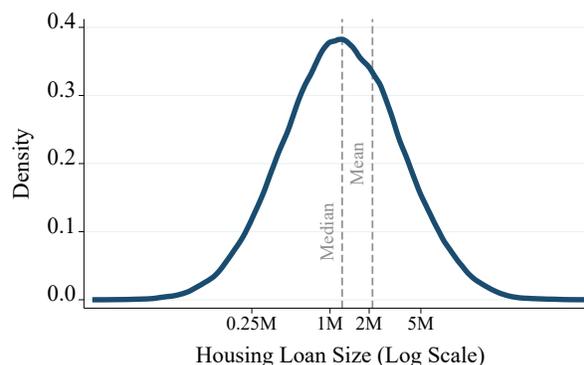
Figure 7 and Figure 8 show the distribution of housing loans at origination over time. There is a wide distribution in housing loans values, and it has a large right tail. It is closer to a lognormal distribution as other financial variables often are. The mean of the distribution is approximately 60 percent larger than the median, while the 30th percentile value is around INR 500,000. Some of these housing loans may be for incremental construction (as is common in developing countries) but in Tier 3 and rural areas these values are sufficient for the construction of a complete dwelling.

**Figure 7: Housing Loan Moments, 2016–2020**



Notes: Data is for housing loans at origination. 30th = 30th percentile. 70th = 70th percentile.

**Figure 8: Density of Housing Loans, 2020**



Notes: Density estimated using moments of loan sizes at origination for 2020. Median is INR 1,239,257 and mean is INR 2,120,928.

This subsection has uncovered substantial heterogeneity in lenders and borrowers across housing finance in India. Some of this is institutional—with the dual HFC and SCB setup that has its unique legacy in India’s financial sector and long-term local currency capital markets. The other dimension is the vastness of the typologies of housing loans and lenders in India—from the foreign bank lending upwards of INR 3 million to a rural bank (an Other bank) lending a sixth of that value.<sup>14</sup> Borrower profiles in terms of occupation, credit age, and gender also vary across this space. The next section presents a classification of AHFC based on the above analysis of loan, borrower and lender types.

## 5 Classification of Affordable Housing Finance Company Lenders

There is no regulatory or license type for AHFC. Unlike microfinance in many markets, AHFC began within the regulated universe of housing finance lenders in India. The nascent literature of AHFC suggests that almost all are registered as HFC rather than SCB, with the

<sup>14</sup> Other Banks lend a tenth of the value that Foreign Banks do for housing loans.

plurality holding the HFC-N license type (Das, Karamchandani and Thuard 2018, Deloitte 2019). Though this is still an understudied area, the provenance of AHFC within the HFC-N license type could be linked to the liability side of the balance sheet, where HFC-N borrow in long-term local currency debt markets *because* they do not have deposits as a funding source. This does not imply that banks are not engaged in similar lending as AHFC, but the literature and anecdotal evidence suggests that banks are playing a smaller role in this new space.

As there is no license type for AHFC lenders, the classification exercise in this paper takes a two-pronged classification approach. The detailed credit bureau data does not bifurcate lenders apart from the thirteen lender groups available in the credit bureau data. These are grouped by ten broad license and ownership types and then split into thirteen with a top ten carve out for three types.

The first step of the two-pronged classification approach takes a lender view. To aide with the classification exercise, the credit bureau also supplied a 2020 list of all lenders by total housing loan portfolio size and average outstanding housing loan amount. This lender list in addition to publicly available financial statements from self-identifying AHFC lenders is used to identify possible AHFC *lenders* in the 2020 credit bureau lender list. The second step of the classification approach transfers the lender and loan size guidelines from the first step to the detailed credit bureau data, to classify possible AHFC *loans*.

The first step starts with linking the names of commonly known, larger and self-identifying AHFC lenders found in the literature with their publicly available financial statements to understand license types and construct a loan size threshold for these possible AHFC lenders. Table 5 shows the license type and average outstanding housing loan sizes between 2016–2021 for six lenders that self-identify and openly brand themselves within the AHFC mold.

**Table 5: Average Outstanding Housing Loan Sizes at Select Known AHFC Lenders (INR, thousands)**

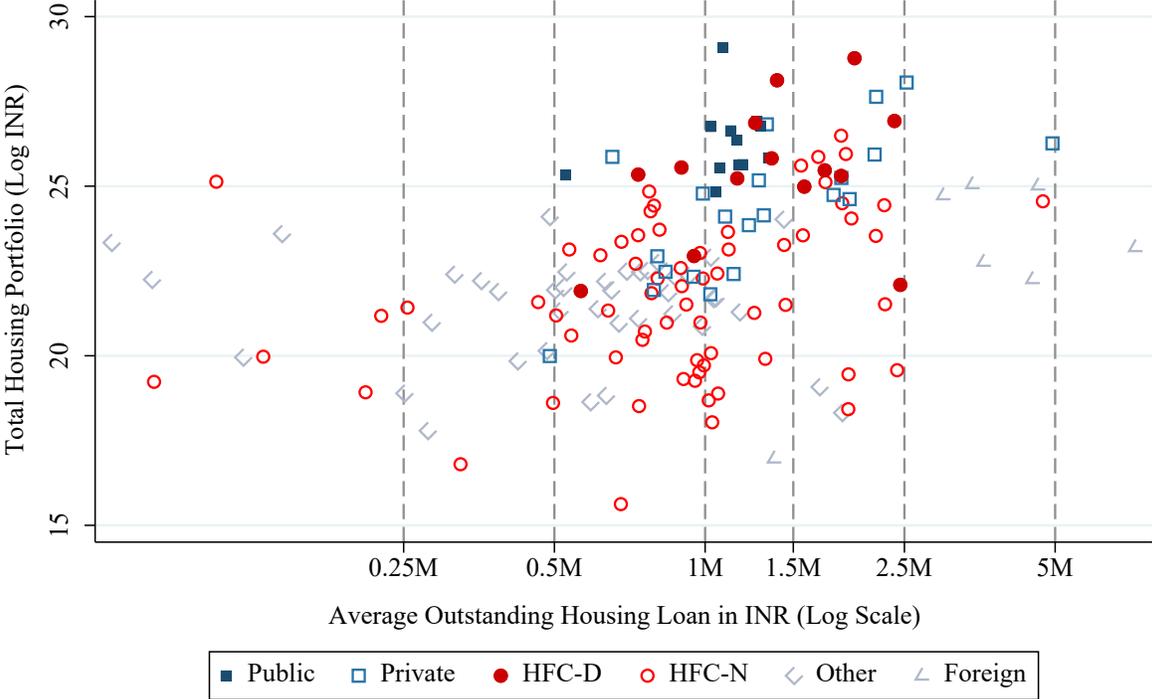
	License	2016	2017	2018	2019	2020	2021
Aadhar Housing Finance Ltd	HFC-N	—	—	820	830	840	850
Aptus Value Housing Finance India Ltd	HFC-N		750	825	850	—	720
Gruh Finance India	HFC-N	739	752	783	819	—	—
Motilal Oswal Home Finance Ltd	HFC-N		900	854	850	880	860
Muthoot HomeFin Ltd	HFC-N	—	—	1,080	960	940	950
SvatantraMHFC	HFC-N	479	425	439	—	—	—

*Notes:* Gruh Finance India was acquired by Bandhan Bank in 2020 and so no longer reports on a non-consolidated basis.

*Source:* Company financial statements sourced from individual company websites.

All the lenders in Table 5 are licensed as HFC-N. This is therefore the first filter to be applied to the categorization and it fully conforms to all the anecdotal evidence in the literature about AHFC. Further, most of the average outstanding housing loan values in Table 5 are below INR 1,000,000 and the median of the average outstanding loan sizes from Table 5 is INR 830,000. This is commensurate with the HFC-N average outstanding loan size in Panel C of Table 4. The Table 5 figures are also in line with the average loan size of 26 AHFC balance sheets of INR 930,000 sourced by Das, Karamchandani, and Thuard (2018). Guided by this analysis, the anonymized 2020 lender list provided by the credit bureau data are mapped in Figure 9 by their total housing loan portfolio and the average outstanding loan size in 2020.<sup>15</sup>

**Figure 9: Lender Classification by Total Housing Portfolio and Average Outstanding Housing**



The credit bureau lender list for 2020 has a total of 161 housing finance lenders. Of these, 14 are HFC-D, 12 are public banks, 21 are private banks, 66 are HFC-N, 41 are Other banks, and 7 are foreign banks. Foreign banks are clearly different players in the housing lending market (as noted earlier) with a large average outstanding loan size and a midrange total portfolio size. Private

<sup>15</sup> For privacy reasons, each lender in the 2020 lender list is tagged only by its license and registration type. Individual lenders are not identifiable in the credit bureau 2020 lender list shared with the authors.

banks are larger in size and have larger average outstanding loan sizes. HFC-N are arguably most like private banks in the Figure 9 mapping of lenders in housing portfolio and average outstanding housing loan size space. Public banks are all to the left of the INR 1,500,000 vertical line—which may be an internal target or a strategy to meet priority sector lending targets. HFC-N are smaller than the main players (HFC-D, private and public banks) though there is a significant variation amongst them. Other banks are also below INR 1,000,000 average outstanding housing loan size space but have smaller portfolios in general.

Based on this graphical lender segmentation analysis, the anecdotal evidence from the literature, and the data in Table 5, the lender classification approach taken here is to classify AHFC lenders as HFC-N lenders that have an outstanding average housing loan size less than INR 1,000,000. There is an element of circularity to this classification approach, as it is well documented that AHFC offer smaller loans than legacy lenders. Without a separate license type, using portfolio moments is an expedient way to classify a nascent typology of lender. Other lenders could compete in this space, as AHFC is more about borrowers and products rather than lender license or registration types.

Armed with this new definition, Figure 10 shows the same segmentation as Figure 9, but with an AHFC categorization based on license type and an average loan size of less than INR 1,000,000. This includes HFC-N lenders with average outstanding loan sizes below INR 500,000 which is less than half of the value from Table 5. As the 2020 lender listing provided by the credit bureau is anonymized, it is not possible to verify the identity of these AHFC tagged lenders.

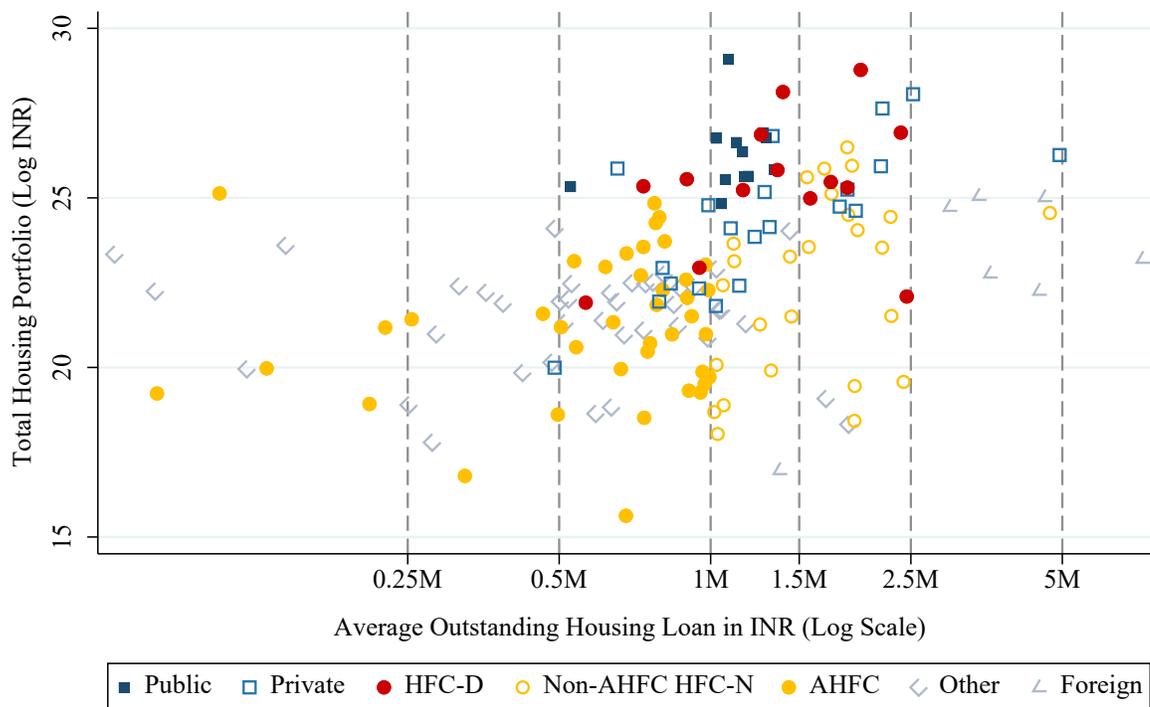
Using this first AHFC classification step definition, out of the 66 HFC-N lenders, 40 are classified as AHFC based on this average outstanding loan size threshold. The total AHFC loan portfolio size is INR 350.3 billion with 1.15 million outstanding active loans for the year 2020. Therefore, the average outstanding loan amount is INR 304,897.<sup>16</sup> This splits the HFC-N category 24:76 in portfolio value and 65:35 in number of loans, implying that AHFC have a 1.8 percent market share of the entire housing finance market. Their median loan size at issuance is

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<sup>16</sup> This is smaller than the value in Table 5 as those are larger, urban, more prominent and self-identifying AHFC lenders and because Figure 10 includes a number of large AHFC lenders with small average outstanding loan sizes.

INR 732,834 and on average each of the 40 AHFC are present in only 11 states, compared to non-AHFC HFC-N with an average of 17 states. This shows that AHFC are less national than non-AHFC HFC-N. In comparison the average public, private and HFC-D lender is present in 35, 25 and 29 states across India.

**Figure 10: Lender Classification Incorporating AHFC Lenders**



The categorization by lender license type and lender average outstanding loan size is possible for 2020, as an anonymized list of lenders was made available to the authors. The detailed credit bureau data of loans does not allow the splitting of lender types beyond the thirteen categories shown in Table 2. Therefore, the second step of the classification approach uses the loan size at inception and the lender type to construct a classification of AHFC loans in the credit bureau data.

These AHFC loans are initially defined to be loans underwritten by HFC-N with a loan size at inception of less than INR 1,000,000. This is not the same as the AHFC classification from Figure 10 as it includes loans underwritten by non-AHFC HFC-N tagged below INR 1,000,000 at inception as well as loans underwritten by AHFC tagged lenders above INR 1,000,000. Therefore,

the second step of the classification approach is a AHFC *loan* definition, in contrast to the first AHFC *lender* approach. Both are bound by the HFC-N license type and capital market liability model.

The AHFC lender and loan classification approaches yield different universes of loans. The AHFC loan definition with an INR 1,000,00 ceiling yields a total 2020 AHFC portfolio size of INR 306.0 billion with 1.23 million outstanding active loans. Therefore, the outstanding average loan amount is INR 248,033. It splits the HFC-N category 20:80 in portfolio value and 69:31 by number of loans and implies an AFHC market share of 1.4 percent of the entire housing finance market for 2020. As a result, the AHFC loan definition has a higher number smaller HFC-N loans, which in aggregate totals a slightly smaller universe in value. This AHFC loan definition approach does allow for a time series construction: in the five years from 2016 to 2020, AHFC lenders tagged as such have underwritten 4.5 million loans, totaling more than one trillion rupees. AHFC have grown their portfolio by an average annual compound rate of 27 percent between 2016—2020, or equivalently by a factor of 3.4 over these 5 years.

Given that this initial AHFC loan definition includes smaller loans (those below INR 500,000) which could be for incremental housing construction or housing microfinance in rural areas, the AHFC loan definition approach can be adapted to focus solely on defining loans with a loan size floor. Imposing a loan size floor of INR 500,000 so that the AHFC loan definition is restricted to HFC-N underwritten loans between INR 500,000 and INR 1,000,000 then the portfolio outstanding would be INR 188.5 billion, the market share for 2020 would be 0.9 percent and the compound annual growth rate between 2016—2020 would be 32 percent. This suggest that including the smaller loans does not change the narrative of a high growth rate from a small base.

Table 6 uses the both these AHFC loan definitions—in the first five columns as Arcade A for HFC-N loans below INR 1,000,000 and in the second five columns as Arcade B for HFC-N loans between INR 500,000 and INR 1,000,000—to compute loan and borrower characteristics for each of the five years using the credit bureau data. Starting with Panel A, which are loans weighted by the number of loans: as expected, the main differences between the panels of Table 6 is the loan size. The average binned loan size at inception in Arcade A is INR 194,900 compared to INR 738,700 in Arcade B for 2020. This is because Arcade B is truncated from below and

**Table 6: AHFC Housing Finance Loans Across India, 2016–2020 across Two AHFC Loan Definitions**

	Arcade A: AHFC as HFC-N Loans Below INR 1M					Arcade B: AHFC as HFC-N Loans in INR 0.5M–1M				
	2016	2017	2018	2019	2020	2016	2017	2018	2019	2020
<b>Panel A: Weighted by number of loans</b>										
Median loan size (INR, thousands)	100.0	100.0	100.0	100.0	100.0	850.0	850.0	850.0	850.0	850.0
Average loan size (INR, thousands)	255.0	245.8	220.1	204.3	194.9	746.7	744.4	741.1	739.3	738.7
Tier 1 city (%)	5.2	5.2	5.6	6.1	6.5	24.0	21.6	19.3	17.1	15.9
Tier 2 city (%)	17.1	17.3	17.7	19.0	19.7	37.5	36.8	36.0	35.4	34.4
Tier 3 city (%)	24.8	23.8	23.1	23.0	23.3	19.0	19.8	20.4	21.9	22.8
Rural (%)	52.9	53.7	53.6	51.9	50.5	19.5	21.8	24.3	25.6	26.8
Average interest rate (%)	16.0	16.5	15.1	14.8	15.2	15.1	15.6	14.2	14.1	14.6
Co-application (%)	5.2	7.0	9.0	10.2	11.5	21.0	29.9	33.1	30.9	29.9
Female applicants (%)	20.8	20.0	19.3	19.1	20.0	21.7	21.0	22.6	24.0	25.1
Age when underwritten (years)	41.4	41.4	41.1	40.9	40.8	38.6	38.6	38.5	38.6	38.6
Salaried applicants (%)	6.9	7.1	7.4	8.9	9.6	25.7	24.3	22.4	23.1	22.5
Self-employed applicants (%)	6.0	5.9	6.1	6.5	6.7	12.0	11.8	11.3	11.1	10.5
New to credit (%)	44.3	43.2	39.3	33.8	25.1	31.8	35.7	36.8	34.4	27.8
Observations (thousands)	119.7	160.3	214.4	272.8	301.3	41.3	63.9	97.8	134.4	155.5
<b>Panel B: Weighted by portfolio size</b>										
NPLs (%)	3.8	4.8	4.9	4.7	4.9	0.8	0.9	1.2	1.5	1.4
Tier 1 city (%)	14.6	13.6	13.0	12.2	12.1	24.6	21.8	19.4	17.2	16.0
Tier 2 city (%)	28.7	28.6	28.6	28.8	28.9	37.6	37.1	36.3	35.4	34.3
Tier 3 city (%)	21.8	21.8	21.8	22.7	23.3	18.8	19.5	20.2	21.8	22.8
Rural (%)	34.9	36.0	36.5	36.3	35.7	19.1	21.6	24	25.5	26.9
Average interest rate (%)	15.5	16.1	14.7	14.6	14.9	14.9	15.5	14.1	14.1	14.5
Co-application (%)	13.6	19.0	22.5	22.3	24.0	20.8	30.0	33.0	30.8	30.8
Female applicants (%)	21.2	21.1	22.2	23.2	24.8	21.5	20.9	22.5	24.0	25.6
Age when underwritten (years)	39.7	39.7	39.6	39.5	39.4	38.5	38.5	38.4	38.6	38.5
Salaried applicants (%)	16.6	16.1	15.8	16.9	17.5	25.8	24.2	22.4	23.0	22.4
Self-employed applicants (%)	9.4	9.2	9.1	9.1	9.2	12.3	11.9	11.5	11.2	10.8
New to credit (%)	40.8	41.1	38.9	35.2	28.7	31.4	35.4	36.5	34.0	28.3
Observations ('000)	119.0	158.0	212.8	270.7	299.4	41	62.7	97.3	133.2	154.6

*Notes:* Each ‘observation’ is a cell across lender and borrower characteristics, so observations do not represent number of loans. Interest rates and loan sizes are categorized into bins and are not continuous. Loan sizes are at inception and are binned. The total number of loans in the first five columns is 4,455,227 and in the second five columns is 896,958.

contains no ‘small’ loans. As a result, Arcade A has half of its loans in rural areas, compared to a quarter in Arcade B, with the plurality of Arcade B loans in Tier 2 cities. Average interest rates across both arcades are in the mid-teens, with Arcade B having slightly lower interest rates. These interest rates are higher than the HFC-N interest rates from Table 4. In terms of the other characteristics, larger loans are more often associated with co-applicant and more female applicants. Across both arcades, a quarter are new to credit, and for Arcade A, this value started at 44.8 percent in 2016. Panel B shows loans weighted by portfolio size. The starkest difference is in terms of loan delinquencies. Arcade B has an NPL rate of just 1.4 in 2020 compared to 4.9. With almost equal interest rates, this suggests that Arcade B loans are more profitable, and the spreads in Arcade B are the highest out of all other lender categories in Table 4. These descriptive statistics match the anecdotal evidence of AHFC from the literature well, although the data in Arcade A does have a rural bias given the AHFC loan definition for these columns does not have a floor.

With either AHFC loan definition, it is clear that the AHFC lenders identified are lending through a different modality than the legacy lenders shown in the first three columns of Table 4. It is also striking how the quantitative narrative from Table 6 is similar to the global narrative that compares how microfinance institutions lend in comparison to banks. This analogy is further extended with the observation that many self-identifying AHFC use a 30-day delinquency metric for internal distress measurement which is exactly how the microfinance sector measures early warnings towards potential NPLs. Having described the market segmentation and the market positioning of AHFC lenders, the next section undertakes econometric tests of whether AHFC lending is statistically different from other lenders.

## **6 Econometric Analysis of Lending by Affordable Housing Finance Companies**

The previous section discussed the overarching market segmentation and defined AHFC as a carve-out of HFC-N, either through a lender classification or a loan classification. It highlighted the differences between different lender types, the large heterogeneity of the housing finance landscape in India, and the differences in AHFC loans and borrowers compared to other lender types.

This section takes advantage of the detailed micro data to undertake additional segmentation analysis to uncover the loans and borrowers across different lender types. This

section poses the question of whether, controlling for as much as can be measured in the data, AHFC are really operating through a different business model. From the data in Section 5, it could be the case that these differences in means and medians can be explained by other factors—such as geography or the occupation of borrowers. Table 6 shows that AHFC have smaller loans, lend less in Tier 1 cities, have higher interest rates, and offer loans more often to non-salaried and those with no or shorter credit histories. However, a subsequent line of inquiry is how do these AHFC lenders perform in the same cell against other lenders. Whether AHFC are simply located somewhere else or if their strategy is discernably different from other lenders is a key question. In particular, the rural and smaller loans cannot be compared to larger urban loans, even though the lender license type is the same. A regression framework is set up so to identify similar borrowers and loan types and test whether AHFC outcomes differ. Put differently, how do other lenders perform when they behave like AHFC, as other lenders are not excluded from serving these borrowers or underwriting these types of loans. Theoretically, this section presents its results in a framework that attempts to align loan-borrower pairs that only differ by lender type to measure if AHFC are lending differently using an omitted category indicator variable approach. For example, to assess if AHFC are more likely to lend to those who are new to credit, the exercise is to find all the loan-borrower pairs that are identical in all dimensions except their credit vintage and assess whether AHFC have an edge or proclivity to lend more to those who are newer to credit.

This is achieved through a regression framework to understand the trade-offs between these variables. This can help uncover the performance of AHFC in more detail. Regressions are run with various borrower and loan characteristics as the dependent variable against an indicator variable of whether the loan cell is an AHFC lender together with additional control variables. The form of these regressions is as follows:

$$Y_{it} = \alpha + \beta \cdot AHFC_{it} + X_{it} + \varepsilon_{it} \quad [1]$$

$$Y_{it} = \alpha + \beta \cdot AHFC_{it} + \gamma \cdot AHFC_{it} \cdot Year_t + X_{it} + \varepsilon_{it} \quad [2]$$

Equation [1] helps understand how different outcomes ( $Y$ ) vary with AHFC status across all time periods, while equation [2] assesses how this has changed over time. The control variables are the vector  $X$ , and  $i$  and  $t$  correspond to a loan-borrower-lender-type cell, and time. The results

of the regressions are shown in Table 7 for HFC-N loans below INR 1,000,000 and those between INR 500,000 and INR 1,000,000 as in Table 6.

This is shown in Table 7 across two super panels (one for each AHFC loan size definition) and within each super panel across four panels for Equations [1] and [2], weighted first by the number of loans and second by the portfolio size. Panels 1A and 1B show that even after controlling for other features, AHFC have higher interest rates, smaller loan sizes, lower NPLs, and are more likely to lend to those who are new to credit. Where the difference between Panels 1A and 1B are muted, even after controlling for portfolio size in 1B. Interestingly among peer lenders, AHFC actually lend to salaried borrowers more often. Panels 1A and 1B both show that AHFC are doing something different to the competition in the housing loan and borrower space, and this is also true for the narrower AHFC loan definition in Panels 2A and 2B.

Panels 1C, 1D, 2C and 2D show that, over time, AHFC have increased interest rates for larger loans and reduced them for smaller loans; reduced loan sizes for smaller loans and increased loan sizes for larger loans, reduced NPLs; and targeted slightly younger borrowers. However, the rates of drift are not substantial to reverse the results from Panels 1A, 1B, 2A and 2B. For the wider AHFC loan definition (HFC-N loans below INR 1,000,000) the regression framework shows in terms of magnitude, NPLs are 265 basis points lower at AHFC, and AHFC have a 13 percentage point margin in lending to those who are new to credit, after controlling for similar loan, borrower, and lender type characteristics. While for the narrower AHFC loan definition (HFC-N loans between INR 500,000 to INR 1,000,000), NPLs are 268 basis points lower and AFHC have a 12 percentage point margin in lending to those who are new to credit.

This clearly shows that AHFC are different across both AHFC loan definitions and this fully conforms to the anecdotal evidence and the summary statistics in Table 6. These new lenders have been able to find a market niche, grow, and fine-tune their lending strategy to manage risk while increasing income. Indeed, these could be a useful example for other geographies provided the pre-existing conditions are similarly conducive. The next section assesses government housing finance subsidy programs using a similar lens.

**Table 7: Regressions of Housing Loans and Borrower Outcomes for AHFC Versus Comparators across Two AHFC Loan Definitions**

	(1) Int	(2) Size	(3) NPL	(4) Tier 1	(5) Co-App	(6) Female	(7) Salaried	(8) Age	(9) New
<b>Super Panel 1</b>									
Panel 1A: Equation [1] Weighted by number of loans for loans less than INR 1M									
AHFC	4.52***	-5.20***	-3.03***	0.00***	-0.01***	-0.09***	0.08***	-1.12***	0.09***
R <sup>2</sup>	0.40	0.30	0.80	0.95	0.52	0.32	0.30	0.17	0.28
Panel 1B: Equation [1] Weighted by portfolio size for loans less than INR 1M									
AHFC	4.43***	-14.58***	-2.65***	0.00***	-0.06***	-0.03***	0.09***	-1.96***	0.13***
R <sup>2</sup>	0.42	0.43	0.73	0.95	0.51	0.34	0.29	0.21	0.28
Panel 1C: Equation [2] Weighted by number of loans for loans less than INR 1M									
AHFC × Year	-0.100***	-0.395***	-1.054***	0.000***	0.016***	-0.007***	0.010***	0.015**	-0.014***
R <sup>2</sup>	0.35	0.28	0.64	0.95	0.48	0.25	0.25	0.14	0.20
Panel 1D: Equation [2] Weighted by portfolio size for loans less than INR 1M									
AHFC × Year	0.003***	1.043***	-0.608***	0.001***	0.047***	0.004***	0.015***	0.020***	-0.028***
R <sup>2</sup>	0.36	0.40	0.52	0.95	0.46	0.27	0.23	0.16	0.19
Observations	23,245,203	34,360,277	24,684,949	34,360,277	34,360,277	34,360,277	34,360,277	32,813,692	34,293,278
<b>Super Panel 2</b>									
Panel 2A: Equation [1] Weighted by number of loans for loans between INR 0.5M–1M									
AHFC	4.08***	-3.24***	-2.88***	0.00***	0.09***	-0.06***	0.12***	-1.85***	0.12***
R <sup>2</sup>	0.40	0.29	0.80	0.95	0.52	0.32	0.30	0.17	0.28
Panel 2B: Equation [1] Weighted by portfolio size for loans between INR 0.5M–1M									
AHFC	4.14***	-13.23***	-2.68***	0.00***	-0.03***	-0.03***	0.10***	-2.15***	0.12***
R <sup>2</sup>	0.42	0.43	0.73	0.95	0.51	0.34	0.29	0.21	0.28
Panel 2C: Equation [2] Weighted by number of loans for loans between INR 0.5M–1M									
AHFC × Year	-0.058***	0.109***	-1.289***	-0.001***	0.021***	-0.006***	0.007***	-0.086***	0.011***
R <sup>2</sup>	0.35	0.27	0.64	0.95	0.48	0.25	0.25	0.14	0.20
Panel 2D: Equation [2] Weighted by portfolio size for loans between INR 0.5M–1M									
AHFC × Year	0.036***	1.570***	-0.776***	0.000***	0.047***	0.003***	0.014***	-0.022***	-0.014***
R <sup>2</sup>	0.36	0.39	0.52	0.95	0.46	0.27	0.23	0.16	0.19
Observations	23,245,203	34,360,277	24,684,949	34,360,277	34,360,277	34,360,277	34,360,277	32,813,692	34,293,278

Notes: Int = interest rate. NPL = non-performing loan, Co-App = if loan has a co-applicant, which is usually a spouse of the main applicant and New = new to credit which is defined as borrowers with less than two years of credit history. Regressions are weighted by portfolio outstanding and control for all other loan, borrower, and lender characteristics available for each column. For example, the regression on interest rates is controlled for other lenders, geography, borrower occupation, borrower gender, loan size, application type, borrower age, borrower credit history length, and borrower occupation. Coefficient of other control variables not shown. \* p<0.05, \*\* p<0.01, \*\*\* p<0.001

## 7 PMAY-CLSS Loans and Recipients

In India there are a range of government-funded housing programs, and currently the PMAY umbrella initiative is arguably the most important, especially for potential urban owner occupiers.<sup>17</sup> The PMAY umbrella initiative (which includes other programs aside from the PMAY-CLSS) was launched in June 2015 and aims to provide affordable housing to the poor. Its original stated objective was to provide housing for all by 2022, the year by which it aimed to build 50 million homes: 30 million in rural areas and 20 million in urban areas. The PMAY helps households in the EWS, LIG, and middle-income groups I and II (MIG-I and MIG-II).<sup>18</sup> The ‘Housing for All by 2022’ program has been implemented under two broad categories: PMAY Urban and PMAY Gramin (Rural). The PMAY suite of programs provides central assistance through state government to urban local bodies and other implementing agencies across four pillars: (a) an in situ rehabilitation of existing slum dwelling using land as a resource through private participation, (b) a credit linked subsidy scheme (CLSS) administered through primary lending institutions, (c) a lump-sum subsidy for the purchase or construction of a dwelling called the affordable housing in partnership (AHP), and (d) a subsidy for beneficiary-led construction or enhancements to dwellings.

The housing finance linked subsidy program—CLSS—provides an up-front subsidy for eligible borrowers who obtain a housing loan from a participating lender. For EWS and LIG borrowers, the CLSS provides an up-front subsidy of up to INR 267,280 on the first INR 600,000 of a housing loan, calculated as the net present value of the interest of a fixed mortgage payment of up to 20 years at an interest rate of 6.5 percent. EWS and LIG borrowers must have a woman as a co-owner of the mortgage, or a woman must be the borrower herself. For MIG-I and MIG-II the subsidy is for the first INR 900,000 and INR 1,200,000 of a housing loan and is the net present value of the interest of this value (or lower) at an interest rate of 4 and 3 percent over 20 years. Figure 11 shows the rupee value of the PMAY-CLSS subsidy for different income groups as the loan amount varies, and Figure 12 shows how the subsidy percentage of the loan varies by the loan

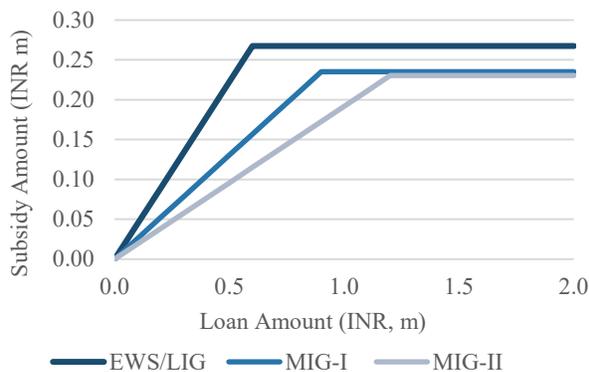
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<sup>17</sup> See the annex for a complete history of housing and housing finance programs.

<sup>18</sup> These are definitions that are housing specific in India and are not means tested. They also combine area and the square footage of the dwelling in an unusual way, especially for single- or two-person households. The current thresholds are: EWS households are those with annual income below INR 300,000 and a carpet area of less than 30 m<sup>2</sup>; LIG between INR 300,000 and INR 600,000 and a carpet area of less than 60 m<sup>2</sup>; MIG-I between INR 600,000 and INR 1,200,000 and a carpet area of 160 m<sup>2</sup>; and MIG-II between INR 1,200,000 and INR 1,800,000 and a carpet area of less than 200 m<sup>2</sup>.

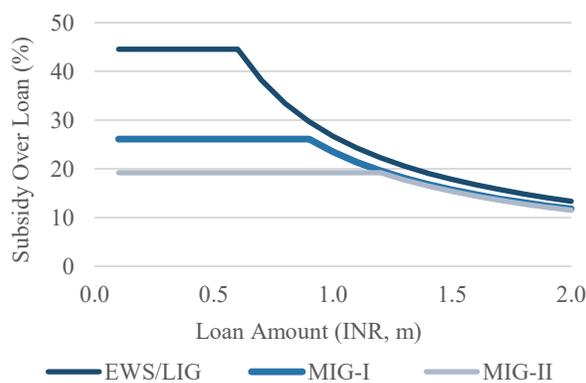
amount for different income groups. Figure 12 demonstrates that EWS/LIG segments are provided a 45 percent subsidy up to the loan threshold of INR 600,000, while the corresponding thresholds and percentages are INR 900,000 and 26 percent for MIG-I, and INR 1,200,000 and 19 percent for MIG-II. For each income segment, the subsidy percentage decreases exponentially after the threshold is reached as shown in Figure 12.

**Figure 11: CLSS Up-Front Subsidy Amount in INR**



Source: Authors' calculation using official definitions.

**Figure 12: CLSS Up-Front Subsidy Percentage (%)**



Source: Authors' calculations using official definitions.

These programs have been popular, though the vast range of housing programs and requirements have been reported to be confusing for the market. As of December 2019, a total of 11.4 million dwellings have been authorized under the PMAY.<sup>19</sup> Two-thirds of this are from the fourth pillar of PMAY—the beneficiary-led construction which is an up-front building subsidy for INR 150,000 to eligible borrowers.

Total CLSS subsidies until December 2019 were INR 203 billion and total PMAY investment into projects was INR 6 billion. These programs are designed to be cost and risk-sharing, and the CLSS works with the housing finance market. In terms of leveraging private capital and by providing subsidies at the appropriate juncture in a borrower's financial decision tree, these programs have good design features. However, the vast suite of programs and the urban-rural distinction does cause market confusion and increases transaction costs.

The credit bureau data provide a data field for housing loans supported by the PMAY-CLSS scheme; although reporting to a credit bureau is not mandatory, a number of lenders do share this

<sup>19</sup> The November 2021 figure is 11.4 million.

information with credit bureaus. As data are available at a more granular level in the credit bureau, it is possible to see what types of loans and borrowers have PMAY-CLSS tags from a quantitative perspective.

Table 8 shows the number and value of outstanding housing loans that are supported by the PMAY-CLSS and reported to the credit bureau. These values correspond to the total value of the loan and not the PMAY-CLSS subsidy. The number of PMAY-CLSS tagged loans grows from just five in 2016 to a total of just under 400,000 in 2020 in the credit bureau data. In terms of value, the total credit bureau PMAY-CLSS loan value is half a billion rupees. The December 2019 total for PMAY-CLSS subsidies was INR 203 billion—this is a net present value as the up-front subsidy is a payment for future interest payments by the borrower. Therefore, a factor of 2.5 between the total PMAY-CLSS subsidies and the outstanding loan amounts is not unrealistic given the data in Figure 12. In terms of percentages, the PMAY-CLSS has grown to reach 2.56 percent of all housing loans in value and 2.37 percent in number in the credit bureau data.

**Table 8: Number and Value of PMAY-CLSS Supported Housing Loans (INR, thousands)**

	2016	2017	2018	2019	2020
Number of loans	5	1,849	27,641	165,000	398,950
Portfolio value of loans (INR, millions)	9	1,070	23,200	189,000	551,000
PMAY-CLSS share to all loans in value (%)	0.00	0.01	0.14	0.97	2.56
PMAY-CLSS share to all loans in number (%)	0.00	0.02	0.20	1.05	2.37

*Source:* Credit Bureau Data.

Table 9 shows the total PMAY-CLSS shares of loans by lender types and regions in 2020. PMAY-CLSS loans are a small percentage of Foreign and Other banks’ portfolios, while they are a larger percentage of HFC—and in particular HFC-N (those HFC-N with a median portfolio size above INR 1,000,000, or non-AHFC HFC-N). As of March 2020, at least 5.6 percent of loans in number or 5.4 percent of outstanding loans were underwritten with PMAY-CLSS support at HFC-D and only 1 percent at public banks—while at HFC-N it was 5.4 and 8.2 percent, respectively. Weighted by population, these loans are spread evenly geographically, with Tier 1 cities have marginally the lowest share.

As the market segmentation of lender and borrowers has been outlined in the section earlier, it is useful to understand what types of loans the PMAY-CLSS supports. The PMAY-CLSS design is intended for marginal borrowers to help them overcome the borrowing hurdle—therefore

priority is given to younger, less salaried, newer to credit, and perhaps those more likely located in Tier 2 cities given the high cost of ownership in Tier 1 cities.

**Table 9: PMAY-CLSS Shares by lender type and region (2020)**

	<b>Weighted by loans (%)</b>	<b>Weighted by portfolio (%)</b>
<b>Panel A: By lender</b>		
HFC-D	5.37	5.59
Public	1.16	1.04
Private	0.76	1.71
AHFC	1.73	1.00
Non-AHFC HFC-N	5.40	8.20
Other	0.10	0.07
Foreign	0.00	0.00
<b>Panel B: By region</b>		
Rural	1.91	2.81
Tier 1	2.72	2.35
Tier 2	2.67	2.71
Tier 3	2.29	2.49

*Notes:* THE AHFC definition here is HFC-N loans below INR 1,000,000 at origination.

Table 10 presents the characteristics of PMAY-CLSS supported loans to verify the profile of loans and borrowers against the design. It shows that PMAY-CLSS loans are large, with a median of INR 1,250,000. Further it shows that the interest rates are lower than those for commercial banks (which is by design) and although there is a large salaried proportion, many are new to credit.

**Table 10: PMAY Borrower and Loan Characteristics, 2016–2020**

	<b>Weighted by loans</b>	<b>Weighted by portfolio</b>
Median loan size at inception (INR)	1,250,000	—
NPLs (%)	0.5	0.5
Lender: HFC-D (%)	44.4	52.5
Lender: Public banks (%)	18.2	16.7
Lender: Private banks (%)	13.6	7.7
Lender: AHFC (%)	5.4	1.8
Lender: Non-AHFC HFC-N (%)	18.1	21.1
Lender: Other (%)	0.3	0.2
Tier 1 city (%)	20.9	27.0
Tier 2 city (%)	31.4	29.7
Tier 3 city (%)	26.6	24.0
Average interest rate (%)	9.7	9.3
Co-application (%)	52.9	51.7
Female applicants (%)	32.8	33.6
Age when underwritten (years)	37.1	36.4
Salaried occupation applicants (%)	(%)	40.0
New to credit (%)	29.4	26.2
NPLs (%)	—	0.5
Observations	406,094	404,312

Finally, the delinquency rate is low (but also the program is new, and the portfolio is not seasoned yet) and Tier 2 cities have a higher share of PMAY-CLSS loans. Interestingly, the reporting or compliance of having a co-applicant is not perfect given the estimated share is only just above 50 percent. All this suggests that there is room to better target the PMAY-CLSS. The average loan size is on the higher side and not all applicants seem to be complying with the co-applicant requirement. The share of those who are new to credit is encouraging. Although the PMAY-CLSS interest rate is effectively subsidized, the level of these lower interest rates suggests that risk management for these loans may not on par with other portfolios. The lowest lending to NPL spread from Table 4 is 6.6 percentage points at public banks, while HFC-D have a spread of 9 percentage points. Given that there are many more PMAY-CLSS at HFC-D lenders, the 9.7 average interest rate for PMAY-CLSS seems insufficient to cover risks and costs.

The targeting of the PMAY-CLSS can be assessed more rigorously in a regression framework. The final analysis is to assess if, on the margin, the PMAY-CLSS is efficiently targeting those who are less likely to get a loan in an ex-post assessment. Information on rejected mortgage applications is not available. Therefore, it is not straightforward to conduct a natural experiment. However, it is instructive to identify loans and borrowers that are similar to a PMAY-CLSS recipient and see if there is any meaningful difference in the one dimension that is omitted. This is akin to the approach in Equation [1]. For example, if we control for everything as best as possible in the data available, except for gender, we can test if PMAY-CLSS recipients are more likely to be female. This is shown in Table 11.

**Table 11: Measuring the Effectiveness of PMAY-CLSS Targeting**

	Weighted by number of loans		Weighted by portfolio size		Observations
	PMAY-CLSS	R <sup>2</sup>	PMAY-CLSS	R <sup>2</sup>	
Interest rate	-0.07***	0.42	-0.04***	0.48	16,870
Size	0.09***	0.17	0.01***	0.09	16,870
NPL	-1.17***	0.89	-1.01***	0.8	16,870
Tier 1	-0.02***	0.08	-0.05***	0.06	16,870
Co-applicant	0.11***	0.35	0.03***	0.35	16,870
Female	0.02***	0.07	0.01***	0.08	16,870
Salaried	0.04***	0.12	0.05***	0.09	16,870
Age	-0.10***	0.03	-0.13***	0.03	16,870
New	0.13***	0.07	0.11***	0.05	16,870

*Notes:* Each row is a regression as in Equation [1] with the row heading as the dependent variable and an indicator if the loan is PMAY-CLSS supported. Observations are cells of common loan, borrower and lender type characteristics. Each regression controls for those characteristics not being regressed as the dependent variable. \* p<0.05, \*\* p<0.01, \*\*\* p<0.001

Each row in Table 11 is a regression as in Equation [1], but this time with a PMAY-CLSS indicator instead of an AHFC indicator variable. The results show that indeed the PMAY-CLSS has loan and borrower elements that are both progressive and regressive in terms of targeting: interest rates are lower (4 percentage points than would otherwise be estimated); the loan size is higher; NPLs are lower; borrowers are more likely to be outside Tier 1 cities; borrowers are more likely to be female, younger, and are new to credit. However, they are also mostly salaried.

This suggests that—if indeed the demand side is where the housing constraints are most binding—the PMAY-CLSS is helping on the margin push toward less well-covered market segments. If the challenge is on the supply side, as suggested by Karmali and Weng (2022), then these PMAY-CLSS subsidies can be better targeted. The interest rate of the PMAY-CLSS seems too low and the loan size too large. It is of concern that the average PMAY-CLSS loan size is high at INR 1,250,000—suggesting that the targeting can be strengthened through tools such as means testing or other socioeconomic and qualitative approaches to the allocation of subsidies.

## **8 Conclusion**

This paper takes a quantitative view of a new class of lender (AHFC) in the Indian mortgage market by leveraging detailed credit bureau data. The anecdotal evidence in the literature shows that these lenders are using a high-touch approach common to microfinance to lend to those who are newer to credit, with higher interest rates, while managing the risk of these borrowers.

Through a lender market segmentation exercise, the credit bureau data are used to construct a number of definitions for these lenders as there is no unique financial institution license type for AHFC. The results from the data vindicate this qualitative narrative and show that AHFC have grown, especially in terms of the number of loans in Tier 2 and 3 cities and in rural areas (if the AHFC definition is extended below INR 500,000 at housing loan inception). Their average loan sizes are between 2.5 to 1.7 times smaller than in Tier 1 cities and they charge higher interest rates. The econometric analysis shows that in market segments where they compete with other lenders, AHFC are doing something different. They are lending more often to those who are new to credit and are not salaried. Their delinquency rates to date are below the additional lending spread that they charge compared to other lenders, and so far, this seems a sustainable business. This is particularly true for the AHFC loan definition that imposes a floor for loans at INR 500,000. The

detailed analysis herein dispels the worry that this is a high-risk business from inception. The loan amounts are manageable, and it seems AHFC know their customers well given the high-touch microfinance strategies that they appear to be using. However, the exercise to tag lenders and loans in the available data is not perfect, and the analysis here contains smaller HFC-N loans as well that may not be underwritten by AHFC lenders as the detailed credit bureau data do not allow a separation of lender types.

The policy implications are to allow these AHFC to continue to lend to those neglected by legacy lenders provided that these new lenders have good prudential and corporate governance standards. Their novel approach to housing finance should not attract excessive regulation, especially within the arc of ‘government as a facilitator’ of housing. The detailed annex shows the special institutional context in which AHFC emerged in India. This context is central to the narrative. The unique dual housing finance setup in India has allowed for local currency capital markets to grow and these AHFC have likely found a niche between borrowing long term in local currency and lending—often with the support of government programs—to those deemed unworthy borrowers by other institutions. Their growth and low delinquency rates are impressive. In terms of the size of the housing finance market in India, the injection of capital in public sector banks in 2017 increased the number of loans from these lenders, especially in non-Tier 1 markets. Although AHFC have grown rapidly from a low base—especially in the number of loans—they only represent between 1.4 to 2.4 percent of the mortgage market.

The implications for other countries trying to replicate this model would be to assess a candidate market’s local currency capital market and whether alternative credit screening techniques used by AHFC, such as the diary cash log method, can be borrowed from this successful India example. The annex allows for a more detailed peer country institutional comparison. The experience of microfinance has shown the risk of mission drift, where once microfinance institutions are allowed to accept deposits, they find lower risk corporate borrowers and start to compete with banks. Although not conclusive in this study, it seems that by not allowing deposits, the HFC-N license type has spurred a new type of mortgage lending that a deposit-led liability business model would never allow.

The paper also discusses the PMAY-CLSS loans and borrowers. This subsidy program has grown since 2016 and there are now just below 400,000 housing loans supported by this program. There are elements of the PMAY-CLSS targeting that are both regressive and progressive. PMAY-CLSS beneficiaries are more likely to live in Tier 2 cities and be new to credit; however, the loan size is large compared to other loans and the interest rate seems to be too low. This raises concerns about appropriate targeting, risk management, and the rationing of public funding. It would be prudent to tighten the eligibility requirements for the PMAY-CLSS, ensure compliance is high (for example, for co-applicants), and review beneficiary profiles to ensure that the most deserving are obtaining this public support.

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## 9 Annex on the History of Housing Finance and Housing Policy in India

### 9.1 Introduction

To understand the growth of AHFC, it is critical to place these relatively new institutions in the arc of the history of housing finance and housing policy in India. Given the early success of these institutions in India, shown in this paper, a critical question is how other markets and countries can borrow from this example to support housing finance for those on the margins of more traditional housing finance around the developing world. This annex provides a detailed history of housing finance and housing policy in India to draw attention to the complexity of the housing ecosystem in India and to allow policy makers to draw parallels or otherwise to the conditions in other markets to gauge if similar institutions such as AHFC could flourish in other countries. Following Ghosh (2018), this annex begins with a three-paradigm presentation of the history of housing finance and housing policy. After which, the annex explores contemporary housing finance and housing policies in greater detail.

Although the 1946 Constitution of India is silent with respect to a public role in the provision of housing, the Government of India assumed a responsibility to provide housing in its First Five-Year Plan in 1951. Over the course of history, the role of the public sector in housing in India has changed significantly. This can be traced across three paradigms from the 1950s to today: (a) starting from a *provider* perspective, where housing provision was squarely in public hands as part of a larger welfare system with direct subsidies to household in the 1950s and 1960s; (b) to the role of an *enabler* of housing using cross-subsidies and more flexible financing instruments during the 1970s and 1980s; (c) to being a *facilitator* with the introduction of market-based instruments and demand-side interventions since 1990.

In the early years after independence, the institutional setup for public housing was developed through the establishment of housing boards, housing cooperatives, and public agencies, together with the enactment of urban development regulations in major cities in the form of master plans and building bylaws. This institutional development occurred within a context of rapid urbanization because of the country's incipient industrialization that began during World War II. This was marked by steady and continuous migration from rural areas to urban areas and cities. This migratory pressure into urban areas, which was coupled with high population growth

(averaging 2 percent growth per year from 1950 to 1990), placed a strain on the need for housing in urban areas. Despite the national government's commitment to address this housing challenge, the economic dynamism of cities, increasing unemployment or underemployment in agriculture, and the added draw of people from rural areas mainly from the poorer segments of society resulted in the creation of urban slums with substandard dwellings that lacked basic amenities such as water and electricity, and were largely unsanitary dwellings that were built from non-permanent construction materials (Government of India 1951).

The post-independence housing challenge was not limited to urban areas. There were also rural housing challenges, but their nature was different. While in the cities the main challenges were high land costs and overcrowding, in rural areas the main issues were the lack of water, communication, transportation, and sanitation services.

Successive Five-Year Plans developed and monitored by the national government's Planning Commission are evaluated throughout this analysis from a housing sector lens, starting from the First Five-Year Plan in 1951 through to the Seventh Plan in 1985, when the development of the housing finance sector was presented, and finally the last Five-Year Plan—the Twelfth Plan in 2012.

Sivaramakrishnan (1969) has noted that public housing policy has been developed based on two dichotomies: under the assumption that the housing market was part of the welfare policy (a public good) or the presumption that it is a productive sector capable of fostering economic growth (a private good). These dichotomies match the literature's classification of India's housing programs into three broad paradigms for housing policy mentioned above: (a) government as a *provider* of housing, (b) government as an *enabler* of housing, and (c) government as a *facilitator* of housing. These three paradigms can be mapped to the individual government programs in housing that were included in each Five-Year Plan of the country. Although the relationship between programs and the overarching paradigms is not perfect, there are clear trends in the types of programs designed and the contemporaneous policy direction. It was not until the early 1990s that the role of the financial sector in housing finance was incorporated into government policy. These paradigms, plan numbers, and corresponding government programs are summarized in Table 12. The subsequent subsections discuss each of these three paradigms separately.

**Table 12: Housing Government Programs and Legislation since Independence**

Paradigm	Plan number	Plan year range	Salient Government programs
Government role as provider	First	1951–1956	Subsidized Housing Scheme for Industrial Workers and EWS (1952) National Buildings Organization established (1954) Low Income Housing Scheme (1954)
	Second	1956–1961	Subsidized Housing Scheme for Plantation Workers (1956) Middle Income Group Housing Scheme (1959) Rental Housing for State Government Employees (1959) Village Housing Projects Scheme (1959) Land Acquisition and Development Scheme (1959)
	Third	1961–1966	
	Fourth	1969–1974	Housing and Urban Development Corporation (HUDCO) established (1970) Provision of house sites to houseless workers (1971) Environmental Improvement of Urban Slums - EIUS (1972)
	Fifth	1974–1978	Housing Development Finance Corporation (HDFC) established (1977)
Government role as enabler	Sixth	1980–1985	Sites and Services Scheme - SSS, IDSMT started (1980) Scheme of Urban Low-Cost Sanitation (1981) Indira Awas Yojana (1985)
	Seventh	1985–1990	Urban Basic Services for the Poor, UBSP (1990)
	Eighth	1992–1997	Model Rent Control Legislation, MRCL (1992) NHP revised (1994) National Slum Development Program, NSDP (1996)
Government role as facilitator	Ninth	1997–2002	2 million housing program (1998) National Housing and Habitat Program, NHHP (1998) Valmiki Ambedkar Awas Yojana (2001)
	Tenth	2002–2007	Jawaharlal Nehru National Urban Renewal Mission, JNNURM (2005) National Urban Housing and Habitat Policy, NUHHP (2007)
	Eleventh	2007–2012	Rajiv Awas Yojana (2009) Affordable Housing in Partnership, AHP (2009)
	Twelfth	2012–2017	Credit Risk Guarantee Fund Scheme, CRGFS (2012) Rajiv Rinn Yojana, RRY (2013) AHP Guidelines revised (2013) Model State Affordable Housing Policy (2015) National Urban Rental Housing Policy, NURHP (2015) Pradhan Mantri Awas Yojana, PMAY (2015)
	—	2017–Present	Real Estate Regulation and Development Act, RERA (2016) Model Tenancy Act (2021)

*Source:* Adapted from Ghosh (2018).

*Notes:* 1966–1969 Plan Holidays: Due to the failure of the Third Plan, the government was forced to declare ‘plan holidays.’ Three annual plans were drawn during this intervening period. 1978–1980 Rolling Plan: The Janata Party government rejected the Fifth Five-Year Plan and introduced a new Sixth Five-Year Plan (1978–1980). This plan was again rejected by the Indian National Congress government in 1980 and a new Sixth Plan was made. 1990–1992 Annual Plans: The Eighth Plan could not take off in 1990 due to the fast-changing economic situation and the years 1990–1991 and 1991–1992 were treated as Annual Plans.

## 9.2 A Provider of Housing: 1951–1964

India's post-independence policy makers conceived an urban-centered industrial country that would anchor rural labor absorption and lead to long-term sustained economic growth. Theoretically, the process would bring longer-term gains to poor people, including through much sought-after rural labor absorption.

The first thorough evaluation of the country's housing situation was conducted in the Second Five-Year Plan in 1956. This revealed a significant 'shortage' of housing mainly in urban areas. The supply shortage metric that was used, and is still used today, is to consider the stock of housing that is 'inadequate.'<sup>20</sup> This has been commonly defined as whether a dwelling is *pucca*—or if its walls and roof are built of permanent building materials. In the case of roofing, permanent materials would include wood, stone, cement, reinforced concrete, iron sheets, or asbestos.<sup>21</sup> In general, this approach is a problematic characterization of any housing assessment as it is not grounded in economic choice or relative quality improvements in the built environment (Karmali and Weng 2022). This adequacy of the housing framework also subsumes that transforming a current household from an 'inadequate' dwelling to an 'adequate' dwelling would be welfare enhancing, without any regard for other housing amenities that hedonic pricing regressions would classify as valuable—such as distance to work. Despite these methodological shortcomings that admittedly only came to the international housing literature later in the 1970s, most of the early Five-Year Plans characterized housing through this 'shortage' approach.

In 1951, 2.5 million dwellings were deemed to be 'needed' in addition to the 10 million existing stock of dwellings in urban areas.<sup>22</sup> In rural areas, the contemporaneous 1951 analysis showed that housing quality was worse, especially for access to clean water and good sanitation (Government of India 1956). To address this situation, different policies were implemented from 1951 to 1964, including programs targeting housing demand through a subsidized approach that offered loans and subsidies to cover up to 80 percent (up to a maximum per income grouping) of the construction cost and land acquisition cost. These programs were administered through state governments, charities, and hospitals directly to beneficiary households. One such program

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<sup>20</sup> The second plan does mention that: "housing statistics are also extremely deficient and incomplete and data are not available showing either the progress of new construction or the extent of shortage."

<sup>21</sup> Asbestos is not banned in India, despite a 1986 moratorium on licensing any new asbestos mining.

<sup>22</sup> Assuming that an estimated 62 million people resided in urban areas in 1951.

launched in 1956 was called Low Income Group Housing Scheme that addressed housing demand through long-term home building loans to individuals and cooperatives. The eligibility criteria was for individuals and cooperative members with income less than INR 6,000 per year, and loans had a 3 percent interest rate repayable in three years. By the end of the Second Plan all housing program loans amounted to INR 2.15 billion and 40,000 benefited from the different housing schemes, including the Low Income Group Housing Scheme.

Additionally, all Five-Year Plans incorporated 'slum clearance' policies, as a mechanism to directly address these 'new' dwelling environments in large urban centers. Overall, these 'clearance' policies met with limited success mainly due to the lack of viable housing options to accommodate the existing slum residents. During the first three Five-Year Plans, there was a net reduction of urban housing stock due to these slum clearance policies and a limited private supply of new housing (Hingorani 2011).

All housing programs conceived through the successive Five-Year Plans paid special attention to rural housing policies, which aimed to improve the construction quality as well as water and sanitation systems. This is because after India's independence, almost 85 percent of the population still lived in rural areas. However, the availability of public funding for rural housing was limited, and only pilot housing programs were launched in rural areas. For example, the Rural Community Program where communities assumed a larger responsibility in improving village housing conditions, or the establishment of brick kilns in rural areas starting from 1950 to improve rural dwelling construction. Indeed, this was an early warning that the provider of housing paradigm would not be able to address all housing challenges, due to the real budget constraint that was more binding in rural areas.

One program from this period was implemented by the national government to provide housing to industrial workers: the Subsidized Industrial Housing Scheme. The scheme provided a combination of loans (with tenors up to 15 years) and grants to cooperatives of industrial workers, state governments, and public authorities. The purpose of these funds was to cover the cost of construction up to a prescribed maximum cost, and funding differed depending on the number of rooms in the proposed dwelling. These grants would cover between 25 and 50 percent of the cost (Government of India 1951). On the legislative side, the government enacted regulations to ensure

the correct use of the land, and regulations to enforce building bylaws. However, compliance was limited. This contributed to pockets of unorganized urbanization, unauthorized squatter settlements, poor construction techniques, basic infrastructure deserts without water supply or sanitation.

Given the provider paradigm at the time, the increasing cost of building materials was often cited as a major barrier for growing the supply of housing. It was also a period where a free market and unregulated prices were not the prevailing policy priority. As a result, the National Buildings Organisation (NBO) was established. It was tasked to develop low-cost housing designs and explore ways to reduce costs through appropriate choice of building materials and an efficient utilization of labor (Hingorani 2011). The organization was also mandated to carry out technology transfer, experimentation, development, and dissemination of housing statistics.

Overall, several commentators have noted that many of these housing programs in this first provider paradigm were not able to meet their ambitious targets. Hingorani (2011) notes that the intended results of these programs were not met, as the 'shortage' of dwellings remained high. Further the target low- and middle-income beneficiaries were frequently not able to access housing programs, due to poor design and nonexistent means testing. Another challenge that is couched within the parameters of the provider paradigm, in addition to the aforementioned high cost of building materials, was the increasing cost of land in urban areas which posed a major challenge. Other measures such as rent control policies or land requisition proved to be a major obstacle for private investment along with bureaucratic and procedural hurdles (Hingorani 2011). Another review of this period concludes that the top-down provider paradigm to housing, with substantial involvement by the central government in all aspects from land acquisition to construction and allocation, resulted in limited success, in particular low impact for the target groups (Tiwari and Rao 2016). Sahu, Zachariah, and Baski (2009) note that due to the limited success of these programs and the lack of a substitute private sector to supply housing there was a limited supply. The new housing supply fell behind the demand because of failure to implement programs, lack of funds, and rising construction costs (Sahu, Zachariah and Baski 2009).

### **9.3 An Enabler of Housing: 1965–1990**

Starting in 1965, national policy makers began to question the viability of the provider paradigm. All the successive Five-Year Plans from 1965 to 1990 conceded the limited past success of the public sector in providing adequate housing. Further, there was a recognition to engage with the private sector, sometimes simply to cope with the rapid population growth and high urbanization. For the first time, the private construction and real estate sectors were seen as important pillars of economic development and dynamism during the enabler paradigm period (Tiwari, et al. 2015).

From 1950 to 1980, public investments in housing through the successive Five-Year Plans represented nearly 7 percent of total public investment, other investments by public sector enterprises, departmental undertakings, and grants-in-aid institutions accounted for 11.3 percent, while private sector investment during the corresponding period was around 81 percent of total investment in housing in India (Government of India 1980).

Nevertheless, despite this growing recognition of the limited success of policies designed during the provider paradigm period, the national government continued implementing existing loan and subsidy programs and policies with minor adjustments. There was no abrupt change across paradigms, but the evolution was more gradual. Even though the rate of urbanization increased, a large majority of the population continued to live in rural areas: with only 23 percent of the population living in cities in 1980. However, this number as a percentage does not express the magnitude of the challenge of housing provision in urban areas for almost 160 million people (Tiwari and Rao 2016). The Fourth Five-Year Plan (1969–1974) reoriented housing policy toward a new strategy, especially in relation to ‘slum clearance.’ In this plan, the national government admitted the inefficiencies of the previous instruments that led in some cases to the actual creation of new slums and the deterioration of existing ones (Government of India 1969).

The provider paradigm period was characterized by the direct delivery of housing programs to beneficiary households, where the government played a leading role for the provision of housing. In contrast, during the enabler paradigm period of 1965–1990, two major initiatives were launched that paved the way for a new public approach toward housing: the Environmental Improvement of Urban Slums Scheme (EIUS) in 1972 and the Sites and Services Scheme (SSS)

in 1980. The EIUS aimed to improve basic infrastructure in slums (both notified and not notified) of major cities. The program started in 11 cities and later expanded to 9 more cities. Its goals were ambitious and included the provision of tap water, community toilets and baths, drainage, street lighting, and the widening and paving of roads (Singh 2013). This program continued well into the 1990s where its scope was widened under the Eighth Five-Year Plan to incorporate other poverty alleviation programs (Mathur 2009). This recognition that the in-situ built environment can be improved through service provision was a marked departure from the relocation policies for slum residents during the provider paradigm period.

Similarly, in 1980 the government launched the SSS, which provide basic infrastructure or land for a fee to dwelling builders and contractors (Wadhwa 1988). Like the EIUS, the SSS was designed to be attuned to housing demand and its parameters allocated fiscal resources to sites which private parties deemed suitable. As a result, both the EIUS and the SSS have been characterized as a success for urban areas in the literature.

However, in rural areas, the challenges of low-quality construction and the lack of water and sanitation facilities remained. Although the urban government housing policy paradigm had shifted between 1965 and 1990, there was less change in the approach to rural housing. The rural-focused plans continued to program for the provision of building sites (or land) to all the remaining landless rural families, which was a legacy of the provider paradigm. Urban policy was faster to abandon such extreme goals, as fiscal resource constraints become more binding, especially for housing (Government of India 1980).

Given the growing fiscal constraints, an unsustainable level of subsidies promised under previous programs, and the limited success of many housing programs there was a realization in the 1970s that a strategy grounded in public provision of housing to all would not succeed to solve the 'slum problem' or the housing shortage (Mathur 2009). In response, an incremental approach to provide infrastructure to access transport and services and secure tenure was gaining consideration in the design of new programs (Wadhwa 1988).

In 1970, the national government embarked on establishing a publicly owned financial corporation to promote housing and urban development infrastructure. With this vision, the government created a national institution called the Housing and Urban Development Corporation

(HUDCO). The use of the legal structure ‘corporation’ cannot be overemphasized and is the hallmark of the enabler paradigm period. HUDCO’s mandate was to assist and promote housing and urban development programs with government agencies, which is fulfilled by providing finance for building sites and services, and other dwelling construction programs of housing boards. HUDCO’s social obligation required it to provide at least 55 percent of the credit to EWS and LIG households (Tiwari and Rao 2016).

In parallel, seven years later in 1977, the Housing Development Finance Corporation (HDFC) was established as a private sector financial institution. HDFC became the first specialized mortgage company in India and focused on retail lending based on market principles and targeted mainly middle- and high-income households. The success of HDFC led to the emergence of several other HFC, either as private sector or joint ventures with the co-ownership of the government, other banks, or insurance companies (Hingorani 2011). These were financial institutions with a special license to engage almost exclusively in housing finance.

On the regulatory side, in 1988 the government took major steps to address two of the most significant housing challenges in India: the regulatory framework and housing finance. The first one was the formulation of the National Housing Policy which established the foundation of housing policy in India. The National Housing Policy was amended on two occasions, in 1994 and 1998, to respond to the problems identified since its creation and to incorporate the National Habitat and Housing Policy (Ghosh 2018). These two initiatives laid the foundation, from the housing perspective, for the wave of liberalization that started in India in the 1990s.

The second major step was the creation of the NHB, established from the need to deepen the access to local currency long-term finance by individual households at a large scale, through a wholesale model. This was based on the experience in the US with the success of Freddie Mac and Fannie Mae. The preamble of the National Housing Bank Act of 1987 cements the NHB’s objective as: “...to operate as a principal agency to promote housing finance institutions both at local and regional levels and to provide financial and other support to such institutions and for matters connected therewith or incidental thereto...”<sup>23</sup>

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<sup>23</sup> The Housing Finance Bank Act (1987).

Wadhwa (2009) claims that the biggest contribution of the enabler paradigm period was in the housing finance sector: as housing credit expanded this had positive social and financial benefits, especially for MIG and high-income group (HIG) households. These incipient market-based programs laid the foundation for the third and final paradigm: the facilitator approach.

#### **9.4 A Facilitator for Housing: 1990–Present**

The wave of economic liberalization in India starting in the 1990s affected all sectors and branches of the economy, including housing. The housing policies and programs with direct subsidies to households were largely abandoned in favor of market-driven policies, as was also the case in other sectors. The Seventh Five-Year Plan (1985–1990) set the tone for a facilitator and promotional role of the public sector in the area of housing provision. The cornerstone of this was the further development of the housing finance market.

The first ideological shift was a recognition that urban areas were international centers for economic activity and identifying urban-specific needs required designated policies and measures that differed from those of the rural areas. This recognition was the realization that markets (mainly capital markets and housing markets) functioned in urban areas, but they were less or underdeveloped in rural areas.

A second marker was an explicit change in the role of the government that was redefined as a facilitator instead of a provider or an enabler. The Eighth and Ninth Five-Year Plans reiterated that the public sector was meant to create the facilitating legislation to boost private sector participation, whereas subsidy-based policies were reserved for vulnerable and underprivileged populations. For example, the Seventh Five-Year Plan states that “...the government’s role will have to be restricted to the improvement of slums, direct provision of housing to the weaker sections of the society and encouragement and support of housing finance institutions.” This went as far as demoting the responsibilities of slum improvement and EWS housing to lower geographic governmental tiers (Tiwari and Rao 2016).

Additionally, a major change in the institutional setup was a push for decentralization that took place through the 74th Constitutional Amendment in 1992. This made local authorities responsible for providing a service that has hitherto not been included in the constitution: housing. This sea change triggered the creation of various and diverse local housing policies, mainly

targeting LIG and EWS segments. With this housing devolution formalized in the constitution, local authorities emerged as the leading entities of housing. At the same time the provenance of the funding for these programs was still from the national government and are still referred to as centrally sponsored schemes (Mathur 2009). Therefore, the design is for implementation to be local, but part of the funding is from the national government. The difference with the previous schemes before 1992, was that the programs did not include local government co-funding. However, after partial devolution in housing programming, local authorities were required to match the funds coming from the central government.

On the financial side, this period was the most important for developing financial institutions to cover the needs for housing financial instruments. The Seventh Plan admitted that “[t]he most crucial need for housing development... [is to establish] a proper and diversified institutional structure for housing finance.” During the sunset years of the enabler paradigm period (1965–1990), the NHB was created to serve this purpose. Furthermore, other commercial banks and housing finance institutions were instructed by the government to participate on a larger scale in housing finance activities (Tiwari and Rao 2016).

This paradigm shift was a boon for private real estate developers who were able to benefit from lower interest rates, market-friendly legislation, and less government interference for approvals. The national government extended the expansion of capital market funding to government agencies and local authorities to meet their own financial obligations (Hingorani 2011). The increasing competition among players also brought its own losers. The public entities, agencies, housing boards, and other institutions that were traditionally mandated to provide financial support for the LIG and EWS population were not able to compete with the private operators without the support of the government which led to a reduction in their operations.

On the housing regulatory side, the liberalization process continued, and the housing legislation enacted from the provider paradigm period after independence to control prices or to limit building opportunities was progressively repealed. As a result, the Urban Land Ceiling and Regulation Act and Rent Control Acts were repealed in many cities. Even the Development Control Rules were changed and experimented with in many cities. It even allowed builders to construct high density buildings (with high floor space indexes) in areas without the needed supporting transportation of services infrastructure (Hingorani 2011).

However, other problems remained unsolved such as land acquisition. Early in the facilitator paradigm period, the government was not able to enact legislation to reduce the unorganized use of land and unauthorized construction is still a problem mainly in cities, which has contributed to the growth of some slums.

The overall evaluation of this period is positive considering the significant progress made in deepening housing finance, although this was often regressive rather than progressive. The primary beneficiaries have been increases in homeownership for MIG and HIG segments. The next subsections discuss housing finance and programs in more detail in this current facilitator paradigm.

#### **9.4.1 Contemporary Housing Finance in India**

This subsection discusses particular housing finance institutional details and regulations, and how these have evolved over time. It covers lenders, priority sector lending, and prudential supervision and regulation.

##### **9.4.1.1 Lenders**

HFC and SCB are the two main providers of housing finance in India. Other mortgage providers include cooperative banks and cooperative housing financial societies. Emerging housing finance institutions that serve more informal borrowers include small finance banks, microfinance institutions and AHFC. With the rapid growth of urbanization and growing incomes, the government recognized the critical importance of housing finance and the need for the development of a multi-institutional-type network to meet the growing investment needs of the housing sector. The history of this dual SCB and HFC setup on the supply side of housing finance originated in the 1990s, when SCB entered the housing market.

Commercial banks, or SCB, are defined as those banks that are licensed according to the second schedule of the RBI Act (1934) and that perform standard banking operations such as taking deposits and providing loans. SCB are categorized into three main groups according to their ownership and the nature of their operation: public sector banks, private sector banks, and foreign

banks.<sup>24</sup> Nationwide, as of March 2019, there are 87 SCB: 20 public sector banks with a total of 87,860 branches; 22 private sector banks with 32,375 branches; and 45 foreign banks with 300 branches. SCB are regulated and supervised by the RBI. Housing loans are an important part of SCB lending and are categorized as personal loans. As of March 2018, housing loans represented 12.7 percent of outstanding loans and 22.6 percent of loans to households.

The NHB has historically licensed and regulated HFC. The NHB defines HFC as “a company registered under the Companies Act, 1956 (1 of 1956) which primarily transacts or has as one of its principal objects, the transacting of the business of providing finance for housing, whether directly or indirectly.” As of January 2020 there were 101 HFC with a total of 5,100 branches across India, of which 18 have permission to accept public deposits.<sup>25</sup> As of August 2019, HFC are now regulated by the RBI. Before August 2019, HFC were regulated by the NHB under the provisions of the National Housing Bank Act of 1987.<sup>26</sup> The rationale for the change in regulator is based on NHB’s widening mandate as it has increasingly assumed the role of refinancer and lender to the housing finance sector, and this has created a conflict of interest.<sup>27</sup>

The HFC sector is highly concentrated with the top 2 HFC accounting for 58.5 percent of the total HFC loan portfolio and the top 5 HFC representing over 82 percent.<sup>28</sup> The first HFC was founded in October 1977. It was founded and capitalized as a ‘development finance institution’ by the Industrial Credit and Investment Corporation of India Limited and included equity from the International Finance Corporation (IFC).

In the early stages of regulated housing finance, HFC played a larger role than SCB, because the sole purpose of HFC was related to housing finance. However, the limited number of HFC branches inhibited the growth across the market in the early years.<sup>29</sup> The participation of SCB in the housing market increased in the early 1990s, as the RBI required SCB to allocate annually

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<sup>24</sup> Public banks include the State Bank of India and its associates and nationalized banks.

<sup>25</sup> Out of the 18 HFC with permission to accept public deposits, 6 of them are required to obtain prior written permission from the NHB before accepting any public deposits

<sup>26</sup> The NHB, wholly owned by the RBI, is a multi-functional development finance institution for the housing sector. Its functions include regulation and supervision of HFC, financing, and promotion and development of housing finance in India. The NHB aims to promote a sound, healthy, viable, and cost-effective housing finance system to cater to all segments of the population and to integrate the housing finance system with the overall financial system.

<sup>27</sup> Report on Trend and Progress of Banking in India 2018–19.

<sup>28</sup> ICRA - Indian Mortgage Finance Market Update for June 2019.

<sup>29</sup> For example, in 2000 there were only 524 HFC branches compared to 5,100 in 2018.

a minimum of 3 percent of their incremental deposits for housing finance amid demographic pressure on urbanization and rapid economic development, which raised the demand for housing and housing finance. The entry of SCB in the housing market started gradually. Toward the end of the 1990s, against the backdrop of a lower interest regime, industrial slowdown, slow credit growth, and ample liquidity, commercial banks recognized the potential of housing finance as an alternative avenue to lend their surplus funds. The rising disposable incomes, growing demand for housing, stability in real estate market, and fiscal incentives made housing finance an attractive bankable business.<sup>30</sup> From 2007 until 2018, HFC loan growth has been higher than of SCB, leading to redistribution in the market share between SCB and HFC. Recent annual nominal growth rates in outstanding housing loans between 2006 and 2018 have been 18.9 percent per year for HFC and 13.5 percent per year for SCB.

**Table 13: Minimum Capital and Public Equity Listing Requirements (February 2021)**

Regulation	NBFC		SCB
	NBFI-ND-SI	HFC	
<b>Starting capital requirements</b>	Minimum net owned equity required is INR 20 million.	Minimum net owned equity required is INR 200 million.	Minimum required initial paid up voting equity capital: (a) on-tap licensing of universal banks in the private sector – INR 5 billion. (b) For small finance banks - INR 2 billion.
<b>Public equity listing requirements</b>	No mandatory listing requirements.	No mandatory listing requirements.	Listing requirements (a) For a new universal bank - required to get its shares listed on a stock exchange within six years of commencement of operations. (b) For small finance bank - to be mandatorily listed within three years of reaching a net worth of INR 5 billion for the first time.

*Notes:* NBFC = Non-banking financial corporation. NBFI-ND-SI = Non-banking financial institution, non-deposit taking, systemically important.

Table 13 shows the capital and public equity licensing requirements for HFC and SCB as of February 2021. Historically, HFC have had lower requirements for starting capital and corporate

<sup>30</sup> Thingalaya, N. K., M. S. Moodithaya, and N. S. Shetty. 2009. "Housing Finance: A Study of Experiences of Commercial Banks." Prepared for Indian Institute of Banking and Finance.

governance. This gap has closed over the years as HFC licensing and corporate governance requirements have become stricter, though there remains a regulatory arbitrage gap.

#### **9.4.1.2 Priority Sectors and RBI Regulations**

All SCB institutions are required to extend a material portion of their loans to state-determined priority sectors. These priority sectors are: (a) agriculture; (b) micro, small, and medium enterprises; (c) export credit; (d) education; (e) housing; (f) social infrastructure; (g) renewable energy, and (h) others. As per the Master Circular on Priority Sector Lending, 40 percent of net bank credit must be in these sectors.<sup>31</sup> In June 2018 and then in April 2019, RBI increased the threshold for the size of housing loans that can be counted toward this priority target. The latest limits are INR 3,500,000 per unit in urban centers (with population above 1 million) and INR 2,500,000 in other urban centers. There are also many affordable housing schemes, both at the national and state levels, which promote the construction of affordable housing for the poor—see Section 9.4.2. Further, in 1998 RBI mandated SCB to allocate 3 percent of net new deposits of public sector banks to housing.

#### **9.4.1.3 Prudential Supervision and Regulation**

The fundamental premise underlying the non-banking financial company (NBFC), including HFC, regulatory framework is for ‘lighter’ regulation than banks. Arguably, it enables NBFC to have operational flexibility and develop sectoral and geographical expertise, resulting in a variety of financial services and ease of access. The regulatory arbitrage in favor of NBFC is a deliberate policy choice and is sometimes framed as a trade-off with cheap deposit funding that banks have access to. Arbitrage induced by ‘lighter’ regulation is built on the premise that any NBFC scale of operations is expected to be significantly low compared to banks and it may, therefore, not pose any significant systemic risk (Reserve Bank of India 2021).

The RBI assumed powers to regulate HFC from the NHB in 2019. HFC are a specialized NBFC type. In February 2021, the RBI established a new definition of HFC. To qualify as HFC, a NBFC must have 50 percent assets as housing loans, 75 percent of which should be for individual

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<sup>31</sup> RBI, Priority Sector Lending - Targets and Classification.

homebuyers (RBI Directives to HFC, February 2021). In particular, the updated definitions are as follows:

(a) “Housing finance company” shall mean a company incorporated under the Companies Act, 2013 that fulfils the following conditions: It is an NBFC whose financial assets, in the business of providing finance for housing, constitute at least 60% of its total assets (netted off by intangible assets). Housing finance for this purpose shall mean providing finance as stated at clauses (a) to (k) of : “[o]ut of the total assets (netted off by intangible assets), not less than 50% should be by way of housing financing for individuals as stated at clauses (a) to (e) of: “Housing Finance” shall mean financing, for purchase/ construction/ reconstruction/ renovation/ repairs of residential dwelling units.

Campbell, Ramadori, and Ranish (2015) studied the changing regulation across housing finance in India to understand how these impact mortgage outcomes at banks. They find that priority sector limits incentivize smaller and riskier loans, and this is particularly salient around the priority lending sector threshold. This suggests that banks are willing to accept a higher delinquency rate to meet these priority lending sector targets. They also find that banks are willing to accept a higher delinquency rate for mortgages when mortgages qualify for a more favorable capital risk weight. Another finding of their paper is that a change in the definition for delinquent mortgage loans (from 180 days to 90 days) led to improvements in loan monitoring and lower delinquency rates overall.

#### **9.4.1.4 Summary of the Contemporary Housing Finance Landscape**

Given the above landscape of housing finance, the dual role of SCB and HFC is clearly unique to India. This had led to the development of local currency capital markets, especially long-term local currency debt. However, this has come at the cost of some inefficiency. Under this institutional structure are several regulations—either as priority sector lending thresholds or mandatory deposit requirements—that shape the housing finance sector and incentives. Without these, many of the current features of housing finance in India would not have existed. This is also part of the explanation for why the AHFC type has emerged in India. The next section discusses housing programs and housing regulations that have also shaped the market.

## **9.4.2 Contemporary Housing Programs and Housing Regulations in India**

Although the financial sector regulatory environment is often distinct from government fiscal programming and policies, these are closely linked for housing in India, as housing programs and policies have direct mortgage implications (either as liquidity or as directed lending).

### **9.4.2.1 Recent Housing Regulations and Legislation**

There are several new programs and regulations that have been launched or enacted since 1990. These include repealing the Rent Control Act in four states to loosen restrictions on the rental market, especially the hereditary rights to a rental contract. The new Model Tenancy Act tries to firstly set forth the establishment of conditions for tenancy, eviction, and management of the property. Second, in regulating tenancy, it proposes mechanisms to balance and protect the rights of landlords and tenants. Last, it proposes a three-tier adjudicatory mechanism consisting of rent authorities, rent courts, and rent tribunals for swift adjudication of tenancy-related disputes.

In terms of repossession, the 2002 Securitisation and Reconstruction of Financial Assets and Enforcement of Securities Interest (SARFAESI) Act made asset seizure and repossession due to nonpayment of debt easier in India. The SARFAESI Act essentially empowered banks and other financial institutions to directly auction residential or commercial properties that have been pledged to them in order to recover loans from borrowers. Before this act took effect, financial institutions had to take recourse to civil suits in the courts to recover their dues, which was more time-consuming process. Other methods of asset repossession include Debt Recovery Tribunals (DRTs) and Lok Adalat. Evidence shows that the SARFAESI Act recovered the highest amount of non-performing assets during a period of study between 2008–2016, so it is arguably the most favorable recovery channel of non-performing assets (Swain, Sahoo and Mishra 2017).

The newest legislation is the Real Estate Regulatory Authority (RERA) Act, 2016. It is an act passed by Indian Parliament that seeks to protect the interests of potential homebuyers and increase investments in the real estate sector. According to the act, state governments are required to enact their own rules under based on the model rules framed under the central act. The main objectives of the central act are to increase transparency and accountability in the real estate sector and to create a new real estate regulator in each state.

#### **9.4.2.2 Ongoing Housing Programs**

In terms of ongoing programs, the PMAY is the most important program for affordable housing. The umbrella PMAY initiative was launched in June 2015 with the goal to provide affordable housing to the poor. See section 7 for details on the current programs. For the PMAY Urban, the progress as of March 2021 (FY2020–2021) is a total of 11.2 million houses authorized (out of which 4.83 million have been completed), and of these 1.6 million are CLSS beneficiaries. Therefore, the Beneficiary-Led Construction and the Affordable Housing in Partnership are much larger than the CLSS. The PMAY Rural aims at providing a *pucca* house, with basic amenities, to all houseless households and those households living in *kutcha* or dilapidated houses, by 2022.

#### **9.5 Implications for the Development of the AHFC Lender Type in Other Countries**

Combining the unique financial landscape in India with the program and regulations in housing, especially new regulations on real estate companies and the aspiration to create a judicial layer for rental markets, shows that housing in India needs to be understood within a particular institutional context. AHFC cannot simply be extracted from India without this connective tissue. In fact, it is very likely that the combination of a dual SCB-HFC setup, priority sector lending requirements, deep local currency capital markets, a cost of labor where high-touch underwriting is feasible, and housing demand-side subsidies have all contributed to the creation of the AHFC type. These features need to be appreciated as much as the incipient success of AHFC themselves.