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## **Building Houses, Financing Homes**

*A Study Report of India's Rapidly Growing Housing and Housing Finance Markets for the Low-Income Customer*

**Commissioned by NHB, funded by FIRST Initiative with active support from World Bank**  
**July 2010**

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This document provides an outline of a presentation and is incomplete without the accompanying oral commentary and discussion.

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- **Summary of Findings**

- Market Overview
- LIH Developers: Operations, Commercial Viability and Marketability
- Housing Finance Companies: Operations and Commercial Viability
- Appendix

## Summary of Findings

# Improved Supply in the Low Income Housing Market

*The low-income housing market (LIH) in urban India is improving, with the beginnings of a robust supply equation in place for affordable, high-quality housing...*

- This study has found **more than 25 developers in urban areas across India building (or about to build) multi-family units in the Rs. 3 lakh to Rs. 7 lakh price range<sup>1</sup>**
- Additionally, the market is changing in three significant ways:
  - **New Cities**
    - Projects are spread across 7 states indicating that the cities that saw the initial low income housing projects, such as Ahmedabad and Mumbai, are seeing copycat projects in these cities,
    - These successful examples are also leading to the proliferation of low income housing projects in other cities
  - **New Mix of Developers**
    - New mix of developers contains not only traditional developers but also larger, more established developers as well as some corporate players.
    - The latter two see the low income housing market as a scale “manufacturing” opportunity, and are in the process of doing sizable initial projects to confirm feasibility and refine their models, as a key step to building successful businesses at high volumes
      - E.g., VBHC has already announced plans to build a million homes (priced below Rs. 10 lakhs) in 10 years
      - Neptune Group (an erstwhile premium builder) has declared intentions to expand from Mumbai to other cities in Maharashtra with its ‘Swarajya’ brand, before ultimately expanding nationally.
  - **New Ideas**
    - To successfully do this, these developers are constantly innovating in their projects – testing new construction technologies, creating new architectural designs, incorporating sustainability elements, etc.

Note: <sup>1</sup>The study was conducted by Monitor Inclusive Markets for the NHB, funded by FIRST Initiative and supported by the World Bank. For project details, please see the *Project Overview* section in the Appendix

# Increased Access to Loans in the Housing Finance Market

*... and an upswing in the availability of housing finance for poorer customers, with a market that now includes more players than ever before serving, or aspiring to serve, the low income customer*

- The housing finance market today contains a **wide variety** of players:
  - Pioneers of the housing finance space for low income customers, e.g. Gruh and DHFL
- Also includes two new kinds of players:
  - **Dedicated start-ups** like MHFC that have identified this very segment as a large business opportunity
  - **Established companies with excellent track records in allied businesses** (e.g. MAS in Microfinance and Vehicle Loans, SEWA in livelihood and credit, and Muthoot Pappachan Group in Gold Loans) that are seeing opportunities or cross-over efficiencies in the space
- Other expected entrants into the space include:
  - SUMEL Housing Finance Limited, Home First Finance Ltd, Aptus Value Housing Finance India Ltd., and Aadhar Housing Finance Pvt. Ltd., all of which already have, or have applied to NHB for, a Certificate of Registration (CoR);
- To serve a segment which comes with challenges, each of these companies are constantly innovating, e.g. with regard to customer risk assessment mechanisms, distribution models, collection mechanisms, and back-office procedures

## Summary of Findings

# Strong Commercial Potential for LIH Developers




*The low income housing market is highlighted by its commercial feasibility and marketability*

- Strong **commercial feasibility of the LIH developer** space:

- Returns for developers of LIH are robust and attractive:

- In Mumbai and Ahmedabad, **developer project IRRs can be as high as 40%-50%, with gross margins in the 20%-30% range**

- **High demand from customers equating to strong marketability:**

Developer & Project Location	High Customer Demand	Strong Customer Preferences
 <p><b>Project Name: Swarajya</b> <b>Location: Ambivali, Mumbai</b></p>	<ul style="list-style-type: none"> <li>• Over 80,000 people have visited the Swarajya project site since launch in March 2009</li> <li>• 80% of the units have already been booked across Phases 1 and 2</li> </ul>	<ul style="list-style-type: none"> <li>• The project team increased the total number of 1BHK units to be constructed, when they saw that the demand for 1BHKs was significantly higher than for 2BHK units</li> </ul>
 <p><b>Project Name: Navjivan Housing</b> <b>Location: Vatva, Ahmedabad</b></p>	<ul style="list-style-type: none"> <li>• All 173 units that were open for booking in October 2009 for Phase 1, sold out quickly.</li> <li>• Foliage increased prices of units by 10% starting mid-June 2010 due to the high demand</li> </ul>	<ul style="list-style-type: none"> <li>• Foliage changed the mix of apartments in the project, increasing the number of 1RK units (and reducing the number of 2BHK units) due to the difference in the volume of enquiries and pace of bookings</li> </ul>
 <p><b>Project Name: Atulya</b> <b>Location: Anakaputhur, Chennai</b></p>	<ul style="list-style-type: none"> <li>• All 224 units in Phase 1 of Atulya were booked on the day of launch in April 2010</li> </ul>	

- In the fiscal year 2010-2011, therefore, **we estimate that there will be between 25,000 to 50,000 houses on sale in the market**

- Given the plans and projections of the new breed of developers (especially the larger developers like VBHC, Neptune Group, Foliage and Tata Group), who intend to start numerous additional projects in the coming year or two years, **this number should increase exponentially in the near future**

Note: <sup>1</sup>Fiscal year 2010-2011 runs from 1 April 2010 to 31 March 2011. Many developers we interviewed shared their 2010-2011 plans with us during the course of the study, a cumulative number of more than 20,000 units. A number of others said they were working on starting projects, but were not comfortable sharing numbers. Accounting for this, and for the fact that our study was not exhaustive, we have estimated a market size. We feel that the likely supply will definitely exceed 25,000 units and is more likely to be much higher (in the 40,000 to 50,000 range).

## Summary of Findings

# Strong Commercial Potential for HFCs

*The housing finance companies that are serving the low income urban customers, are seeing strong commercial performance*

- **Strong economic potential in the HFC space:**

- Established HFCs have **robust returns on assets and equity**, and the new entrants are expecting similar returns
  - E.g. HDFC has a RoA of 2.7%, DHFL of 1.7% and MAS of between 2% - 2.5% (expected)
  - ROEs for these companies range from 17.5% to ~22%
- There is a strong commercial opportunity in **targeting the low income, informal sector urban customer, which is a large and un-served population**
  - Monitor's illustrative model of a pure-play HFC targeting the low-income, informal sector customer, assumes a "hub and spoke" model
    - HFC would operate in Metros and Tier I – III cities, with "hub" retail branches and "spoke" project site kiosks to follow up on new low income construction projects<sup>1</sup>
  - The model "hub and spoke" HFC would disburse close to 260,000 loans of an average ticket size of Rs. 4 lakhs (and an interest rate of 14%) in ten years
    - Such an HFC **can turn profitable within 3 years, with a RoA of over 2.5% to 2.9% by year 5 and a RoE of ~17% by year 7**

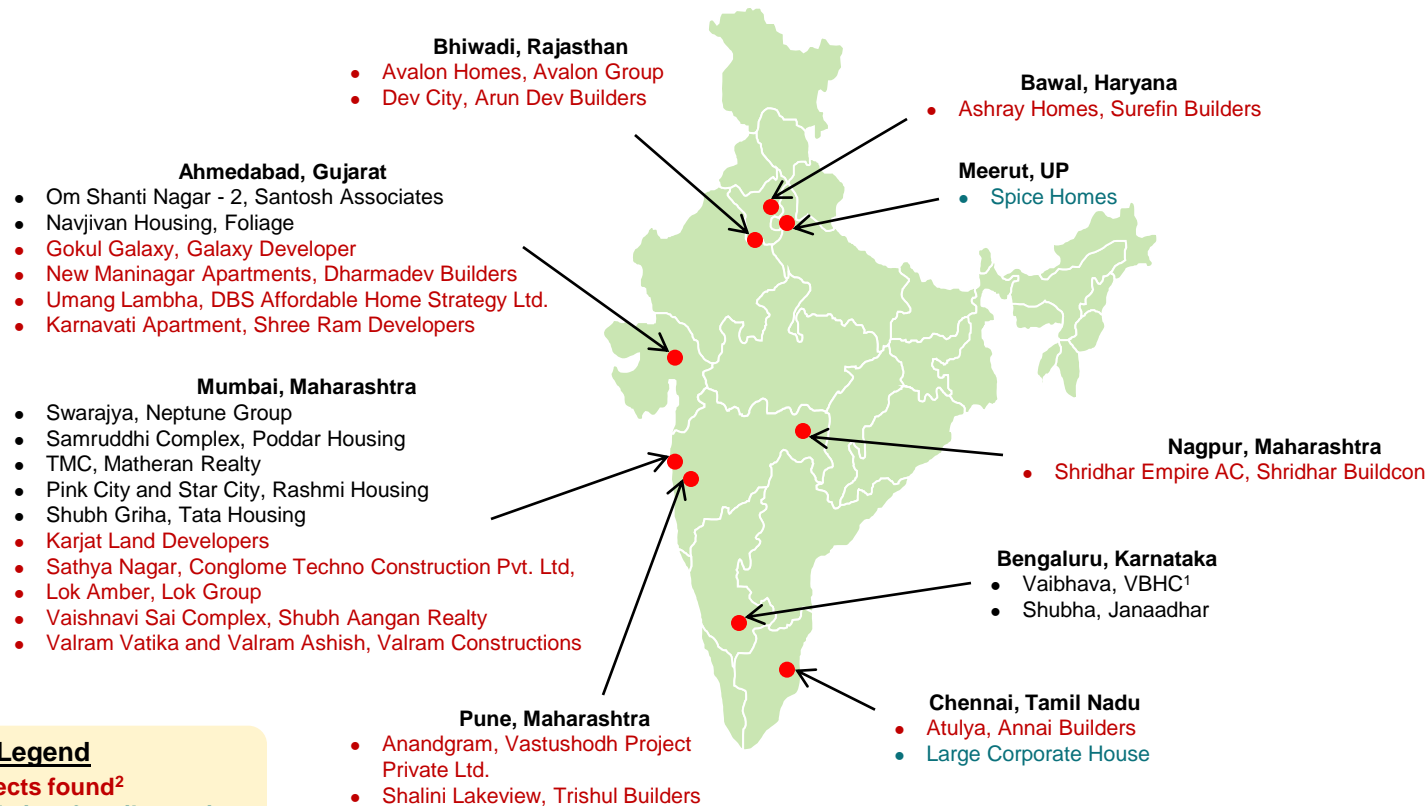
Note: <sup>1</sup>Metros are cities with population of greater than 40 lakhs, Tier I cities have a population of between 10-40 lakhs, Tier II cities have a population of between 5-10 lakhs, Tier III cities have a population of between 1-5 lakhs.

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# Market Overview of Developers Presence in India

*There are today over 25 developers building or planning to build low income housing across 7 states – many of the developers we spoke to are planning more projects in the next one or two years*

## Map of Low-Income Housing Projects, 2010



Note: The list provided is not an exhaustive list. It is an indicative list based on our research of the market. We spoke to over 25 developers who are in the process of making LIH supply available for less than Rs. 7 lakhs. <sup>1</sup>The lowest priced apartment in the Bengaluru project is Rs. 8.8 lakhs – it is included in this map because of the scale at which VBHC plans to build LIH - 1 million units in urban India in the price range Rs. 5 to 10 lakhs over 10 years; <sup>2</sup>New projects found indicates projects we found during our study and did not have prior knowledge of; SAS Group has plans to enter the LIH space and is currently in the process of finalizing the pilot project sites

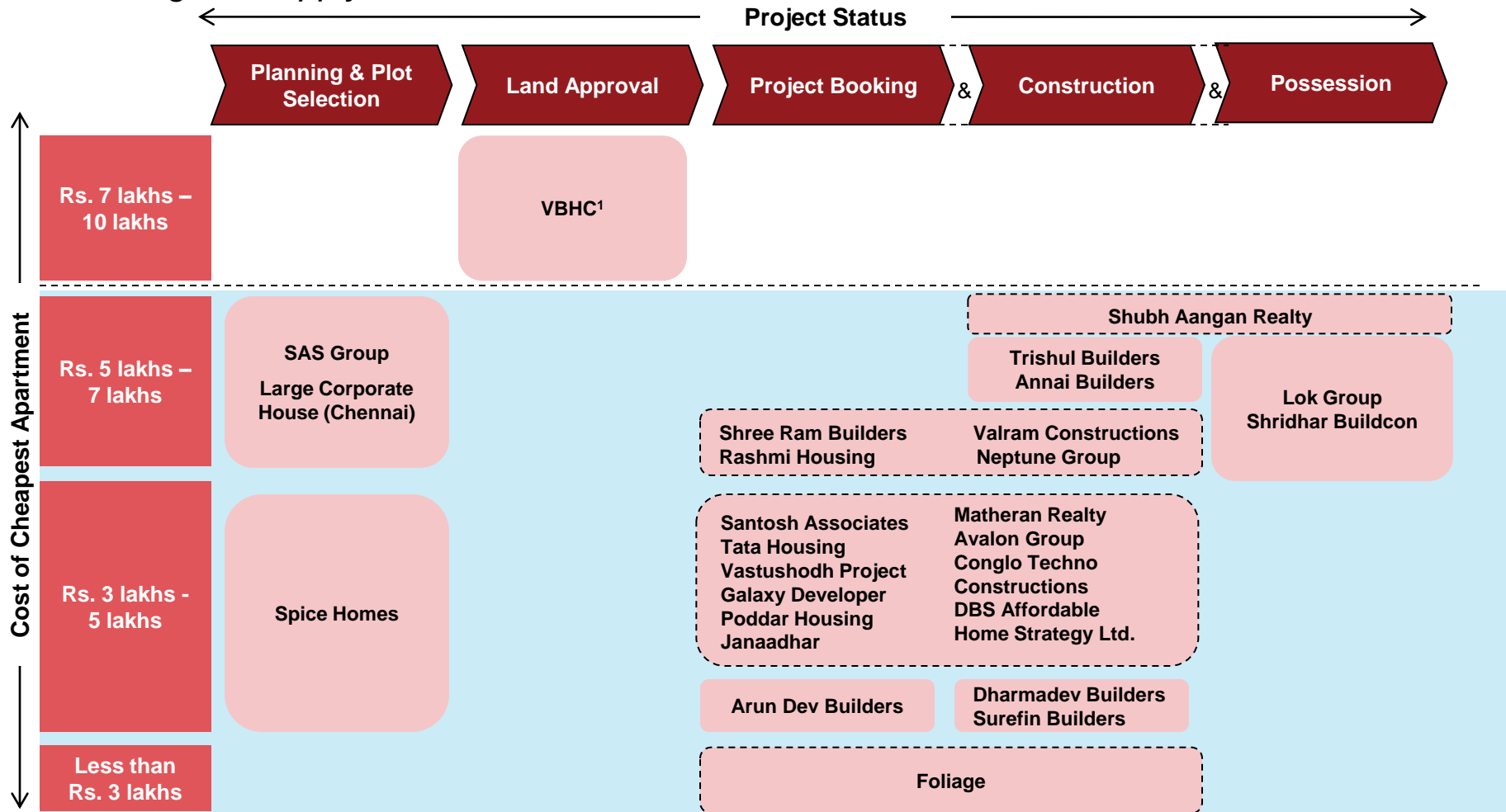
Source: Primary research and interviews of developers, housing finance companies and stakeholders; For a full list of sources used, please see *Nodes & Sources* and *Filtering Long List of Developers for Rs. 3-7 Lakh Homes* slides in the Appendix; Monitor Analysis



# Market Overview of Developers

## Housing Supply Map

These developers, most of whom have houses available at less than Rs. 7 lakhs, are making LIH supply available to customers with MHI between Rs. 7,000 – Rs. 15,000



Note: The list provided is not an exhaustive list. It is an indicative list based on our research of the market. We spoke to over 25 developers who are in the process of making LIH supply available for less than Rs. 7 lakhs. <sup>1</sup>The lowest priced apartment in the Bengaluru project is Rs. 8.8 lakhs – it is included in this map because of the scale at which VBHC plans to build LIH - 1 million units in urban India in the price range Rs. 5 to 10 lakhs over 10 years  
 Source: Primary research and interviews of developers, housing finance companies and stakeholders; For a full list of sources used, please see *Nodes & Sources* and *Filtering Long List of Developers for Rs. 3-7 Lakh Homes* slides in the Appendix; Monitor Analysis

# Market Overview of Developers (Western India)

## Select Developer Examples: Pune

### Map of Pune & Suburbs



### Pune Overview

- **Population:** 3.5 million (according to Census 2001)
  - 2<sup>nd</sup> largest city in Maharashtra
- **Location and Connectivity**
  - 93 kms from Mumbai via Mumbai-Pune Expressway
  - Well connected to other cities in India through road, rail and air
- **Economy**
  - Emerging as a prominent location for IT and manufacturing companies
  - Presence of a large number of colleges and universities
  - Well-established manufacturing, glass, sugar and forging industries since 1950-60s
  - Prominent automotive center - General Motors, Volkswagen, and Fiat have set up greenfield facilities near Pune

#### 1 Vastushodh Project Private Ltd. - Anandgram

- **Location:** Yavat, Maharashtra; Pune-Solapur Road, 45 kms from Pune city center
- **Transport and Connectivity:** Located off a highway; bus station within 1 km
- **Access to infrastructure:** Water and electricity supply from Gram Panchayat; Marathi medium school within 200 meters and English medium school 9-10 kms away; hospital being built on project site
- **Number of units:** 660
- **Mix of housing:**
  - 1RK - 295 and 312 sq. ft. (Rs. 3.4 lakhs)
  - 1BHK – 415 sq. ft. (Rs. 5 lakhs)
  - 2BHK – 547 and 575 sq. ft. (Rs.7 lakhs to 7.75 lakhs)
- **Loading Factor:** 43%
- **Price per square feet (current):** Rs. 1100 – Rs. 1325
- **Format of buildings:** G + 3 (no lifts)
- **Cost of cheapest apartment: Rs. 3.4 lakhs**
- **Consumer finance:** Tie ups with DHFL, MHFC and Bank of Baroda
- **Project status:** 70% of units booked since project launch in January 2010. Construction began February 2010, possession to be given by June 2011

#### 2 Trishul Builders– Shalini Lakeview

- **Location:** Undri<sup>1</sup>, Pune, Maharashtra; 10 kms from Swargate (a major bus stop in Pune), 10 kms from Pune railway station
- **Transport and Connectivity:** Located on main road; bus stop within 500 mts
- **Access to infrastructure:** Within 3 kms of schools and hospitals
- **Number of units:** Over 1500
- **Mix of housing:** 500 1RK flats of 400 sq. ft. (<33% of total) which are < Rs. 7 lakhs; multiple sizes available, others are over Rs. 7 lakhs
- **Loading Factor:** 25%
- **Price per square feet (current):** Rs.1650
  - Rs. 1250/sq. ft. at launch
- **Format of buildings:** Parking + 14 floors
- **Cost of cheapest apartment: Rs. 6.6 lakhs** at current prices, was Rs. 5 lakhs at launch
- **Consumer finance:** Installment scheme provided by the developer – 20% upfront payment and Rs. 5k-10k interest free monthly installment for 5-7 years
- **Project status:** All units booked since booking started October 2009, construction started in March 2010 and possession expected to be given by December 2011

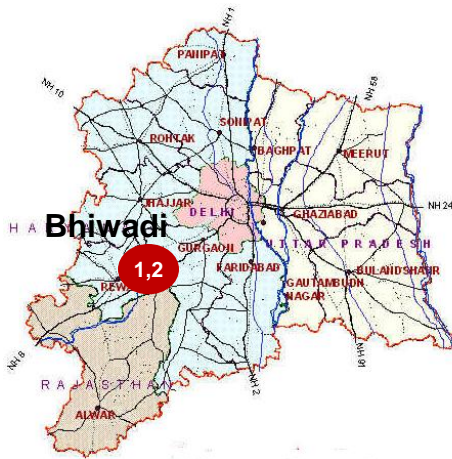
Note: <sup>1</sup>Currently falls under Gram Panchayat (expected to come under Municipal corporation by July 2010)

Source: Project Sales Office; 2001 Census; Monitor Analysis

# Market Overview of Developers (Northern India)

## Select Developer Examples: Bhiwadi

### Map of Bhiwadi in Rajasthan



### Bhiwadi Overview

- **Population:** 34,000 (according to Census 2001)
  - Spread over 3,347 acres of land and 3,000 acres area proposed for extension (industrial zone of Delhi)
- **Location and Connectivity**
  - 90 mins (40 kms) from Gurgaon, 80 kms from Delhi, 200 kms from Jaipur
  - Located right off the 8-lane National Highway 8 (Delhi-Jaipur highway)
- **Economy**
  - Industrial economy, comprising of 2,500 tiny to large industries and MNC industrial units manufacturing various types of products
  - Part of the 2021 National Capital Region Plan
  - MoU signed by Government for an investment of approximately 30,000 crores promoting the growth of this industrial land
  - Examples of companies present in Bhiwadi: Honda Siel, Orient Craft, United Breweries, Ray Ban, Kajaria Ceramic Ltd.

1

#### Avalon Group – Avalon Homes

- **Location:** Alwar bypass road, Bhiwadi, Rajasthan
- **Transport and Connectivity:** Located on a highway, buses available to the city
- **Access to infrastructure:** School within 2 km, hospital within 5-6 kms, college within 2 kms, 24 hrs water and electricity supply
- **Number of units:** 700
- **Mix of housing:** Separate building for 1BHK and 2BHK
  - 1BHK (300 units): 390 sq. ft. saleable (Rs. 4.95 – 5.95 lakhs depending on the floor)
  - 2BHK (400 units): 650 sq. ft. saleable (Rs. 8.24 – 10.25 lakhs)
- **Loading factor:** 11% - 18%
- **Price per square feet (current):** Rs. 1269 – Rs. 1577
- **Format of buildings:** 1BHK: G + 4, 2BHK: G + 14
- **Cost of cheapest apartment:** Rs. 4.95 lakhs
- **Consumer finance:** Tie up with Axis, DHFL, LIC, MHFC and HDFC
- **Project Status:** Booking started December 2009, construction started in March 2010 and possession to be given by April 2012; 200 units booked

2

#### Arun Dev Builders – Dev City

- **Location:** Alwar bypass road, Bhiwadi, Rajasthan
- **Transport and Connectivity:** Located on a highway, buses available to the city
- **Access to infrastructure:** School within 8 kms, hospital within the township, bore well for water supply and electricity supply from the electricity board, electricity back-up through generators
- **Number of units:** 5000
- **Mix of housing:** (sizes are saleable area)
  - 1BHK (1500 units): 350 sq. ft.
  - 1BHK (1000 units): 476 sq. ft.
  - 2BHK (1200 units): 610 sq. ft.
  - 3BHK (1300 units): 1100 sq. ft.
- **Loading factor:** 11% - 18%
- **Price per square feet (current):** Rs. 1351 (appreciated from Rs. 1151 from Dec. 2006)
- **Format of buildings:** G+3 (no lifts)
- **Cost of cheapest apartment:** Rs. 4.73 lakhs
- **Consumer finance:** Units financed by the builder at zero percent interest; Rs. 50,000 down payment and Rs. 2000 EMI for 1BHK; Rs. 1 lakh down payment and Rs. 5000 EMI for 2BHK; equal quarterly payments for 3BHK
- **Project status:** 3000 units sold since launch in December 2006; construction to start in August 2010 and possession expected in June 2011

# Market Overview of Developers (Southern India)

## Select Developer Example: Chennai

### Map of Chennai



### Chennai Overview

- **Population:** 4.34 million (according to Census 2001)
- **Connectivity**
  - Well connected to other parts of India by road and rail
  - Headquarters of the Southern Railway
  - Third busiest airport and second busiest cargo terminus in India
  - Chennai port is the largest in Bay of Bengal and India's second busiest container hub
  - Chennai Mofussil Bus Terminus is the largest bus station in Asia
- **Economy**
  - Major industries: Car, technology, hardware manufacturing and healthcare industries
  - Second largest exporter of software, information technology and information-technology-enabled services in India
  - Base to around 30% of India's automobile industry and 35% of its auto components industry
    - Accounts for 60% of the country's automotive exports

### Annai Builders - Atulya

- **Location:** Anakaputhur, 22 kms from Chennai city center
- **Transport and Connectivity:** Anakaputhur bus terminus within 500 meters, railway station within 4 kms (Pallavaram) of project site
- **Access to infrastructure:** Schools and hospitals within 1 km
- **Number of units:** 224 in Phase 1 and 220 in Phase 2
- **Mix of housing:**
  - 1BHK: 388 sq. ft.
- **Loading Factor:** 26%
- **Price per square feet (current):** Rs. 1598
- **Format of Building:** G + 1 (2 flats each on ground floor and first floor)
- **Cost of cheapest apartment:** Rs. 6.2 lakhs
- **Consumer finance:** HDFC, IDBI, LIC Housing Finance, DHFL, Deutsche Postbank
- **Construction and sales status:** Sold all 224 units in Phase 1 on the day of launch; Bookings complete for Phase 1 and Phase 2, construction for Phase 1 started in June 2010 and possession expected by April 2011

Source: Project Sales Office, Census 2001, Monitor Analysis

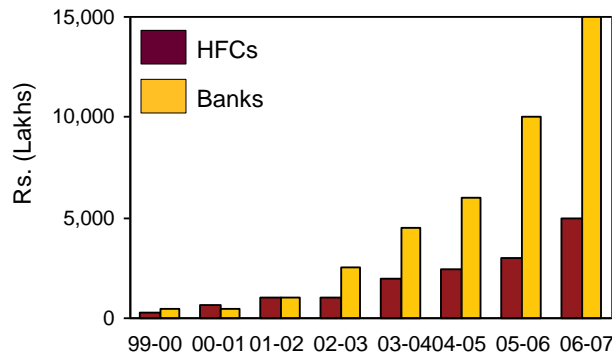
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# Market Overview of HFCs

## State of the Market

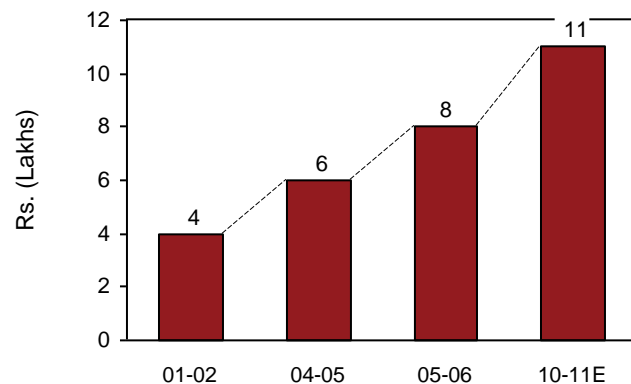
*Despite strong growth in the overall HFC market and growing average ticket size of home loans, there has also been an increase in the number of HFCs serving the traditionally underserved, lower income informal customers*

**Growth in Housing Loans**



Home loan disbursement has grown at 35% between 1993 and 2006, and at a CAGR of 48% from 2000 to 2006

**Average Ticket Size of Housing Loan**



The average ticket size for a housing loan is expected to grow to Rs. 11 lakhs by 2011, which is unaffordable for majority of urban India

**Selected HFCs Serving Low-Income Customers, 2010**

Company/Organization	Primary geographic scope	% Low-Income Customers <sup>1</sup>	Average Loan Size
MHFC	Urban presence in Western India	45%	Rs. 4 lakhs
MAS	Mostly urban/semi-urban presence in Western India	63%	Rs. 3 lakhs
DHFL	Mostly semi-urban / rural presence across India	54%	Rs. 5.1 lakhs
GRUH	Mostly semi urban / rural in Western, Central and Southern India	Not Available	Rs. 6.2 lakhs
SEWA	Urban/semi-urban presence around Ahmedabad	100%	Not Available
MRHFL	Mostly semi urban / rural in Western and Southern India	63%	Rs. 1.72 lakhs

Note: <sup>1</sup>For this study, low-income customers are classified as those with a monthly household income of Rs. 15,000 or less

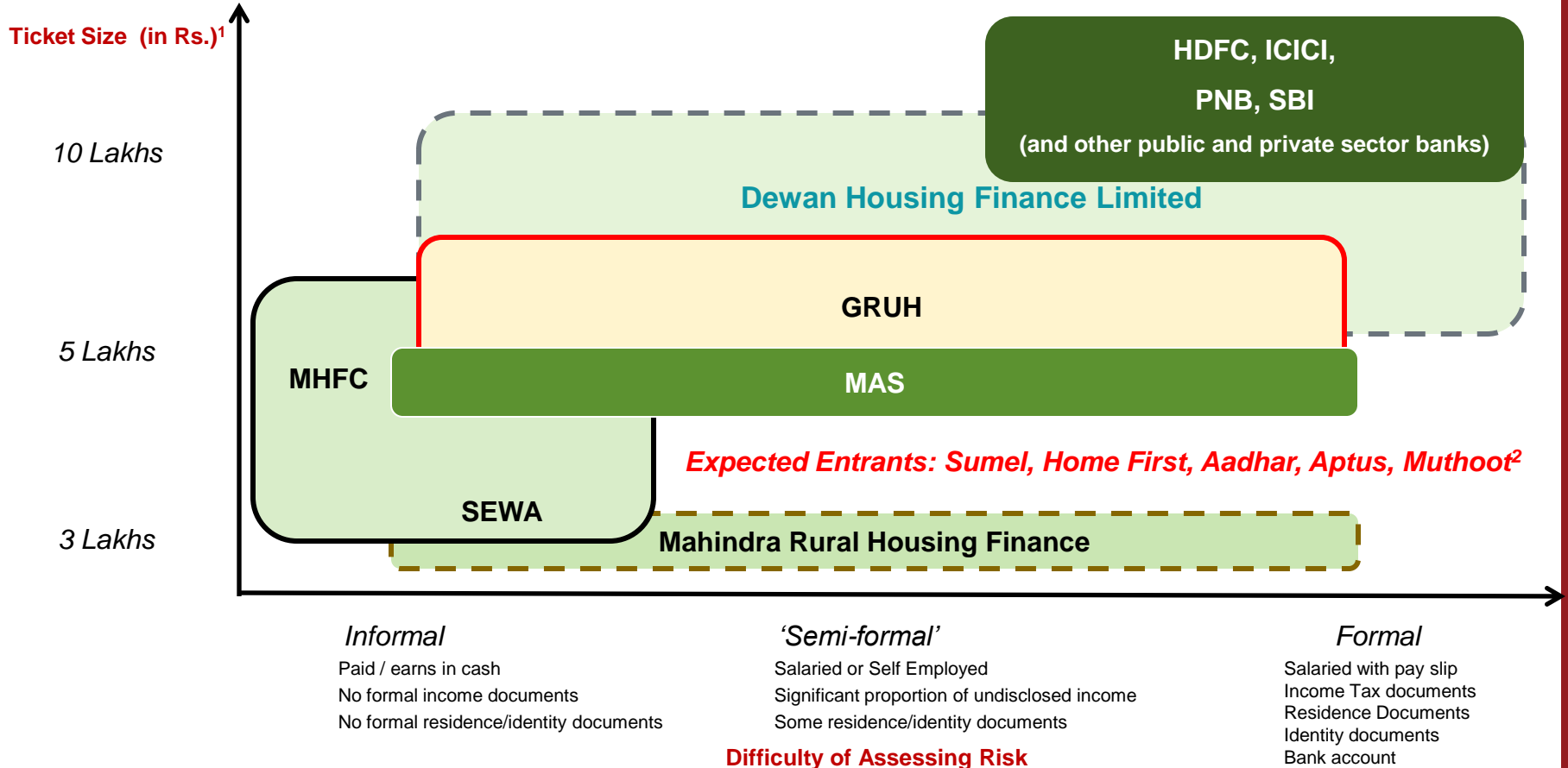
Source: Indian Retail Banking: Industry Insight; Cygnus Business Consulting and Research; Mortgage Finance, Edelweiss Securities; HFC Annual Reports; Interviews with HFC Management; Monitor Analysis

# Market Overview of HFCs

## Representative HFC Map

Today, there are a number of HFCs that are extending housing finance to low-income and middle-income self employed and informal customers and many more are expected to enter soon

**Representative HFC Market Map – India, 2010**



Note: <sup>1</sup>Indicative of the primary product offering (usually average ticket size), though other loan sizes and products may also be offered; <sup>2</sup>SUMEL Housing Finance Limited, Home First Finance Ltd, Aptus Value Housing Finance India Ltd., and Aadhar Housing Finance Pvt. Ltd., all of which already have, or have applied to NHB for, a Certificate of Registration (CoR); entities like Muthoot Pappachan Group, Equitas and Grameen Koota, which are in various stages of their strategy and plan to enter the housing finance space in the low income segment

Source: Primary research and interviews of housing finance companies and stakeholders; For a full list of sources used, please see *Notes & Sources* slide in the Appendix; Monitor Analysis

## Market Overview of HFCs

## Select HFC Example: GRUH Finance Limited

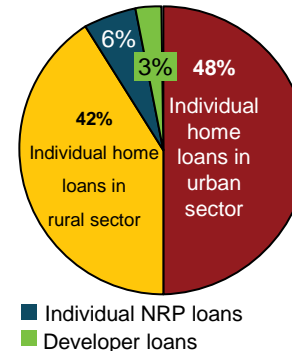
*GRUH Finance, a subsidiary of HDFC, was a pioneer in serving low income customers when it started in 1986*

### Overview

- Primary services include long term housing finance to individuals
  - Other services include loans to professionals for office premises and savings options
- Housing Finance portfolio consists of five areas:
  - Construction, Purchase, Extension, Repair and Renovation
- Cumulative disbursements (as on March 2010): Rs. 4,645 crores
  - Disbursements for FY 09-10: Rs. 780 crores
- Total Number of Loans: 115,400
- 90% of loans were in the retail segment (as on March 2009)
  - Number of families served: 13,870
- **Average loan size: Rs. 6.2 lakhs**
  - **However, average loan size in Mumbai is ~Rs. 12-13 lakhs**
- Financial Performance (as on March 2010)
  - Revenue: Rs. 94 crores
  - NPA: 1.11% (gross)
  - Capital Adequacy Ratio: 16.5%
- Received refinance sanction of Rs. 450 crores from NHB during the year in 2009-2010

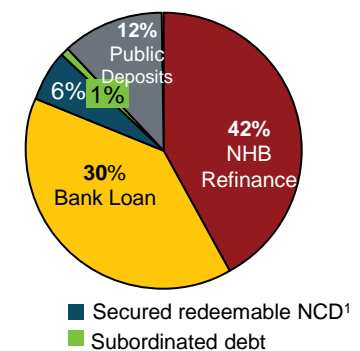
### Loan Asset Profile

(as on March 2010)



### Sources of Funds

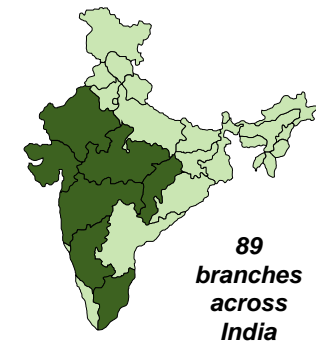
(as on March 2010)



### Customer Profile

- 48% of individual loans are in the urban areas
- Most urban focused loans are in the middle or higher range due to high property prices (e.g. Mumbai's average loan size versus overall average)

### Presence in India



Note: Data is for entire GRUH portfolio, not just for purchase of new homes; <sup>1</sup>NCD: Non-Convertible Debenture

Source: Interview with Sudhin Choksey (Managing Director of GRUH), GRUH Annual Report 2009-2010, ICRA credit rating, Monitor Analysis



## Market Overview of HFCs

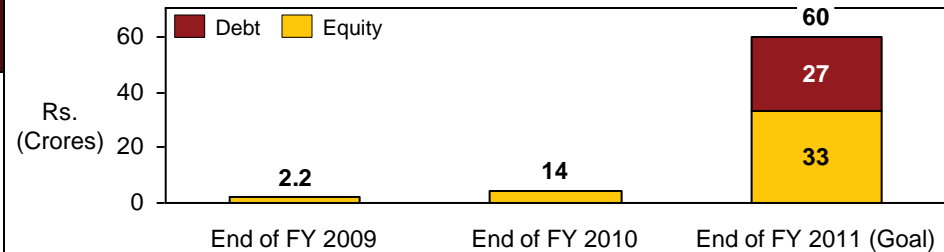
## Select HFC Example: MHFC

*MHFC is a dedicated housing finance start-up that focuses on lower income, informal sector customers. So far, it has sanctioned ~125 loans aggregating Rs. 5 crores*

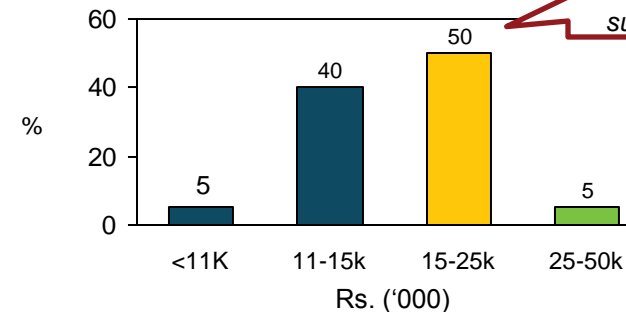
### Overview

- MHFC provides loans for purchase of homes to urban families with MHI less than Rs. 25,000 (mostly informal)
  - Serves customers who are financially excluded due to a various reasons such as lack of documents, occupation, location of current housing, etc.
- Located in Mumbai, but current geographical footprint in Maharashtra and Gujarat
- Ties up with LIH developers to provide housing finance to their customers
  - Assesses credibility of developers, and provides financing to customers by establishing presence at developer's sites
- Restricts operations to customer finance
- Product Details
  - Interest rates: 12-14% (Average: 13.5%)
    - MHFC lends at a floating rate
  - Maximum Loan Tenure: 15 years (Expects Average to be 11 years)
  - Loan to Value Ratio: 75-80% (Average: 65%)
  - Maximum Loan Size: Rs. 5 lakhs (Average: Rs. 4 lakhs)
- Gross spread target: 4%
- NPA: MHFC wants to target an NPAs in the range of 1-2% (industry average: 1-2% for HFCs and MFIs in general)

### Portfolio Size

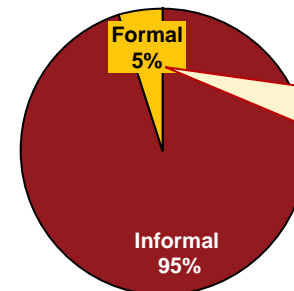


### Income Profile



*Expects mix to change as LIH supply increases*

### % of Informal Customers



The 5% of "formal" sector comprise customers excluded from mainstream HFC loans due to inadequate documentation, employment in certain professions or working for companies that are too small to issue proper salary certificates

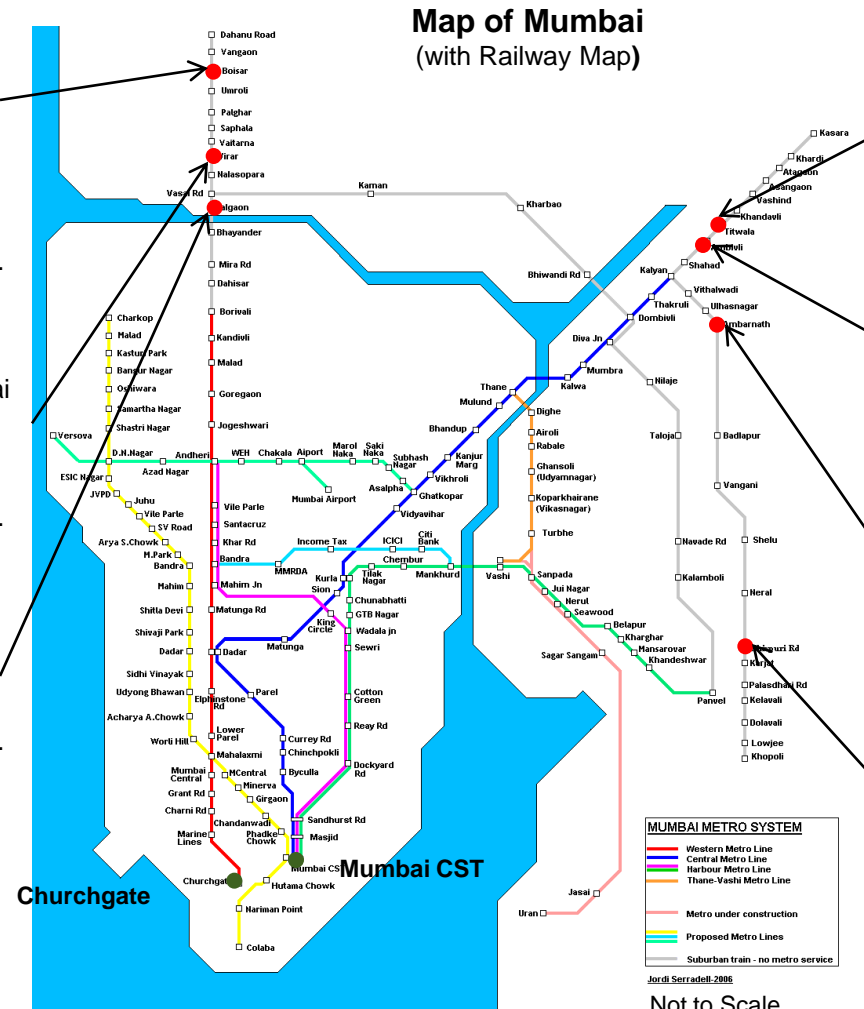
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# Mumbai: Developers Overview of Projects - Mumbai

Helped by the connectivity provided by the rail system, there are a number of LIH developers today in various parts of Mumbai, offering units from Rs. 1162/sq. ft.<sup>1</sup> onwards

- Boisar:** Rs. 1200/sq. ft. (Sathya Nagar, Conglome Techno Construction) -1500/sq. ft. (Shubh Griha, Tata Housing)
  - 102 kms from Churchgate, 120 mins from Churchgate by train
  - Price of cheapest apartment: Rs. 4.5 lakhs (Sathya Nagar and Shubh Griha)
- Virar:** Rs. 1800/sq. ft. (Vaishnavi Sai Complex, Shubh Aangan Realty)
  - 64 kms from Churchgate, 80 mins from Churchgate by train
  - Price of cheapest apartment: Rs. 5.5 lakhs
- Naigaon:** Rs. 2000/sq. ft. (Star City, Rashmi Housing)
  - 48 kms from Churchgate, 65 mins from Churchgate by train
  - Price of cheapest apartment: Rs. 8.6 lakhs



- Titwala:** Rs. 1400/sq.ft. (Valram Vatika and Valram Ashish, Valram Constructions)
  - 71 kms from Mumbai CST, 78 mins from CST by train
  - Price of cheapest apartment: Rs. 5.5 lakhs
- Ambivali:** Rs. 1650/sq. ft. (Swarajya, Neptune Group)
  - 54 kms from Mumbai CST, 72 mins from CST by train
  - Price of cheapest apartment: Rs. 5.2 lakhs
- Ambarnath:** Rs. 1600/sq. ft. (Lok Amber, Lok Group)
  - 60 kms from Mumbai CST, 75 mins from CST by train
  - Price of cheapest apartment: Rs. 5.84 lakhs
- Bhivpuri:** Rs. 1162/sq. ft. (Samruddhi Complex, Poddar Housing)
  - 88 kms from Mumbai CST, 112 mins from CST by train
  - Price of cheapest apartment: Rs. 3.5 lakhs

**MUMBAI METRO SYSTEM**

- Western Metro Line
- Central Metro Line
- Harbour Metro Line
- Thane-Vashi Metro Line
- Metro under construction
- Proposed Metro Lines
- Suburban train - no metro service

Jar Di Serradell, 2006

Not to Scale

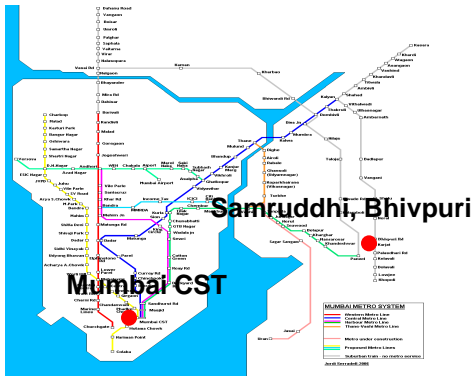
Note: TMC, Matheran Realty's project has not been included in the map above; <sup>1</sup>All prices are in current prices  
 Source: Developer interviews; Project Sales Office; Indian Railways website; Monitor Analysis

# Select Developer Example: Poddar Housing

*Poddar's Samruddhi, opened for booking in March 2010, has reported strong sales so far*

## About Samruddhi Complex

### Map of Mumbai



- **Location:** Bhivpuri, 88 kms from CST in Mumbai, 112 mins on train from CST
- **Connectivity**
  - 15 mins walk from Bhivpuri train station
  - Located off the main road
- **Access to infrastructure**
  - Provision of 4 transformers for electricity
  - Invested Rs. 3.5 crores to lay pipes to bring water from a nearby dam to a tower tank (18 lakh litres capacity) on the project site (no municipal supply of water available)
  - Schools, hospital, etc. within 1 km

### Size of Units

- 1RK: 219 sq. ft. carpet, 300 sq. ft. saleable
- 1BHK: 292 sq. ft. carpet, 400 sq. ft. saleable

### Loading factor: 37%

### Price per square feet (current): Rs. 1162 – Rs. 1237.50

### Cost of the unit (current): Price varies by floor for 1BHKs

- 1RK: Rs. 3.5 lakhs
- 1BHK: Rs. 4.5 lakhs to Rs. 4.75 lakhs

### Format of buildings: G+3 (no lift)

- Initially, 1<sup>st</sup> and 2<sup>nd</sup> floor sold the fastest, G and top floor the slowest – however now all floors sell at the same speed (probably due to differential pricing)

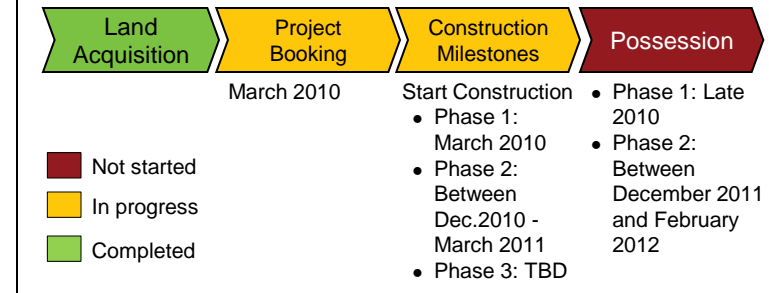
### Consumer finance: Tie ups with MHFC, HDFC, Mahindra, SBI

### Maintenance: 1 year included after which a society will be created – charges will be ~Rs. 1/sq. ft

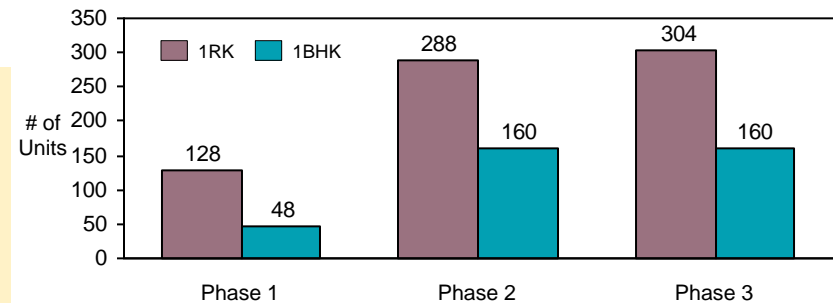
### Marketing: Advertising in trains, newspapers, etc.

### Sales status: Sold 600 units within a month of launch; Total 800 units sold

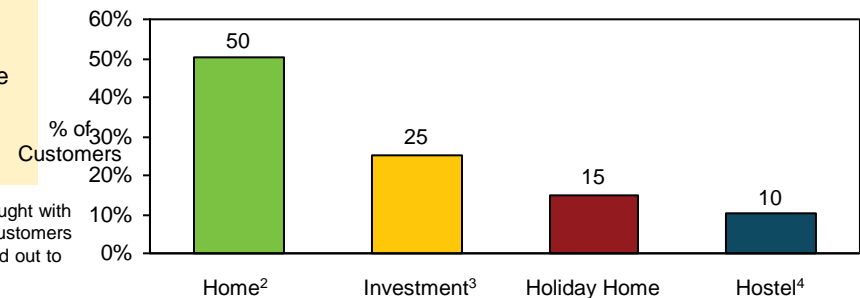
### Project Status



### Number of Units by Phases<sup>1</sup>



### Customers' Purpose of Buying<sup>2</sup>



Note: <sup>1</sup>Poddar Housing plans to build more phases in the future; <sup>2</sup>As conveyed to Monitor by Poddar sales staff. Bought with intent for occupation on possession; <sup>3</sup>May include purchases made to move into later or for reselling. Also, some customers buy two adjacent units and break the wall in the middle and convert it into a bigger apartment; <sup>4</sup>These may be rented out to students of a nearby college

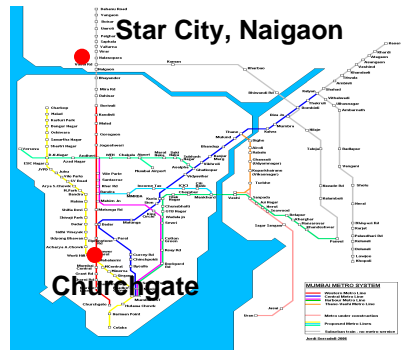
Source: Samruddhi Project Brochures, Site Visits, Monitor Analysis

# Select Developer Example: Rashmi Housing

Star City is located in Naigaon, with only 1BHK units in Phase 1. Units have seen 47% price appreciation (driven by customer demand) since launch and are selling at Rs. 8.6 lakhs

## Details on Star City

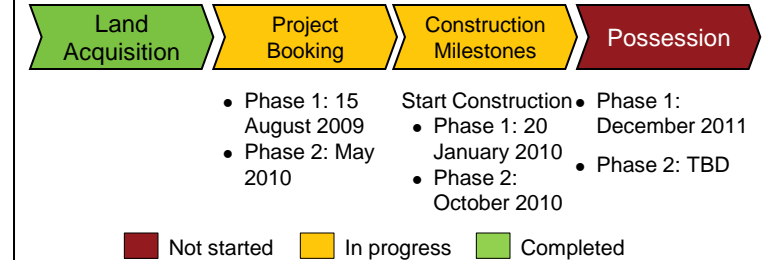
### Map of Mumbai



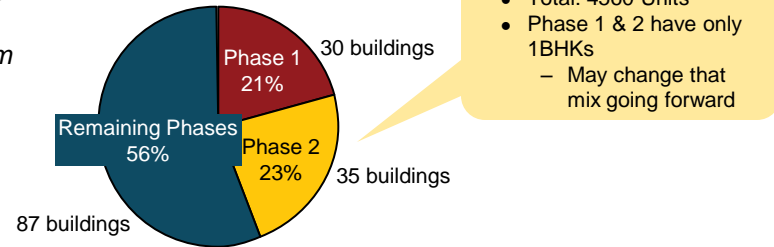
- **Location:** Naigaon, Maharashtra; 65 mins on train from Churchgate in Mumbai
- **Connectivity**
  - 18 mins walk from Naigaon train station
  - The project is built on former agricultural land and overall the area is not that developed – only main roads are developed with the smaller roads almost nonexistent
- **Access to infrastructure**
  - There is no municipal supply of water but the project has a bore well
  - Schools, hospital, temple, etc. within 1 km

- **Size of Units –All 1 BHKs**
  - Saleable: 450 sq. ft.; Carpet: 325 sq. ft.
- **Loading factor:** 38%
- **Price per square feet (current):** Rs. 2000
  - On initial booking (August 2009), the price was Rs. 1364 per sq. ft. (47% price appreciation)
- **Cost of the cheapest unit:** Rs. 6 lakhs at launch
- **Format of buildings:** G+7 with lift
- **Consumer finance:** Tie ups with Bank of India, Bank of Baroda, SBI, PNB, Axis Bank and IDBI
- **Maintenance:** 1 year included after which a society will be created and will charge: Rs. 1.50/sq. ft. per month
- **Sales status:** 672 units sold in Phase 1; Phase 2 opened for booking May 2010

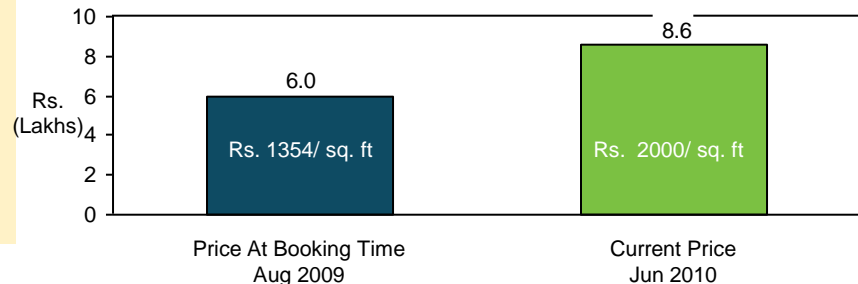
### Project Status



### Number of Buildings



### Price of Units



# Contents

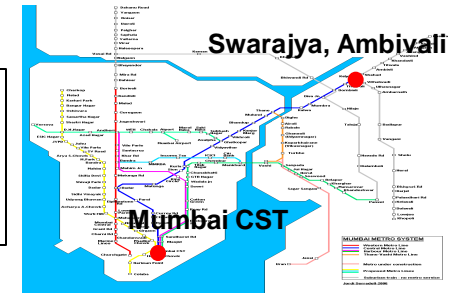
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# Mumbai: Case Study - Swarajya, Neptune Group

## Project Overview

Neptune Group launched its flagship low cost housing project, Swarajya, in Ambivali in March 2009, with a total of 19,122 units

Map of Mumbai



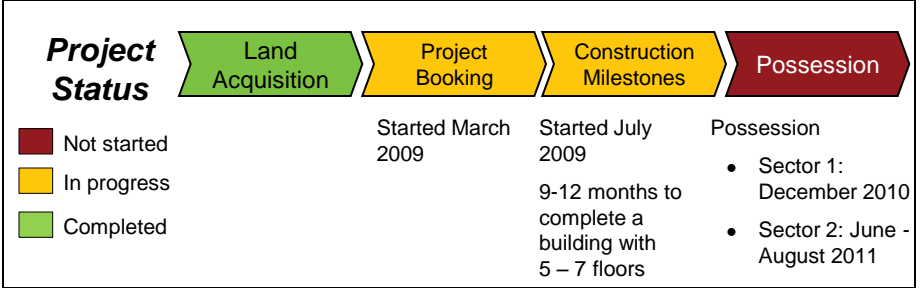
### Developer Details

- Neptune Group is a premium real estate development firm that has delivered retail and commercial projects to higher income segments
- This is its first foray into low-income housing but it plans to continue building other low income housing projects under the Swarajya brand in Nagpur, Pune and other cities

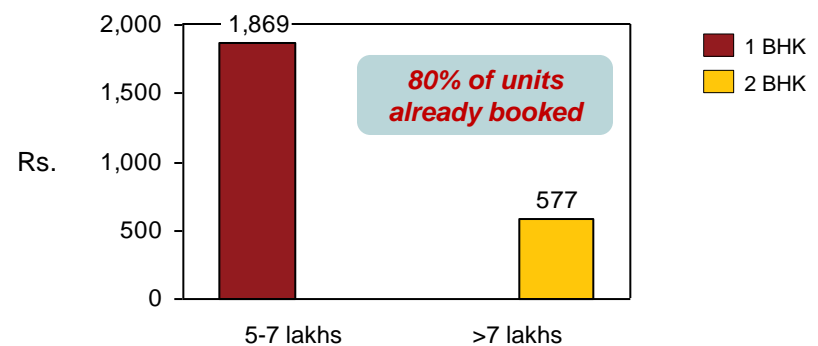
### Swarajya, Ambivali, Mumbai

- Spread over 146 acres and divided into 6 sectors
  - Total units planned: 19,122 (including residential units (90-92%) and commercial space)
- Currently Sector 1 and Sector 2 under construction
  - Sector 1: 1,064 units (18 buildings)
  - Sector 2: 1,382 units (22 buildings)
- Price range: Rs. 5.2 lakhs (launch price Rs. 4.75 lakhs) to Rs. 8.9 lakhs; 80% of the units already booked

- **Location**
  - Ambivali is 72 mins from CST by train (54 kms from CST station) and 2 hours by road from Mumbai city center
- **Transport and Connectivity from Project Location**
  - Ambivali Railway Station: 1.25 kms, which is ~20 mins walking distance; transport facility from Ambivali station to project provided by Neptune Group
- **Infrastructure**
  - Water supply from bore wells and also provided by the municipal corporation
  - Electricity will be provided by MSEB
  - Close to market, temples, schools and hospitals
    - o KDMC has approved a plan for building a school within the development; decision pending on who will build the school (plot reserved for school)



Number of Units by Price Range<sup>1</sup>



Note: <sup>1</sup>Data for Sector 1 and 2 only since they are the only ones under construction; Pricing of units in other sectors is still to be determined  
 Source: Interviews with Neptune Group's Management and Sales Team; Site visits; Project brochure of Swarajya by Neptune Group; Monitor Analysis

# Mumbai: Case Study - Swarajya, Neptune Group

## Construction Details

Neptune Group has launched sectors 1 and 2, which comprise 1869 1BHKs and 577 2BHKs

### Unit Sizes

Flat Type	Number of Units	Carpet Area (in Sq. ft.)	Saleable Area (in Sq. ft.)	Lowest Priced Unit (in Rs.)
<b>Sector 1 and 2</b>				
1 BHK	1869	233	315	Rs. 5.2 lakhs
2 BHK	577	387	523	Rs. 8.9 lakhs

At current prices

Loading Factor: 35%

### Construction Specifications

- RCC construction; internal partition walls made of solid concrete blocks
- High quality fittings and sanitary ware with concealed plumbing
- Copper wiring and provision for multiple electrical connections
- Panel doors at the main entrance
- Good quality powder-coated aluminum sliding windows
- Designer tiles flooring, green marble platform with stainless steel sink; Dado tiles in kitchen; designer toilets with ceramic tiles up to the ceiling instead of half way

### Unit Layouts





# Mumbai: Case Study - Swarajya, Neptune Group

## Typical Floor Plan and Site Layout

Spread over 146 acres, the development will eventually have 6 sectors and 19,122 units

Typical Floor Plans



Site Layout



Sector 1

Sector 2

Planned Phases	Sector 1	Sector 2
Number of Buildings	18	22
Number of Units	1,064	1,382

Sectors 3 to 6 have plans to be finalized and are still to be launched

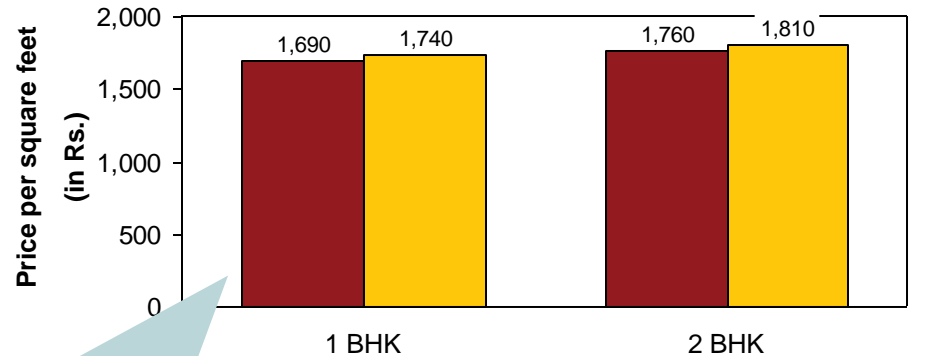
# Mumbai: Case Study - Swarajya, Neptune Group

## Pricing & Format Details

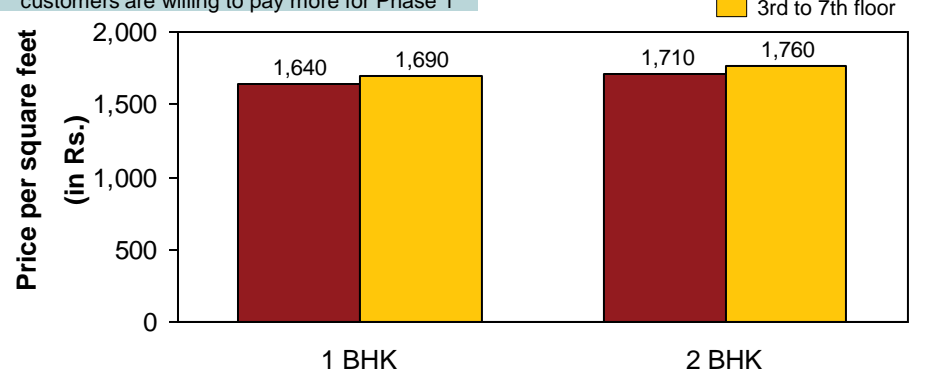
Although Phase 2 is newer, it was launched at a special price of Rs. 1499 per sq. ft for 1 BHKs. Phase 1 units are selling at a higher price as buildings are closer to possession

Price of Units by Floor  
(Current Prices)

### Sector 1



### Sector 2



### Pricing Details

#### • Pricing Variation by Floor

- All buildings are either G+5 or G+7 and have lifts
  - The lift can only be used by those living on the 3<sup>rd</sup> floor or above
- Prices are higher by Rs. 50/sq. ft for floors above 2<sup>nd</sup> floor (than G – 2<sup>nd</sup> floor) because of access to a lift
- Each building consists of either all 1 BHK units or all 2 BHK units
- Floors 1<sup>st</sup> - 4<sup>th</sup> and 1<sup>st</sup> - 6<sup>th</sup> in G+5 and G+7 buildings respectively have sold out fastest
  - Customers are hesitant to buy ground floor units due to flooding issues and top floor units due to leakage concerns during rainy seasons

#### • Maintenance and Extra Charges

- Extra Charges<sup>1</sup>: 6 – 7.5% of the flat cost
- Society to be formed for each sector
  - Customers would need to pay maintenance charges of approximately Rs. 1.75 to Rs. 2 (based on access to a lift) per month per square feet per flat on an ongoing basis

Sector 1 prices have seen higher appreciation because construction is at a more advanced stage. 1BHKs and 2BHKs were launched at Rs. 1499 per sq. ft. and Rs. 1649 per sq. ft. respectively for both sectors. Even though the apartments are the same in Phase 1 and 2, customers are willing to pay more for Phase 1

Note:<sup>1</sup>Includes Share Money, Society Formation Charges, Electricity and Water Charges, Stamp Duty and Registration Charges

Source: Interviews with Neptune Group's Management and Sales Team; Site visits; Project brochure of Swarajya by Neptune Group; Monitor Analysis

# Mumbai: Case Study - Swarajya, Neptune Group

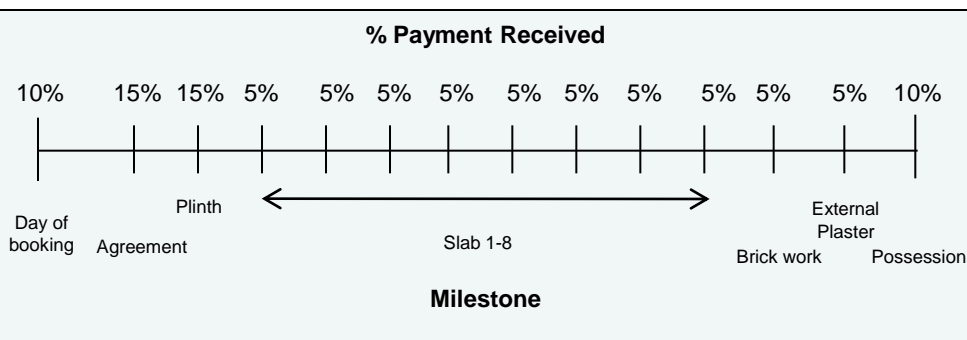
## Customer Finance

*There is wide availability of customer finance, at varied interest rates which range from 8.6% to 14% depending on whether customers are part of the formal or informal sector*

Availability and access to consumer finance (List of preapproved banks)



### Payment Schedule (for a G + 7 building format)



### For a 1 BHK unit on ground floor in Sector 1

<b>Cost of Unit</b>	<b>Rs. 5.3 lakhs</b>
<b>Additional Costs<sup>2</sup></b>	<b>Rs. 35,710</b>
<b>Effective Rs./sq. ft.</b>	<b>Rs. 1,803</b>

Note: <sup>1</sup>Rates as communicated to the MIM team by Sales Team; <sup>2</sup>Includes Share Money, Society Formation Charges, Electricity and Water Charges, Stamp Duty and Registration Charges. Additional costs are paid upfront along with the down payment and hence are not included in the loan amount or EMIs  
 Source: Brochures and handouts for the project, Interviews with Neptune Group's Management and Sales Team; Monitor Analysis

# Mumbai: Case Study - Swarajya, Neptune Group

## Marketing and Sales

*Neptune Group claims that ~80,000 people have visited the Swarajya project since it launched with over 50% of them hearing about the project through word of mouth*

### Marketing Channels

- Advertisements through various mediums
  - Hindi and Marathi news channel
  - Billboards, trains, backs of buses
  - Newspapers – Maharashtra Times, Loksatta, Lokmat

### Sales

- The current pace of booking is 250 units per month
- Sales are expected to go up to 350 – 400 bookings per month as buildings are completed since it builds customer confidence
- In total, 70,000 -80,000 people have visited the site
  - 30,000-40,000 of them were in the first 2 months of launch (March 2009)

### Construction of Phase 1 Buildings



# Mumbai: Case Study - Swarajya, Neptune Group

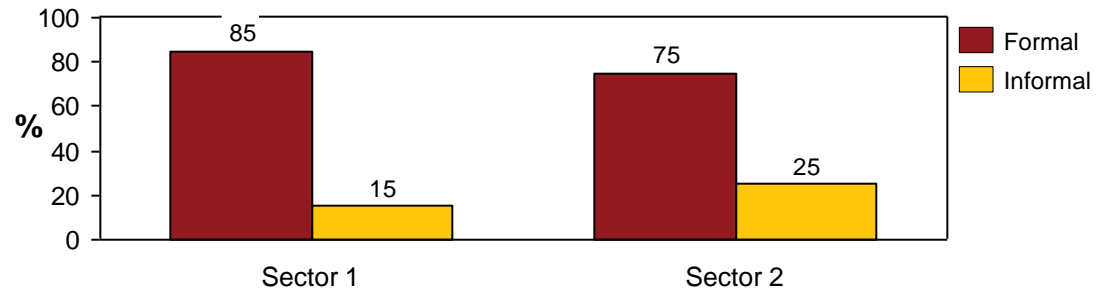
## Customer Profile

*62% of Neptune's customers report monthly household incomes of less than Rs. 15,000, and 73% of them have availed customer financing*

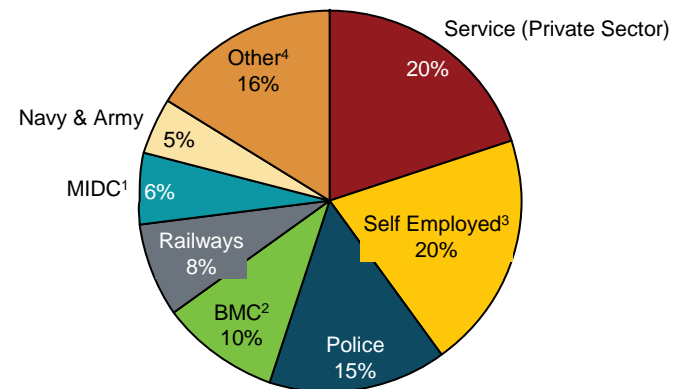
### Customer Profile

- Neptune has so far received visits from over 80,000 potential customers, according to the sales team
- 62% of customers have a monthly household income of less than Rs. 15,000
- 73% of customers avail loans
  - 8% of customers with MHI less than Rs. 15,000 do not take a loan
- Average Loan Size
  - 1 BHK: Rs. 4 lakhs
  - 2 BHK: Rs. 7 lakhs

### Informal Sector Customers by Sector



### Break-up of Customers by Employment



Note: <sup>1</sup>MIDC = Maharashtra Industrial Development Corporation; <sup>2</sup>BMC = Brihanmumbai Municipal Corporation; <sup>3</sup>Self Employed includes owners of hotels, shops, transport, etc. <sup>4</sup>Other includes owners of businesses (6%), Labors/workers used for loading & unloading from truck, ship, etc. (4%), Civil Supervisors & Engineers (2%), Auto & Taxi Drivers (2%) and MTNL & BSNL workers (2%)

Source: Interviews with Neptune Group's Management and Sales Team; Monitor Analysis

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## Objective

- To assess the marketability and commercial viability of low-income housing projects from a developer's point of view for two selected and representative geographies
  - **Mumbai, Maharashtra**
  - Ahmedabad, Gujarat

## Our Approach

- For an effective, accurate and reliable set of results, we included in our analysis:
  - Data and assumptions driven by field-based experiences of both short-listed developers (showcased in the case studies) as well as long-list developers
  - Triangulated findings with expert advisors

# Mumbai LIH Project: Commercial Viability & Marketability Representation

## Assumptions & Inputs

*The majority of the assumptions and inputs are the same for both Mumbai and Ahmedabad projects, with some inputs (land and construction costs) that differ due to ground realities*

### Assumptions Constant Across Mumbai and Ahmedabad

Category	Component	Value
Land Related	Land size	10 acres
	Stamp duty	5%
Plot Related	Residential portion	97%
	Commercial portion	3%
Unit Related	Flat type	1 RK
		1 BHK
Phasing	Number of phases	3
	Phase wise price rise in units	5%
Marketing	Marketing expenses as a % of revenue	Phase I: 3%
		Phase II: 2.5%
		Phase III: 2%
Revenue	Commercial yield factor <sup>3</sup>	2

Category	Component	Value
Cash Flow Schedule	<b>Land and Construction Related Expenses</b>	
	Land & project clearance timeline	12 months
	Upfront payment	50% (rest 50% after 6 months when the land is registered)
	<b>Construction Timeline</b>	
	Construction time per phase	12 months
	Time between start of construction for each phase	6 months
	Upfront construction cost	10% upfront then 7.5% per month for 12 months
	<b>Customer Timeline</b>	
	% of customers signing up at the start of construction	50% (rest 50% midway through the construction cycle)
	Down payment by the customer	20%

### Assumptions Variable Across Mumbai and Ahmedabad

**FSI<sup>1</sup>**

**FSI Land Cost**

**Construction Cost<sup>4</sup>**

**Average Selling Price (at launch)**

**Saleable Area (Carpet Area)**

**Loading factor<sup>2</sup>**

**% of 1RKs and 1BHKs**

	<b>Mumbai</b>	<b>Ahmedabad</b>
	1	1.5
	Rs. 300 per sq. ft.	Rs. 200 per sq. ft.
	Rs. 900 per sq. ft.	Rs. 600 per sq. ft.
	Rs. 1594 per sq. ft.	Rs. 1079 per sq. ft.
1RK	312 sq. ft. (240 sq. ft.)	390 sq. ft. (260 sq. ft.)
1BHK	390 sq. ft. (300 sq. ft.)	540 sq. ft. (360 sq. ft.)
	30%	50%
	1RK: 70%; 1BHK: 30%	1RK: 30%; 1BHK: 70%

Note: To understand how we decided on the input values, please see the *Logic for Assumptions & Inputs* slides in the Appendix; <sup>1</sup>FSI = Floor Space Index is the ratio of the total floor area of buildings on a certain location to the size of the land of that location; <sup>2</sup>Loading factor increased by the carpet area equals saleable area; <sup>3</sup>Commercial yield factor is the factor by which commercial space sells over residential space; <sup>4</sup>Construction cost includes infrastructure cost; Mumbai infrastructure cost: Rs. 75 per sq. ft.; Ahmedabad infrastructure cost: Rs. 50 per sq. ft. Source: Interviews of multiple developers and stakeholders; Monitor Analysis



# Mumbai LIH Project: Commercial Viability & Marketability Representation

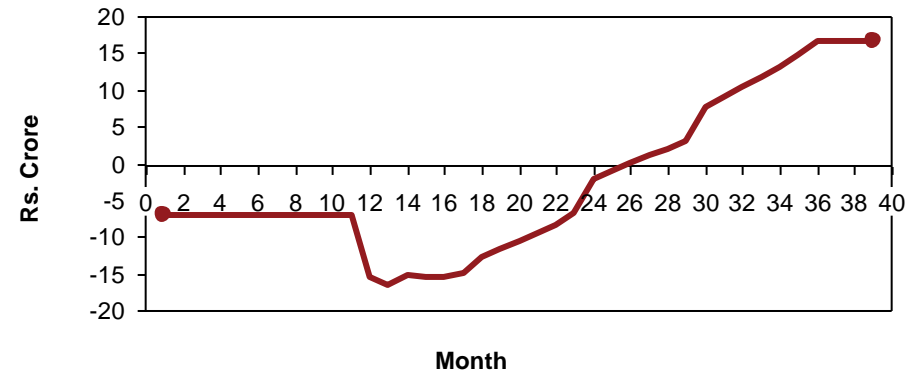
## Output & Results

*The low income housing project modeled has an IRR of 45% and a gross margin of 24% for Mumbai (inflated by the commercial portion)*

### Scenario Summary (Inputs)

<b>Land Cost</b>	Rs. 300 per sq. ft. (Total Cost: Rs. 13.1 crores)
<b>Stamp Duty Cost</b>	Total Cost: Rs. 0.65 crores
<b>FSI Cost</b>	Rs. 300 per sq. ft.
<b>Construction Cost (including Rs. 75 per sq. ft. infrastructure cost)</b>	Rs. 900 per sq. ft.
<b>Selling Price (Residential)</b>	1RK: Rs. 1500 per sq. ft. 1BHK: Rs. 1550 per sq. ft. Average selling price <sup>1</sup> : Rs. 1594 per sq. ft.
<b>Selling Price (Commercial)</b>	Rs. 3188 per sq. ft.
<b>Total Unit Cost (at launch)</b>	1RK: Rs. 4.7 lakhs 1BHK: Rs. 6.1 lakhs
<b>Marketing Expenses (as % of total revenue)</b>	Phase I: 3% Phase II: 2.5% Phase III: 2%
<b>Number of Units (across all phases)</b>	1RK: 885 1BHK: 375

### Net Cash Flow



### Output

<b>IRR</b>	45% <sup>2</sup>
<b>Residential Revenue</b>	Rs. 67.34 crores
<b>Commercial Revenue</b>	Rs. 4.17 crores

### On Revenue

<b>Margins</b>	<b>1RK</b>	20%
	<b>1BHK</b>	23%
	<b>Commercial</b>	62%
	<b>Total</b>	<b>24%</b>

Note: <sup>1</sup>Includes the average selling price throughout the project sales cycle, including Phase 2 and 3 units, each of which sees a 5% price increase from the previous phase. <sup>2</sup>IRRs referred to in this model pertain strictly to the rate of return for the project as an independent undertaking, and do not include the costs of related business unit management

Source: Interviews of multiple developers and stakeholders; Monitor Analysis

# Mumbai: Commercial Viability & Marketability

## Marketability Examples

*The demand for low income housing in Mumbai exceeds supply, which can be seen by the pace of sale of units, and the change in housing mix due to customer preferences, at various project sites*

### Neptune Group



*Neptune Group launched the Swarajya project in Ambivali, Maharashtra in March 2009*

- **High Customer Demand**
  - Since launch, over 80,000 people have visited the project site according to the sales team
  - 80% of units have been booked since launch in March 2009
- **Strong Customer Preferences**
  - The project team increased the total number of 1BHK units to be constructed, when they saw that the demand for 1BHKs was significantly higher than for 2BHKs

*“We already have plans of building other low-income housing projects under the ‘Swarajya’ brand in Pune, Nagpur and other cities after seeing the success of our first LIH project in Ambivali.”*

- Nayan Shah<sup>1</sup>, Neptune Group

### Poddar Housing



*Poddar Housing launched the Samruddhi Complex project in Bhivpuri, Maharashtra in March 2010*

- **High Customer Demand**
  - Sold 800 units so far, 600 of which were sold within a month of launch
- **Strong Customer Preferences**
  - The sales of both 1RK and 1BHK units increased exponentially as soon as a mock apartment was put up for customers to see

### Rashmi Housing



*Rashmi Housing launched the Star City project in Naigaon, Maharashtra in August 2009*

- **High Customer Demand**
  - Sold 672 units out of 896 units since launch
  - Been able to increase prices per sq. ft. from Rs. 1394 to Rs. 2000 in less than 6 months due to high demand

Note: <sup>1</sup>Nayan Shah is the Head of Finance, BD and Investor Relationship Manager at Neptune Group  
Source: Management Interviews, Site Visits, Monitor Analysis

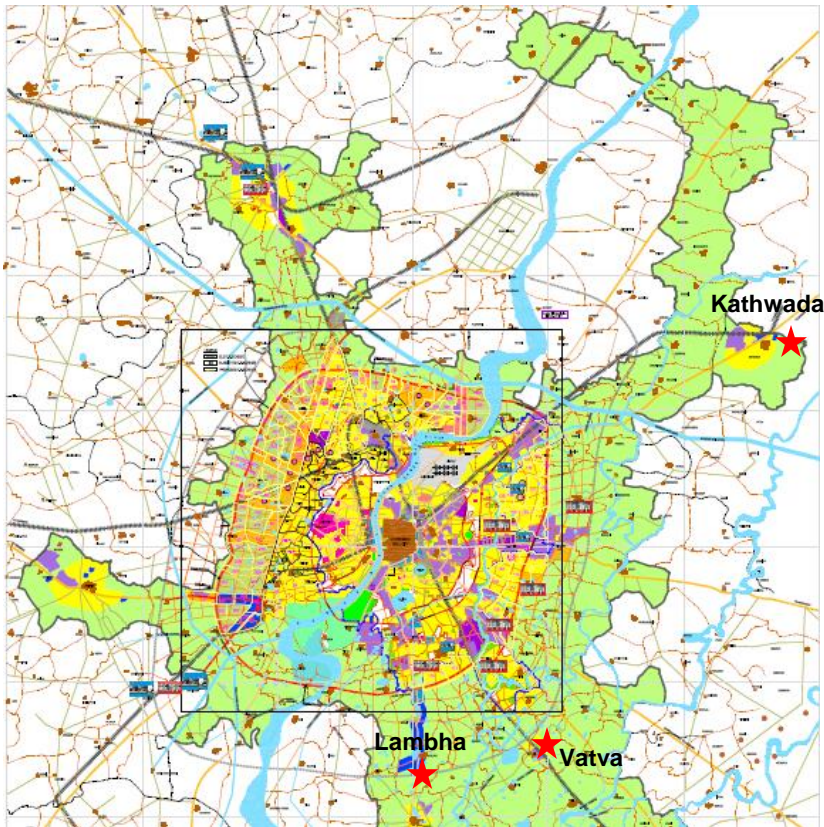
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# Introduction - Ahmedabad

*Ahmedabad has a robust low-income housing market with projects coming up in multiple locations, offering prices as low as Rs. 811/sq. ft.<sup>1</sup>*

**Map of Ahmedabad & Suburbs**



★ Project Location

## Ahmedabad Overview

- Population: 5.2 million (according to Census 2001)
- Ahmedabad is the largest city in Gujarat, which is a strong commercial state in Western India
- Hub of small and large scale industry
  - Major industries – Textile and garments, pharmaceutical
  - Largest supplier of denim in India

## Location Overview

### Data from six projects across Ahmedabad

- **Vatva:** Rs. 811/sq. ft. (Navijivan Housing, Foliage) - Rs. 1,333/sq. ft. (Karnavati Apartments, Shree Ram Developers)
  - 13 kms from the Ahmedabad Junction Railway Station (the primary terminus of rail transport for the city of Ahmedabad)
  - Price of cheapest apartment: Rs. 2.8 lakhs (Navijivan Housing, Foliage)
- **Kathwada:** Rs. 891/sq. ft. (Gokul Galaxy, Galaxy Developers)
  - 18 kms from the Ahmedabad Junction Railway Station
  - Price of cheapest apartment: Rs. 4.01 lakhs
- **Lambha:** Rs. 1111/sq. ft. (Umang Lambha, DBS Affordable Home Strategy)
  - 17 kms from the Ahmedabad Junction Railway Station
  - Price of cheapest apartment: Rs. 4 lakhs

Note: <sup>1</sup>All prices are in current prices

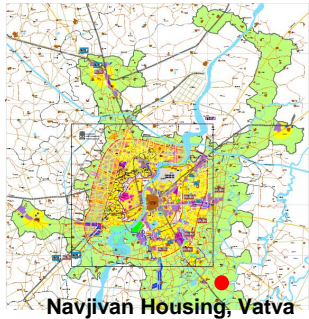
Source: Interviews with developers including Galaxy Developer, Santosh Associates, Foliage, Shree Ram Developers, DBS Affordable Home Strategy Ltd. and Dharmadev Builders; 2001 Census; Monitor Analysis

# Select Developer Example: Foliage

*Foliage's first low-income housing project, Navjivan Housing, offers 1RK units for as low as Rs. 2.8 lakhs*

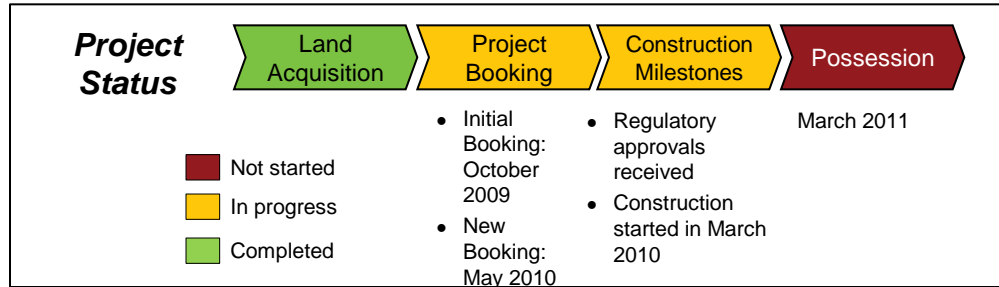
## About Navjivan Housing

### Map of Ahmedabad

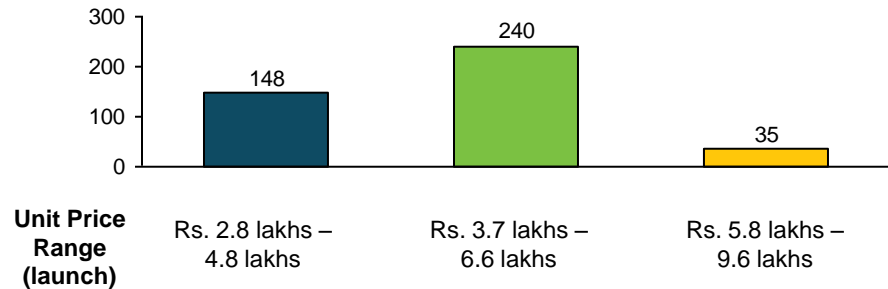


- **Location:** Vatva, Ahmedabad; 13 kms from the Ahmedabad Junction Railway Station
- **Connectivity**
  - Well connected to the city center by public transport
  - Located off the main road
- **Access to infrastructure**
  - Schools (primary and secondary) and colleges within 4-5 kms

- **Configuration of units:** 1RK, 1BHK and 2BHK
- **Total Number of units:**
  - Residential: 423 units
  - Commercial: 38 shops
- **Loading factor:** 50%
- **Price per square feet (launch):** Rs. 828 – Rs. 1144
- **Cost of cheapest apartment (launch):** Rs. 2.8 lakhs
- **Format of buildings:** Total 9 buildings
  - G+3 (without lift), G+5 (with lifts)
  - Parking space with all buildings; in most cases space will be used for visitor parking
- **Consumer finance:** Tie ups with Bank of Baroda, DHFL, MAS, HDFC, MHFC
- **Maintenance:** No upfront maintenance cost; charges to be decided by a society post possession
- **Sales Status:** Total 250 units sold
  - 173 units sold when project first launched in October 2009
  - Booking was closed and reopened in May 2010 when another 77 units were sold
  - Prices increased by 10% starting mid-June 2010



### Number of Units by Price



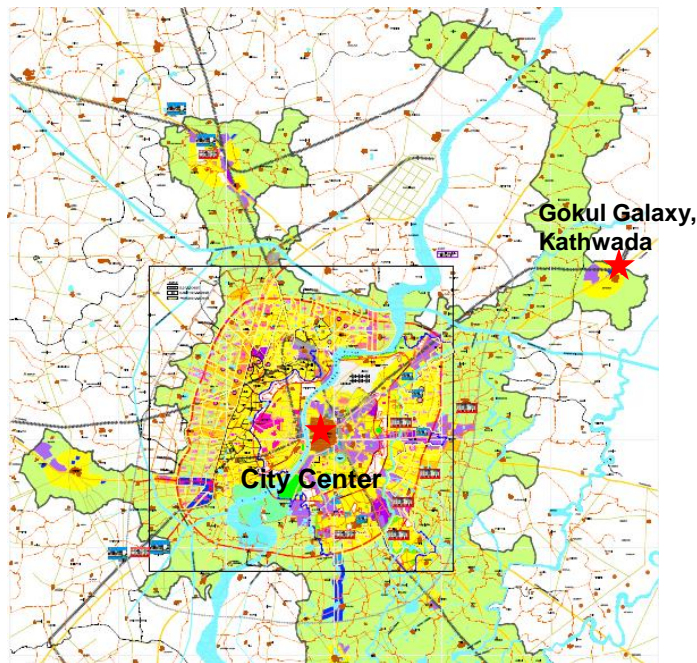
### Unit Details

Unit Configuration	Building	# of Units	Saleable (Sq. Ft.)	Sq. ft. Price (launch)
1RK	C, D, E, F	148	299 – 414	828 – 1161
1BHK	C, D, E, G, H, I	240	458 - 546	811 - 1200
2BHK	A, B	35	632 - 837	922 - 1144

# Select Developer Example: Galaxy Developer

*Gokul Galaxy is located in the northeastern suburbs of Ahmedabad near the industrial hub of GIDC Kathwada*

**Map of Ahmedabad**



**Galaxy Developer – Gokul Galaxy**

- **Location:** Kathwada, Ahmedabad, Gujarat; 15 kms from the city center
- **Transport and Connectivity:** Well connected by public transport - bus stop within 200 meters
- **Access to infrastructure:** School within 1 km, hospital within 0.5 kms, college within 3.5 kms, 24 hrs water supply from bore well
- **Number of units:** 1100
- **Mix of housing:**
  - 1RK (237 units): 270 square feet carpet area (Rs. 4.01 – 5.21 lakhs)<sup>1</sup>
  - 1BHK (750 units): 450 square feet carpet area (Rs. 6.01 – 7.21 lakhs)<sup>1</sup>
  - 2BHK (113 units): 630 square feet carpet area (Rs. 8.01 – 9.21 lakhs)<sup>1</sup>
- **Loading factor:** 35%
- **Price per square feet (current):** Rs. 891 – Rs. 1096
- **Cost of cheapest apartment (current):** Rs. 4.01 lakhs
- **Format of Building:** G + 3 (no lifts)
- **Consumer finance:** MHFC, ICICI and LIC
- **Maintenance:** Will charge Rs. 14000, comprising electricity and maintenance deposit, from the customer
- **Construction and sales status:** 716 units booked; Booking started in August 2009, construction in July 2009 and expected possession to be given by January 2011 for Phase 1 & 2 and August 2011 for Phase 2

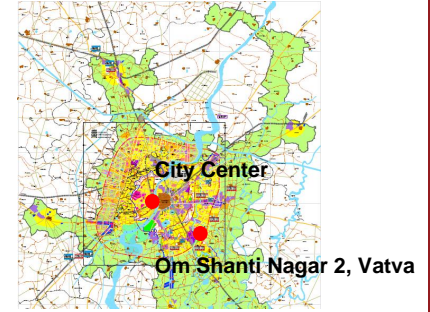
Note: <sup>1</sup>Price range depends on the floor – certain floors have higher price  
Source: Project Sales Office, Monitor Analysis

- Summary of Findings
- Market Overview
- **LIH Developers: Operations, Commercial Viability and Marketability**
  - Mumbai
  - **Ahmedabad**
    - **Case Study: Santosh Associates**
    - Commercial Viability & Marketability
- Housing Finance Companies: Operations and Commercial Viability
- Appendix

# Ahmedabad: Case Study - Om Shanti Nagar 2, Santosh Associates

## Project Overview

*Santosh Associates, headed by Taral Bakeri, launched Om Shanti Nagar 2, a low cost housing project in May 2009, in Vatva, which saw phenomenal sales in its first weeks*

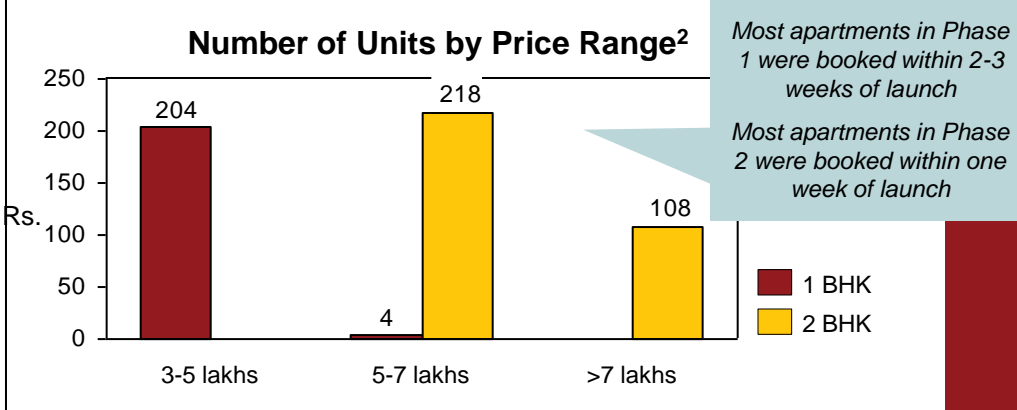
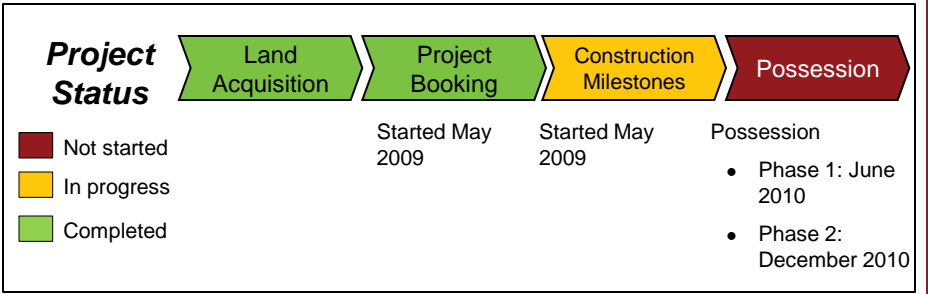


### Developer Details

- Sold 2100 apartments since 1995 across 15 projects in Ahmedabad out of which over 1600 have been handed over

### Om Shanti Nagar 2

- 674 units – 420 units in Phase 1 and 254 units in Phase 2 priced between Rs. 3 and 7 lakhs, out of which 669<sup>1</sup> units have been booked
- Location**
  - 3 kms from Narol Circle on Lamba Highway - 15 kms from the city center and 1.5 kms from S.P. Ring Road
  - Project near large industrial estate – GIDC Vatva
- Transport and Connectivity**
  - The development is located on an arterial road
  - Easy availability of AMTS buses (within 0.4 kms), auto rickshaws (within 0.2 kms), shuttles and S.T. Buses and proximity to BRTS route (within 2 kms)
- Infrastructure**
  - Access to concrete roads with street lights
  - With no current access to municipal supply of water, the development has a provision for a underground water tank (150,000 liters) and a bore well
    - The water supply division is building a water supply to this region but this will take 2-3 years
  - Earthquake resistant structures
  - Proximity to market, temples, schools (2 kms) and hospitals (3 kms); common park area within the complex



Note: <sup>1</sup>While all the flats were booked initially, this number reflects a small number of cancellations (on-going) and re-booking; <sup>2</sup>Total number of units does not add up to 674 because graph shows data compiled for 25 out of the 34 buildings across two phases. Data for remaining buildings (L, M, N and D) is not available  
 Source: Project Brochure; Site Visits; Project Sales Office; Santosh Associate's Website; Monitor Analysis



# Ahmedabad: Case Study - Om Shanti Nagar 2, Santosh Associates

## Construction Details

Om Shanti Nagar 2 has both 1 BHK and 2 BHK formats, in a variety of sizes

### Sample Unit Layouts<sup>1</sup>

#### Unit Sizes

Flat Type	Number of Units	Carpet Area (in Sq. ft.)	Saleable Area (in Sq. ft.)	Lowest priced Unit (in Rs.)
<b>Phase 1</b>				
1 BHK	136	294-381	459-594	Rs. 3.88 lakhs
2 BHK	284	432-495 <sup>2</sup>	675-774	Rs. 5.77 lakhs
<b>Phase 2</b>				
1 BHK	64	332-377	519-589 <sup>2</sup>	Rs. 4.33 lakhs
2 BHK	190	433-537	675-828	Rs. 6.38 lakhs

Loading Factor: 56%

#### Construction Specifications

- RCC construction
- Sand force plaster with cement for outer walls and cement plaster with white wash for the walls inside
- Ceramic Tiles Flooring for all rooms, glazed tiles for bathroom, white W.C. and white wash basin, Kotastone for platform with stainless steel sink
- Alcove: 3 feet in bathroom 2 feet in toilet, 2 feet on platform
- Steel section window panel with glasses in the windows
- ISI Mark copper wiring for all rooms; wiring is exposed (casing)
- Sustainability: Use of environmentally friendly lime paint

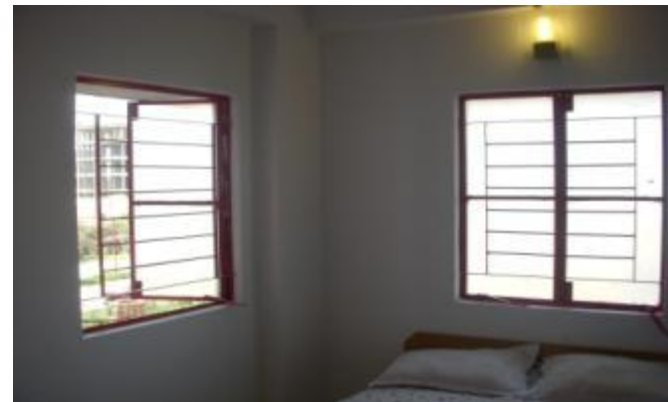
**1 BHK**  
Carpet Area = 365 sq. ft.



**2 BHK**  
Carpet Area = 454 sq. ft.



Picture of Mock Apartment - Bedroom



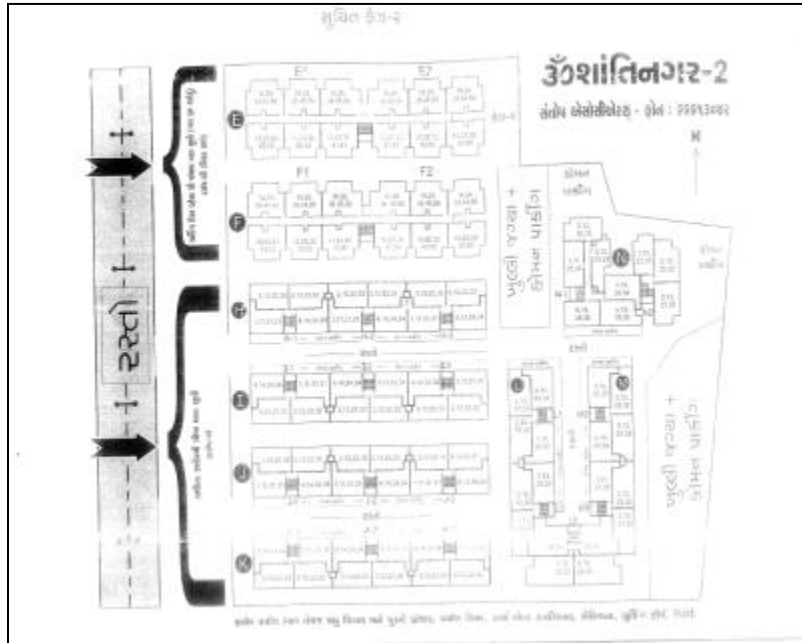
Note: <sup>1</sup>There are variations in the format of the units across buildings and phases; <sup>2</sup>Area is estimated – carpet area is ~64% of saleable area  
Source: Project Brochure; Site Visits; Project Sales Office; Santosh Associate's Website; Monitor Analysis

# Ahmedabad: Case Study - Om Shanti Nagar 2, Santosh Associates

## Site Layout

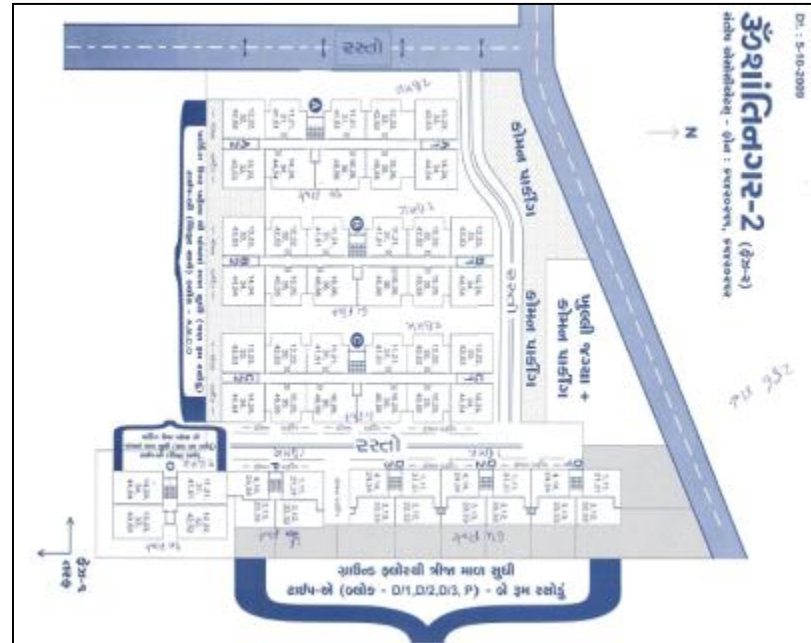
Santosh Associates launched the Om Shanti Nagar 2 project over 2 phases, totaling 15 buildings

**Phase 1**



<b>Number of Buildings</b>	<b>9</b>
<b>Number of Units</b>	<b>420</b>

**Phase 2**



<b>Number of Buildings</b>	<b>6</b>
<b>Number of Units</b>	<b>254</b>

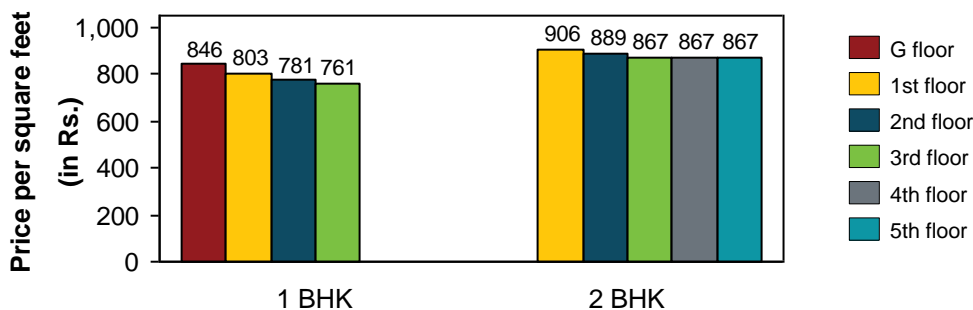
Source: Project Brochure; Site Visits; Project Sales Office; Santosh Associate's Website; Monitor Analysis

# Ahmedabad: Case Study - Om Shanti Nagar 2, Santosh Associates

## Pricing and Format Layouts

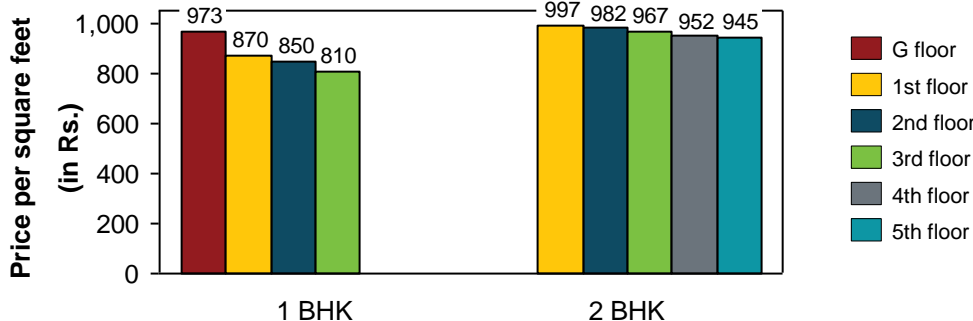
*Prices of units decrease as floors increase, especially in buildings that have 1BHK flats and no lifts, as customers prefer lower floors*

**Price of Units by Floor (Phase 1)**



Average Rs. / sq. ft.	1 BHK	2 BHK
	798	880

**Price of Units by Floor (Phase 2)**



Average Rs. / sq. ft.	1 BHK	2 BHK
	876	969

### Pricing Details

**• Pricing Variation by Location**

- Price per square feet is higher for buildings close to the entrance of the complex
- The location of the unit within the same floor also makes a difference to price
  - o For example, units in the corner are higher priced
    - A 2-BHK unit on the Ground Floor in Phase 1 in the corner is priced at Rs. 6.33 lakhs, whereas an adjacent apartment is priced at Rs. 6.16 lakhs (with all other things being equal)

**• Pricing Variation by Floor**

- Prices per square feet are lower as you move up the floor for both 1 BHK and 2 BHK units
  - o This may be due to customer's preference for lower floors
  - o The price differential between floors is larger for a 1 BHK versus a 2 BHK, probably because buildings with 1 BHK units do not have a lift and the absence of a lift increases the inconvenience factor for residents of 1 BHK units
- Most of the buildings have a terrace on the top floor, which is given to the customers living on the floor below
  - o An extra charge of about Rs. 15,000 is incorporated in the price of the apartment for the additional terrace space
- Customers on the ground floor get extra space for an added amount

**• Pricing Variation by Format**

- Prices may also vary due to some floor format variations (such as provision of store room, or a balcony in a few apartments)

**• Maintenance and Extra Charges**

- Maintenance is being covered by the interest earned from a corpus which was created by pooling money from customers (Rs. 20,000)
- Additional money will be charged by the society, if the interest is not enough to cover the cost of maintenance

Note: Apartments cancelled after initial booking are being re-sold at an appreciated price. For example, one of the apartments was re-sold at a price 26% above the original price of Rs. 4.38 lakhs  
 Source: Project Brochure; Site Visits; Project Sales Office; Santosh Associate's Website; Monitor Analysis

# Ahmedabad: Case Study - Om Shanti Nagar 2, Santosh Associates

## Customer Finance

Customer financing is available from a wide variety of sources. Additionally, customers have 2 payment options: Option 2 enables them to pay 10% less for the flat

Availability and access to consumer finance (List of preapproved banks)



(Largest partner)



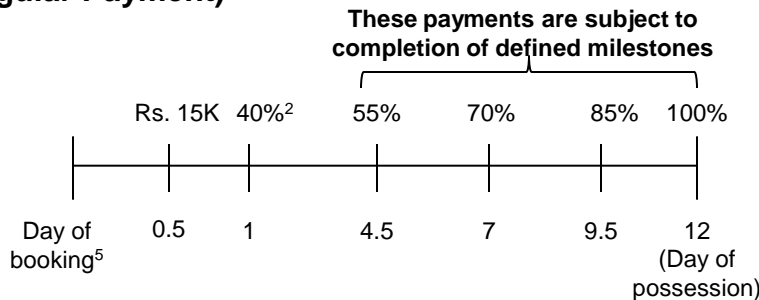
Largely formal sector customers ←

→ Some capacity to serve informal sector customers

### Option 1 (Regular Payment)

Cumulative payment made by the customer

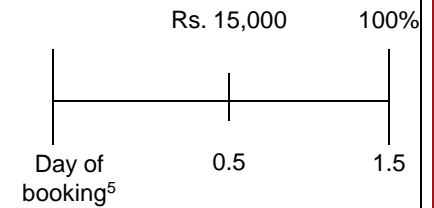
Months since day of booking<sup>1</sup>



### Option 2 (Down Payment)

Cumulative payment made by the customer

Months since day of booking<sup>1</sup>



### For a Typical Type A<sup>3</sup> Lowest priced flat

**Unit Cost** Rs. 3.88 lakhs

**Additional Costs<sup>4</sup>** Rs. 68,905

**Total Cost to Customer** Rs. 4.57 lakhs

**Effective Rs./sq. ft.** Rs. 995

Note: <sup>1</sup>Assumed 12 months to possession after the booking; <sup>2</sup>All percentages represent the percentage of unit price; <sup>3</sup>Type A flats are flats without lift, Type B flats are flats with lift; <sup>4</sup>Additional costs over the unit price include booking charges, membership fee, miscellaneous expenses (legal, sewage, municipal corporations and electricity charges), maintenance fee, service tax, VAT, stamp duty etc.; For Type B Flats, the additional costs add up to Rs. 89,905; <sup>5</sup>On Day of Booking, customers have to give a non-refundable down payment Rs. 20,000

Source: Project Brochure; Site Visits; Project Sales Office; Santosh Associate's Website; Monitor Analysis

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## Objective

- To assess the marketability and commercial viability of low-income housing projects from a developer's point of view for two selected and representative geographies
  - Mumbai, Maharashtra
  - **Ahmedabad, Gujarat**

## Our Approach

- For an effective, accurate and reliable set of results, we included in our analysis:
  - Data and assumptions driven by field based experiences of both short-listed developers (showcased in the case studies) as well as long-list developers
  - Triangulated findings with expert advisors

# Ahmedabad LIH Project: Commercial Viability & Marketability Representation

## Assumptions & Inputs

The majority of the assumptions and inputs are the same for both Mumbai and Ahmedabad projects, with some inputs (land and construction costs) that differ due to ground realities

### Assumptions Constant Across Mumbai and Ahmedabad

Category	Component	Value
Land Related	Land size	10 acres
	Stamp duty	5%
Plot Related	Residential portion	97%
	Commercial portion	3%
Unit Related	Flat type	1 RK 1 BHK
	Number of phases	3
Phasing	Phase wise price rise in units	5%
	Marketing expenses as a % of revenue	Phase I: 3% Phase II: 2.5% Phase III: 2%
Revenue	Commercial yield factor <sup>3</sup>	2

Category	Component	Value
Cash Flow Schedule	<b>Land and Construction Related Expenses</b>	
	Land & project clearance timeline	12 months
	Upfront payment	50% (rest 50% after 6 months when the land is registered)
	<b>Construction Timeline</b>	
	Construction time per phase	12 months
	Time between start of construction for each phase	6 months
Customer Timeline	Upfront construction cost	10% upfront then 7.5% per month for 12 months
	<b>Customer Timeline</b>	
	% of customers signing up at the start of construction	50% (rest 50% midway through the construction cycle)
	Down payment by the customer	20%

### Assumptions Variable Across Mumbai and Ahmedabad

FSI <sup>1</sup>
FSI Land Cost
Construction Cost <sup>4</sup>
Average Selling Price (at launch)
Saleable Area (Carpet Area)
Loading factor <sup>2</sup>
% of 1RKs and 1BHKs

	Mumbai	Ahmedabad
	1	1.5
	Rs. 300 per sq. ft.	Rs. 200 per sq. ft.
	Rs. 900 per sq. ft.	Rs. 600 per sq. ft.
	Rs. 1594 per sq. ft.	Rs. 1079 per sq. ft.
1RK	312 sq. ft. (240 sq. ft.)	390 sq. ft. (260 sq. ft.)
1BHK	390 sq. ft. (300 sq. ft.)	540 sq. ft. (360 sq. ft.)
	30%	50%
	1RK: 70%; 1BHK: 30%	1RK: 30%; 1BHK: 70%

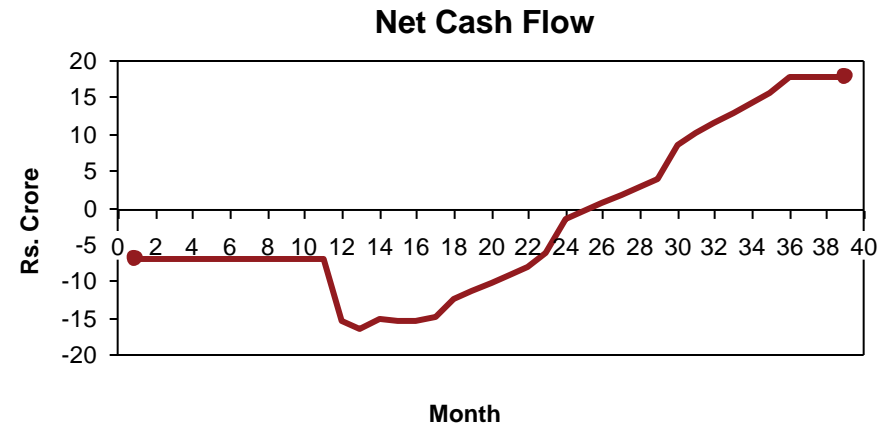
Note: To understand how we decided on the input values, please see the *Logic for Assumptions & Inputs* slides in the Appendix; <sup>1</sup>FSI = Floor Space Index is the ratio of the total floor area of buildings on a certain location to the size of the land of that location; <sup>2</sup>Loading factor increased by the carpet area equals saleable area; <sup>3</sup>Commercial yield factor is the factor by which commercial space sells over residential space; <sup>4</sup>Construction cost includes infrastructure cost; Mumbai infrastructure cost: Rs. 75 per sq. ft.; Ahmedabad infrastructure cost: Rs. 50 per sq. ft.  
Source: Interviews of multiple developers and stakeholders; Monitor Analysis

# Output & Results

*The low income housing project modeled for Ahmedabad has an IRR of 47% and a gross margin of 25% (inflated by the commercial portion)*

## Scenario Summary (Inputs)

<b>Land Cost</b>	Rs. 300 per sq. ft. (Total Cost: Rs. 13.1 crores)
<b>Stamp Duty Cost</b>	Total Cost: Rs. 0.65 crores
<b>FSI Cost</b>	Rs. 200 per sq. ft.
<b>Construction Cost (including Rs. 50 per sq. ft. infrastructure cost)</b>	Rs. 600 per sq. ft.
<b>Selling Price (Residential)</b>	1RK: Rs. 950 per sq. ft. 1BHK : Rs. 1050 per sq. ft. Average selling price <sup>1</sup> : Rs. 1079 per sq. ft.
<b>Selling Price (Commercial)</b>	Rs. 2158 per square feet
<b>Total Unit Cost (at launch)</b>	1RK: Rs. 3.7 lakhs 1BHK: Rs. 5.7 lakhs
<b>Marketing Expenses (as % of total revenue)</b>	Phase I: 3% Phase II: 2.5% Phase III: 2%
<b>Number of Units (across all phases)</b>	1RK: 379 1BHK: 900



## Output

<b>IRR</b>	47% <sup>2</sup>
<b>Residential Revenue</b>	Rs. 68.38 crores
<b>Commercial Revenue</b>	Rs. 4.23 crores

		<b>On Revenue</b>
<b>Margins</b>	<b>1RK</b>	16%
	<b>1BHK</b>	24%
	<b>Commercial</b>	63%
<b>Total</b>		<b>25%</b>

Note: <sup>1</sup>Includes the average selling price throughout the project sales cycle, including Phase 2 and 3 units, which see a 5% price increase from the previous phase <sup>2</sup>IRRs referred to in this model pertain strictly to the rate of return for the project as an independent undertaking, and do not include the costs of related business unit management.

Source: Interviews of multiple developers and stakeholders; Monitor Analysis



# Ahmedabad: Commercial Viability & Marketability

## Marketability Examples

*Two Ahmedabad projects, Santosh Associates and Foliage, have both had excellent sales trends, demonstrating the marketability of Ahmedabad's LIH projects*

### Santosh Associates



*Santosh Associates launched the Om Shanti Nagar 2 project in Vatva, Ahmedabad in May 2009*

- **High Customer Demand**
  - Nearly all 674 units were booked within 2-3 weeks of launch
  - Limited marketing for Phase 2 was required because all the units for Phase 2 were sold to customers who were not able to buy a unit in Phase 1

### Foliage



*Foliage launched the Navjivan Housing project in Vatva, Ahmedabad in October 2009*

- **High Customer Demand**
  - All the 173 units that were open for booking in October 2009 for Phase 1, sold out quickly
    - Foliage re-launched the project in May 2010 and within a week, 77 units were booked
    - Remaining units will be sold at a 10% price increase after mid-June 2010
- **Strong Customer Preferences**
  - Foliage decided to increase the number of 1RKs and reduce number of 2BHKs when they realized that the demand for 1RKs was much higher than 2BHKs

**After the successful launch of the two projects above in Vatva, Ahmedabad, 4-6 additional low income housing projects by different developers have come up in the same area**

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- Summary of Findings
- Market Overview
- Low Income Developers: Operations, Commercial Viability and Marketability
- **Housing Finance Companies: Operations and Commercial Viability**
  - **Case Study: MAS**
  - Case Study: DHFL
  - Commercial Viability
- Appendix

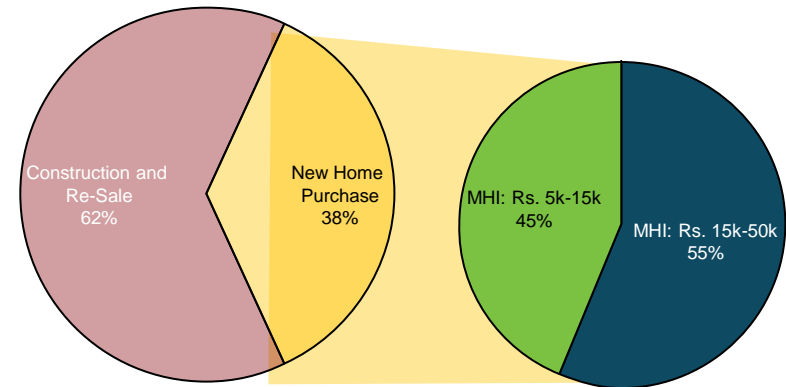
# Company Overview

*MAS Rural Housing and Mortgage Finance Limited is the HFC arm of MAS Financial Services Limited based at Gujarat in Ahmedabad and operational since 1988*

## Company Details

- Four product verticals<sup>1</sup> serving formal and informal sector customers
  - Microfinance, 2 Wheeler Loans, Commercial Vehicle Loans and Housing Finance
  - **Started housing finance in May 2008, full-fledged operations started very recently**
- Housing Finance portfolio consists of three areas:
  - Purchase of New Homes (from developer), Construction of New Homes and Resale
- Total housing portfolio: Rs. 5.4 Crores (as on 31<sup>th</sup> May, 2010)
  - **Portfolio size (for purchase of new house): Rs. 2.02 Crores (as on 31<sup>th</sup> May, 2010)**
- Financial Performance (2009-10) - Revenue: Rs. 114.12 lakhs
- **Total number of disbursements: 135**
  - **42 of which are for purchase of new homes**
  - **63% of the customers have MHI between Rs. 5,000 – Rs. 15,000<sup>2</sup>**
- Follows 'retail model'
  - Present in Gujarat (52 branches, 1600 locations and 120 approved villages), Maharashtra and Rajasthan
  - 70 branches provide all services including housing finance; **20 branches were set up to mostly provide housing finance**
- 35 – 40 officers in the housing vertical

**Total Housing Portfolio** Rs. 5.4 crores      **Portfolio Size (for new homes)** Rs. 2.02 crores



## High-Level Product Details (for MHI: Rs. 5,000 – Rs. 15,000)

	Formal Customers	Informal Customers
Average Interest Rate	10.5%-12.5%	12%-14.0%
Loan Tenure	13 years	
Loan Size	Rs. 3 lakhs	

Note: <sup>1</sup>The details provided in the slides henceforth would be for the home loan vertical catering to the low income segment for the purchase of homes; <sup>2</sup>MAS defines low income segment as customers with MHI between Rs. 5,000 – Rs. 15,000

Source: MAS website, Interviews with Kamlesh Gandhi (Managing Director), Darshana Pandya (COO) and Viral Mody (Operations Manager); Monitor Analysis

# HFC: Case Study - MAS Rural Housing and Mortgage Finance Ltd.

## Retail Presence

MAS has an HFC presence in Gujarat, Rajasthan and Maharashtra with 20 branches configured to offer primarily housing finance<sup>1</sup>

### Presence in India (All Branches)



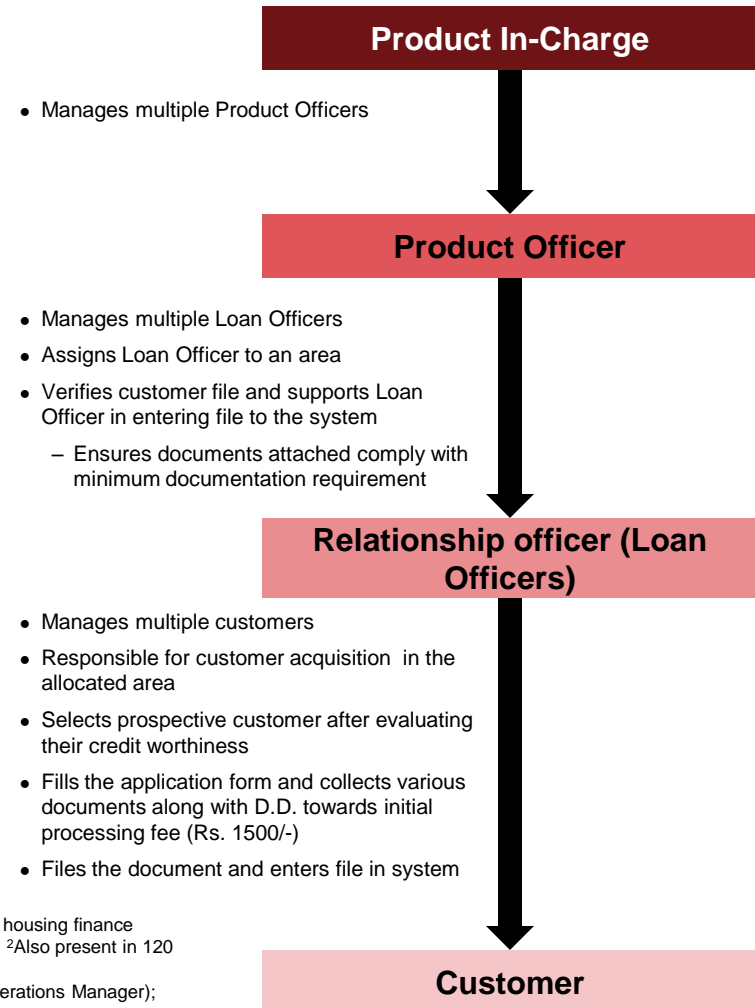
### Branch Details

Location	Number of Branches (set up for housing finance) <sup>1</sup>
Gujarat	12
Maharashtra	4
Rajasthan	4

Note: <sup>1</sup>The 20 branches were set up for housing finance and this forms the bulk of services provided at these centers; While housing finance cannot be provided from other branches at present, there are plans in future to provide these services from all the branches; <sup>2</sup>Also present in 120 villages across Gujarat

Source: MHFC website, Interviews with Kamlesh Gandhi (Managing Director), Darshana Pandya (COO) and Viral Mody (Operations Manager); Monitor Analysis

### Retail/Branch Structure



# Financials

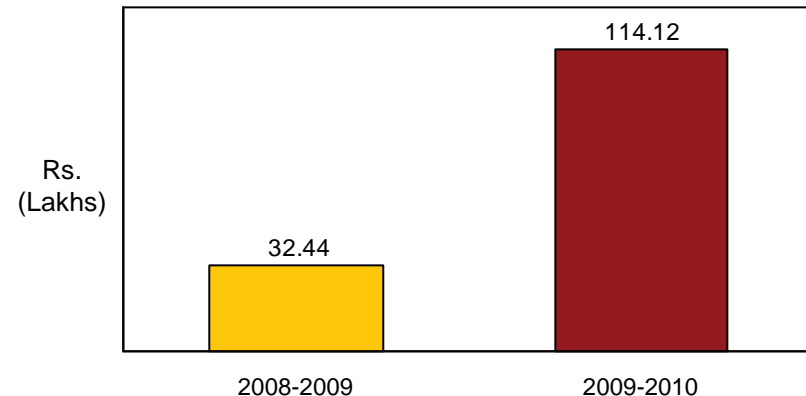
*MAS can get loans from most major banks (i.e. HDFC, IDBI, etc.) at good rates because of the parent company's established relationship with banks; it can also leverage existing infrastructure for cross-efficiencies*

## Capital Structure

- Raised initial Rs.10 crores in equity
  - 90% by MAS Financial Services; 10% by Mr. Kamlesh Gandhi and Mr. Mukesh Gandhi
  - Dividend outflow to be restricted in the initial period
- Debt
  - Rs. 25 crores sanctioned by HDFC for tenure of 7 years
  - In process to attain refinancing from NHB which gives loans at competitive rate to promote affordable and rural housing
- Debt to Equity Ratio
  - MAS feels that although it can attain ratio of 8:1 or more, 6:1 is a more realistic estimate for now
- Excess and Idle Funds
  - Idle fund kept either in Mutual Fund (Debt Fund, Liquid Fund) or Bank FD
    - MAS stated that investments in MF are not for the long term and is sold as and when business need arises
  - Next month's projected disbursement normally kept in a current account

## Financial Performance

### Revenue



*“Our incremental cost for entering the housing finance business was low because we could leverage existing infrastructure (i.e. branches and service centers) to provide home loans”*

*-Kamlesh Gandhi, MD, MAS*

# HFC: Case Study - MAS Rural Housing and Mortgage Finance Ltd.

## Product Details and Project Risk Assessment

*Before any loans are disbursed, MAS conducts due diligence on the developer and the project. The standard product disbursed varies according to the customer, but MAS targets a gross spread of ~4%*

### Project Risk Assessment

- Parameters for assessment of project risk:
  - Advance Project Finance clearances for the project
  - Clear title schemes
  - Legal and technical clearance (Outsourced by MAS)
  - Project paper clearance
  - Reputation of the developer
- Milestone based funding only (rather than advance developer funding) to mitigate risk
- Maximum of 15% of housing finance portfolio can be exposed to one developer

### Product Details

- Product
  - **Informal Sector:** Housing loan of Rs. 2.5 lakhs – Rs. 6 lakhs for 10 – 15 years at an average interest rate of 14% and average LTV of 60.1%
  - **Formal Sector:** Housing loan of Rs. 3.5 lakhs – Rs. 8 lakhs for 10 – 15 years at an average interest rate of 12.5% and average LTV of 50.6%
- Gross spread target: Up to 3.5% - 4%
- Cost structure:
  - Administration cost: 1.5% net of the loan disbursed
  - Delinquency cost: Up to 1.5% - 2.5% of loan disbursed
  - Expected RoA: 2% - 2.5%
- Floating interest rate
- MAS requires all customers to have a life insurance policy and property insurance cum personal accident policy
  - The requirement is to eliminate default due to unforeseen circumstances such as natural death, earthquake, accidental death, property damage, etc.
  - Deducts one time premium from disbursed amount
  - Tied up with Kotak to provide life insurance product – the files are managed by MAS, for which it charges an administrative fee from Kotak
  - Tied up with IFFCO – TOKIO to provide property insurance
- Processing Fee: Varies according to the project and adds to the gross yield

Note: Information awaited on any fee received by MAS for providing insurance through Kodak etc.; more details required on the project risk assessment  
 Source: Interviews with Kamlesh Gandhi (Managing Director), Darshana Pandya (COO) and Viral Mody (Operations Manager); Monitor Analysis

# HFC: Case Study - MAS Rural Housing and Mortgage Finance Ltd.

## Individual Customer Risk Assessment

*Each customer's appraisal process involves multiple checks and balances to ensure completeness of information*

### Customer Origination

- Marketing done through radio, newspaper, developer tie-ups, property shows, etc.
- Loan Officer identifies prospective customers
- Loan Officer fills out application form after evaluating customer's credit worthiness and collects required documents and submits to Product Officer
  - Identify proof
  - Financial papers
  - Basic property and legal papers
  - Demand draft of Rs. 1500 for initial processing fee
- Product Officer verifies all document for completeness
- Submits the application to the credit department

### Customer Risk Assessment

- Credit Officer conducts credit appraisal of applicant
  - Credit history check
  - Analysis of site visit report
  - Telephonic verification of information
  - Track record check
  - Analysis of banking behavior
  - Analysis of income proof
  - Analysis of source of equity
  - A guarantor is mandatory for the informal sector customers; can be waived for formal sector customers through management approval
- Credit Officer prepares Credit Appraisal Memo (CAM) if an applicant passes through the appraisal
- CAM is sent to the COO, who analyzes all the documents and approves the loan
- An approval letter is issued to the customer

### Disbursement Process

- Valuation report requested from approved valuer
- Opinion and Search report obtained from lawyer
- Legal chain prepared by Legal officer, who presents it to Manager, Operations
- Manager, Operations analyzes legal chain and then presents it to COO for disbursement approval
- Disbursement check is handed over to customer after obtaining:
  - Original registered sale deed
  - Duly signed mortgage deed
  - Signed power of attorney
  - Guarantee deed

### Payment Collection

- Tie-up with DENA and SBI to open bank account for customers without one
- Payment collected through Post Dated Checks; No cash collection
- In the event of a default, Credit Officer who did the initial appraisal follows up with the customer
  - If no payment is made within 15 days of default, the Loan Officer who sourced the applicant and the Product Officer visits the customer's residency
  - MAS can recover dues under the SARFAESI Act
- Loan can be restructured by extending either loan tenure or reducing interest rate

### Salient Features

- A lot of emphasis on the training of loan officers
- MAS traces the source of customer's equity (i.e., the down payment made by the customer) because MAS thinks that the source of equity is as an important indicator of the customer's credit worthiness and ability to pay

*"Customer risk assessment in informal sector is a long process – each customer is scrutinized thoroughly by 3-4 credit evaluators."*

- Kamlesh Gandhi

# HFC: Case Study - MAS Rural Housing and Mortgage Finance Ltd.

## Customer Risk Assessment: Case Study

*When a customer applies for a loan to purchase a home, the following process is followed by MAS:*

- Loan Officer fills out an application form for the customer, collects relevant documents and gives it to the Product Officer who checks the documents and submits everything to the Credit Officer

**The credit officer does the appraisal, which involves multiple steps and includes:**

- Checking credit history (takes 1 day)
  - CIBIL (external database); D-Duplication (internal database with details on 3-4 lakh customers)
- Conducting a thorough field and telephonic investigation on the applicant
  - Field investigation – Personal interviews, visit to job sites, suppliers interviews, assessment of business model and its practicability, etc. (takes 1-2 days)
    - Applicant's employment stability judged by either number of years at the job or the number of years in business (business needs to be operational for at least 2-3 years)
    - For businesses, key strengths are identified (i.e., diversified customer portfolio, specialized skill unique to the business, unique business model, etc.)
  - At least 2 reference checks (e.g., neighbors, colleagues, etc.)
  - Verifying sources of margin money and asset base and savings
  - Bank statements; income proofs (if available)
  - Tally information received from telephonic and field verification
- Discounting income stated by applicant to take a conservative estimates
- Computing income to installment ratio (IIR) and Loan to Value (LTV) for applicant and comparing it with criteria given in Appraisal policy
  - Any deviation from what is in the appraisal policy requires the CEO's approval

**COO approves the loan and the disbursement amount**

- Loan is approved based on the Credit Appraisal Memo prepared by Credit Officer and an approval letter is issued to the customer
- Disbursement is approved after analyzing the legal chain prepared by Credit Officer
  - Disbursement check is handed over to the customer after receiving requisite documents (such as registered sales deed, etc.)

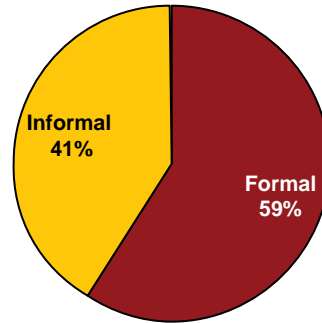


# Customer Profile

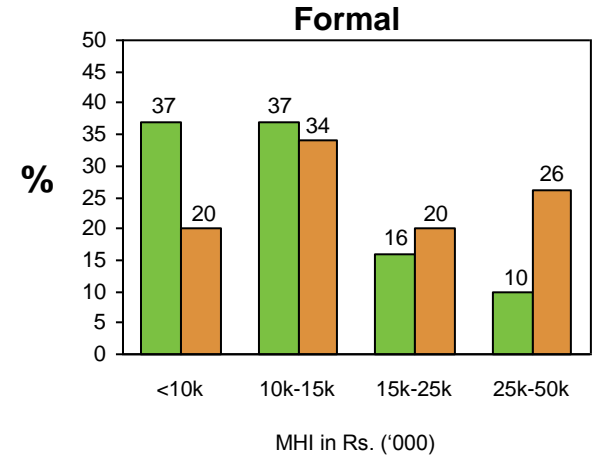
The average monthly income of MAS's customers with a housing finance loan is between Rs. 12,000 – Rs. 15,000

Customer Details
<ul style="list-style-type: none"> <li>Definition of MAS for low income segment: Rs. 5,000 – Rs 15,000 MHI</li> <li>MAS has till date made 42 disbursements for purchase of new homes                             <ul style="list-style-type: none"> <li>– 21 are in the low income segment</li> </ul> </li> <li>Customer profile                             <ul style="list-style-type: none"> <li>– Average age: 35 years</li> <li>– Average Loan Size: Rs. 5 lakhs</li> <li>– Average Loan Tenure: 13 years</li> </ul> </li> <li>Urban Customers: 69%</li> <li>Future customer profile (expected)                             <ul style="list-style-type: none"> <li>– Rural: 67%; Urban: 33%</li> <li>– Formal: 30%; Informal: 70%</li> </ul> </li> </ul>

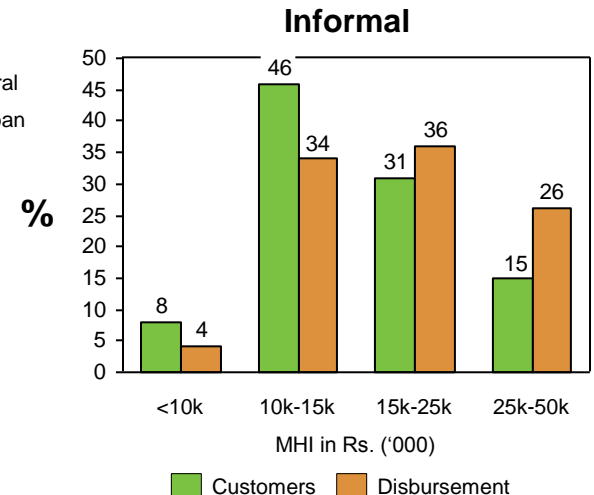
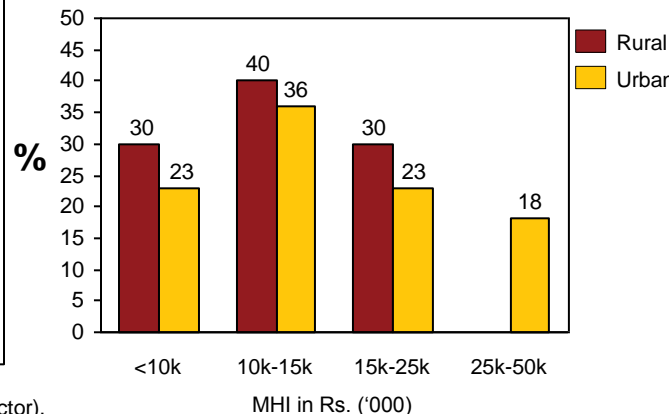
Formal vs. Informal Customers



% of Customer and Loan Disbursement by MHI



Rural vs. Urban Customers



Source: Interviews with Kamlesh Gandhi (Managing Director), Darshana Pandya (COO) and Viral Mody (Operations Manager); Monitor Analysis

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- Appendix

# Case Study: DHFL

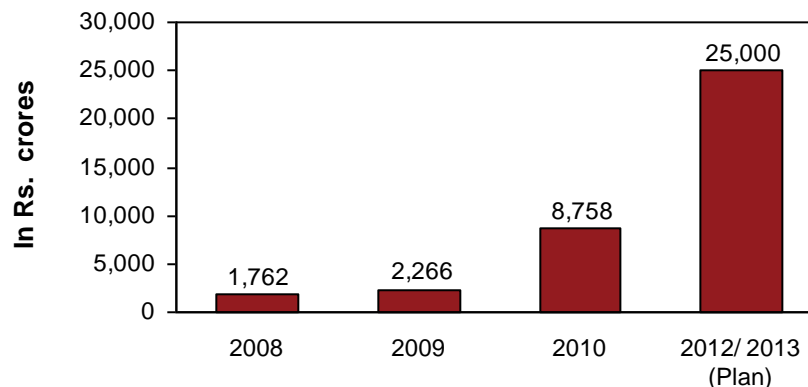
## Company Overview

*DHFL is a housing finance company that started its operations in April 1984*

### Company Details

- Provides housing finance loans in four categories
  - Purchase of flats, improvement of homes, home extensions, purchase of plots, construction and project loans
  - **65% of the loans are given for purchase of new flats**
  - Does group housing loans 50-100 kms from Tier III<sup>1</sup> cities
- Current total housing portfolio: Rs. 9,180 crores (FY 2009-10)
  - Current disbursement per month: Rs. 300 crores - Rs. 350 crores
  - **80% loans below Rs. 20 lakhs; 5-10% loans in the range Rs. 5 lakhs to Rs. 7 lakhs in urban, multi family units**
- Current housing portfolio for purchase of new homes: Rs. 8,758 crores
- Number of loans till date for purchase of new homes: 2.5 lakhs
  - Over 80% of the customers in Tier II and Tier III<sup>1</sup> cities
- Financial performance (FY 2009-10)
  - Revenue: Rs. 993 crores
  - RoE: 22.2%
- As on March 2010, provides services across 342 locations (including 194 via its captive distribution network, 123 locations via tie ups such as that with Punjab & Sind Bank and 25 via DHFL Vyasa)
- Currently has over 980 employees (of which 817 are field officers)
- **Starting a HFC in collaboration with IFC, which focuses on the low income customer.**
  - Awaiting license and expected to launch by September 2010
  - Focusing on giving loans of less than Rs. 5 lakhs in 7 poor states
  - DHFL will provide the domain expertise, and IFC brings start-up capital

**Portfolio Size**  
(for purchase of new homes)



### High-level Product Details

Interest Rates	Self Employed: 10.25% Salaried: 9%
Average Loan Tenure	12 years
Average LTV Ratio	68.8%
Average Loan Size	Rs. 5.06 lakhs <sup>2</sup>

Note: <sup>1</sup>Tier II cities have a population of between 5-10 lakhs, Tier III cities have a population between 1-5 lakhs; <sup>2</sup>In urban areas, the average loan size is higher - for example, in Mumbai, it is ~Rs. 9.5 lakhs

Source: DHFL website, Interviews with Anil Sachidanand (CEO) and Ramratthinam S. (Head of Credit); Monitor Analysis

# Case Study: DHFL

## Retail and Engagement Model

*DHFL has created alliances with other banks to expand geographically, and currently has a wide presence across India with multiple distribution models*

### Retail Model

#### Regional Processing Units (RPU)

- 7 RPUs currently
- Composition of the RPU:
  - RPU Head
  - Data Entry Operators
  - Appraisal Officers
  - Technical Officers
  - Legal Officers
  - Operations Team
  - Accountants
  - Collection Officer
- Each RPU looks after multiple branches within same location

#### Branches

Composition of branch (total of 8-16 employees per branch)

- Branch Manager (1)
- Loan/ Credit Appraisal Officer (2)
- Technical Officer (1)
- Accounts (1)
- Customer Service Manager (1)
- Transferable staff

#### Service Centers

- DHFL follows hub and spoke model
- Service center caters to low volume areas and are managed by branches; 2 member team

### Branch Model

#### Branch Manager

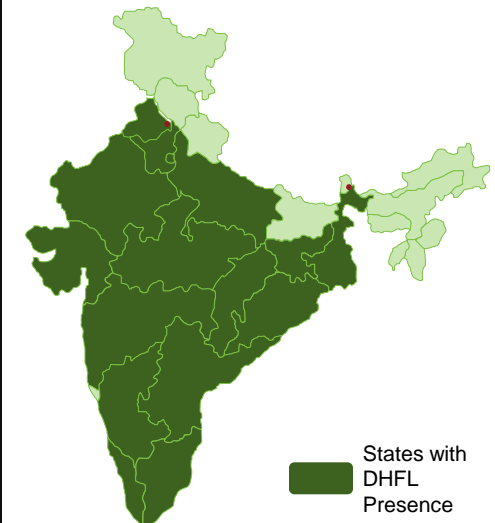
- Oversees operations of a branch
  - Branch logins 100-150 loans per month
- Responsible for collection of payments

#### Loan/ Credit Officers

- Handles 5 – 6 files per day
- Does collection when customers default
- Expected to understand legal and technical knowledge. Also, loan officers should understand the land prices in area of operation

#### Customer

### Presence in India



### Partnerships with Other Banks

- DHFL provides / is:
  - Origination, Scrutiny; Lead Syndicator: Custodian; Servicing, collection and Enforcement Agent
- Bank partner provides:
  - Syndication of Individual loans (if the bank chooses to participate)
  - Access to its key geographic segments
- Currently ~Rs. 300 crores of which 50% is on DHFL books

# Case Study: DHFL

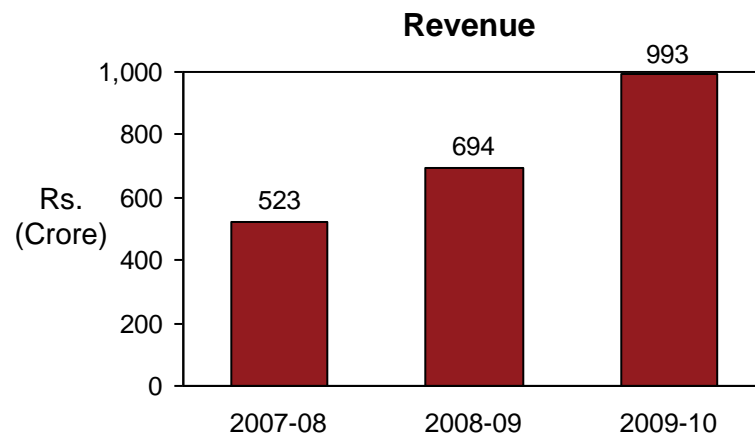
## Financials

*DHFL's revenues have increased 43.1%, and leverage ratio from 10.62 to 12.21, between 2008-2009 and 2009-2010*

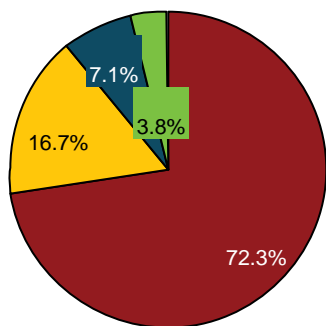
### Sources of Funds

- Sources of Equity
  - Promoter and promoter group: 45.42%
  - Public shareholding: 54.58%
- Debt
  - Cost of funds: 8.55%
  - Tenure of loan: Up to 12 years
- Debt to Equity Ratio
  - Current leverage: 12.21
- Capital Adequacy Ratio (as on March 2010): 16.83%

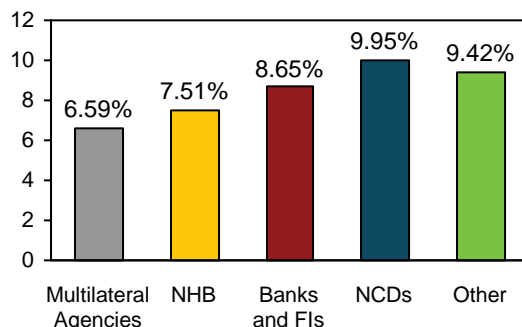
### Financial Performance



#### Sources of Debt



#### Cost of Debt



- Loan from Banks & FIs
- NCD
- NHB Refinance
- Others<sup>1</sup>

Financial Indicator	2008-09	2009-10
D/E Ratio	10.62	12.21
Return on Average Assets (RoAA)	1.92%	2.04%
Return on Equity (RoE)	22.9%	22.2%

Note: <sup>1</sup>Includes Multilateral Agencies

Source: DHFL website, Interviews with Anil Sachidanand (CEO) and Ramratthinam S. (Head of Credit); Monitor Analysis

## Case Study: DHFL

## Operational Details and Project Risk Assessment

*With an NPA of 1.16%, DHFL has successfully focused on ensuring low defaults*

### Operational Details

- DHFL lends at a floating rate
- Net Interest Spread: 2.98%
- Loan Processing fee (from customers): 0.5% - 2%
- Net NPA (as on March 2010): 0.73% (down from 1.03% in 2009)
- Operating costs
  - Processing cost (includes origination and disbursement): 0.8% of the loan value
  - Servicing cost (includes record maintenance and collections): 0.8% of the loan value
- Provides life and job loss insurance and other range of products as an 'agent'
  - For example, partnered with SBI for life insurance

### Tie up Loans

**DHFL provides mass retail loans in areas 50-100 kms from Tier III cities to group of individuals.**

- *A group of individuals collectively seek a loan in single project*
- *Respective loan re-payments are decided based on size of loans and repayment option opt by the individual.*

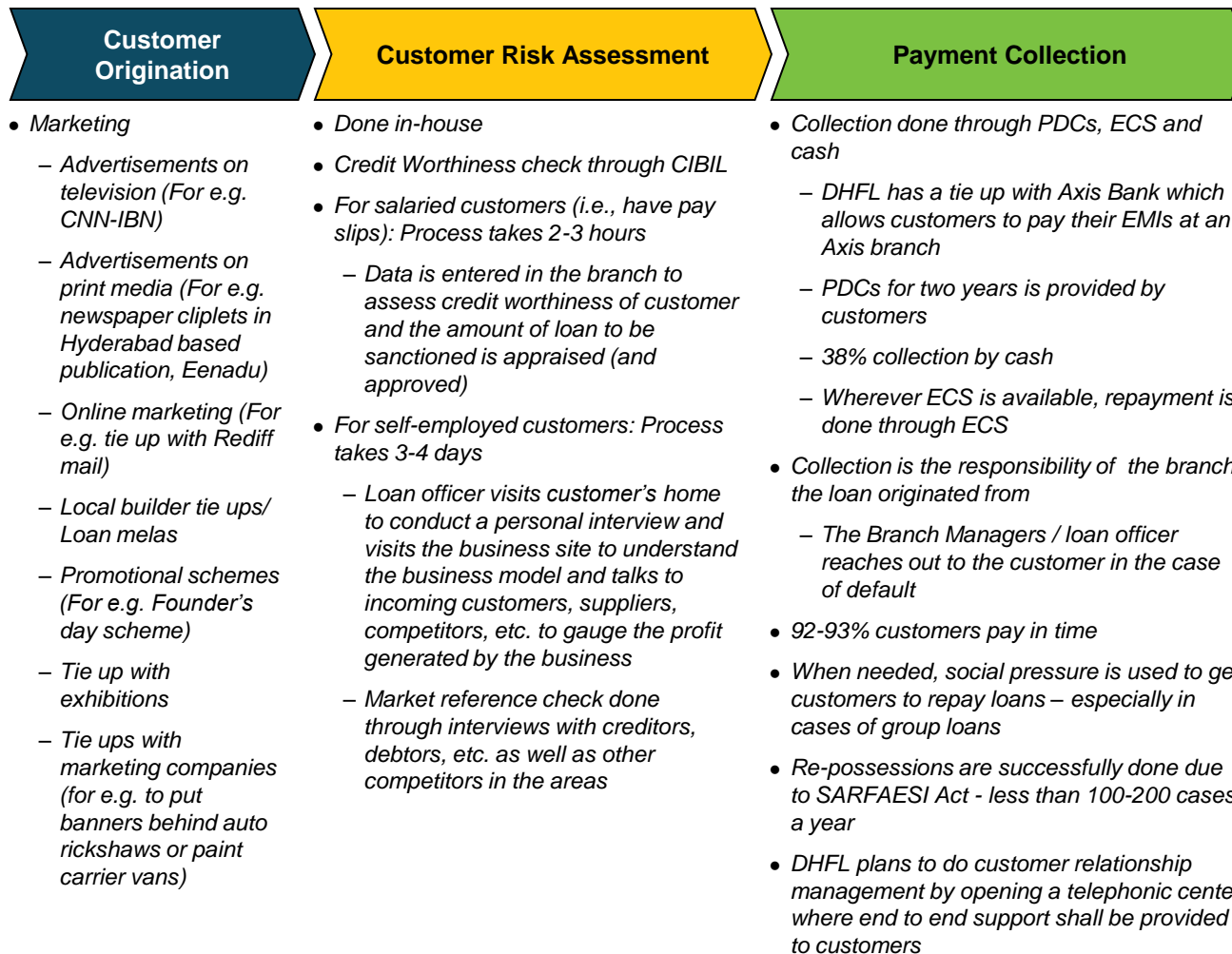
### Project Risk Assessment

- Project loans undergo a legal and technical risk assessment which takes 4-5 days
  - Project Loan assessment involves reviewing promoters' background, project plans, etc, to understand the risk level of the developer
  - In the case of construction on own land, DHFL loan officers assess the costing, amount of the materials to be used, etc.
- Legal and technical documents are first reviewed by the in-house legal team and then sent to a 3rd party lawyer
  - All loans are approved only after the approval of the legal and technical documents
- All loan officers go through internal legal and technical training
  - DHFL places emphasis on training loan officers and puts them 2-3 days of training every 2-3 months
  - Loan officers are expected to have a good knowledge of land prices in the area they serve

# Case Study: DHFL

## Customer Engagement Process

*Customer risk assessment process takes much longer for self-employed customers, and requires multiple methods of cross-referencing income and ability to pay*



### CASE STUDY

#### Collection from a Defaulter

A customer with a housing loan from DHFL, defaulted on the loan and missed payments.

The loan officer contacted her to understand the reasons for her defaulting and to collect the money.

She refused to pay the owed amount and provided various reasons for non-payment.

The matter was escalated to headquarters at which point DHFL decided to apply social pressure to get payments.

- DHFL identified the woman's relatives and friends and approached them and explained the situation
- They requested the relatives and friends to apply pressure on the woman

After 3-4 months, DHFL was finally able to collect part of the loan amount.

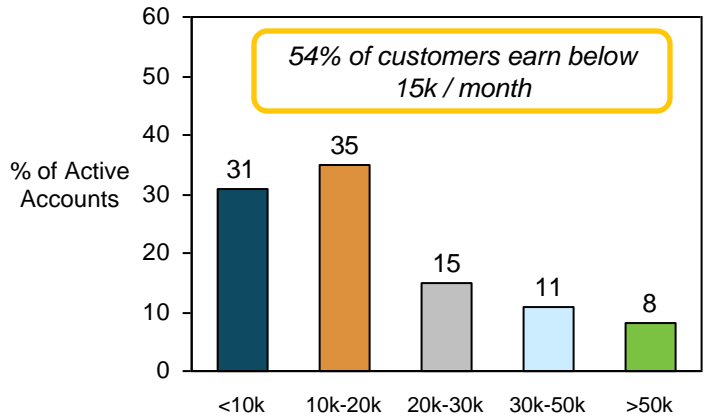
# Case Study: DHFL Customer Profile

*54% of DHFL's active accounts are with customers with a monthly household income of less than Rs. 15,000*

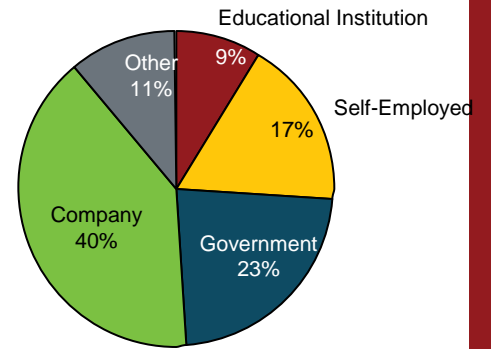
### Customer Details

- Till date served 2.5 lakh customers for new home purchases in the low income segment
  - 65% of loans have been given for the purchase of new flats
- Serves salaried and self employed customers
- Age (range): 30 years – 35 years
- Average Installment-Income Ratio: 38.49%
- Only 5-10% of the customers are from Metros or Tier I cities<sup>1</sup>
- Average Loan Size is Rs. 5.06 lakhs
  - However, in Metros, the average loan size is higher (E.g., Rs. 9.5 lakhs in Mumbai)

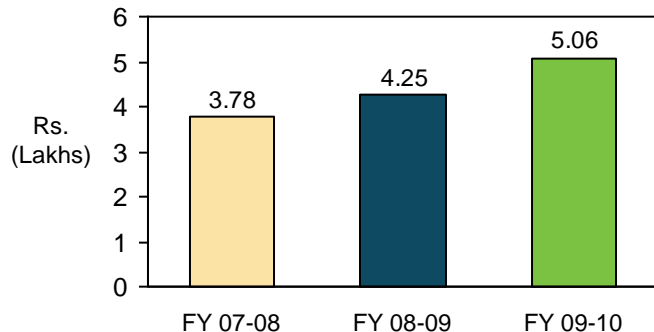
**Income Profile**



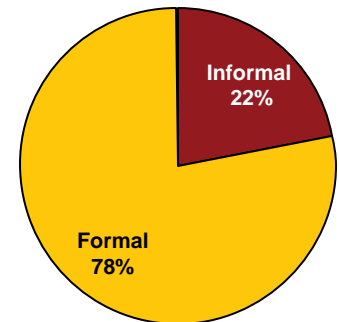
**Customer Profile**



**Average Ticket Size**



**% of Informal Customers**



Notes: 1Metros are cities with population of greater than 40 lakhs, Tier I cities have a population of between 10-40 lakhs  
Source: DHFL website, Interviews with Anil Sachidanand (CEO) and Ramratthinam S. (Head of Credit); Monitor Analysis



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# Commercial Viability: HFC

## Objectives and Approach

### Objective

- To assess the commercial viability of a housing finance company providing housing loans to low-income customers

### Our Approach

- For an effective, accurate and reliable set of results, we included in our analysis:
  - Data and assumptions driven by observations of field operations, management interviews and experiences of both short-listed housing finance companies (showcased in the case studies) as well as long-list housing finance companies
  - Triangulated findings with expert advisors and active HFCs

# Commercial Viability: HFC

## Assumptions & Inputs

*One potential business model for a HFC entering this space is a retail “hub and spoke” model which allows the HFC to reach out to a greater number of customers while keeping its costs low*

### Operational Model

- **“Hub and spoke” model – HFC would operate in Metros and Tier I – III cities<sup>1</sup>, with “hub” retail branches and “spoke” project site kiosks to follow up on new low income and construction projects**
- **HFC will grow to 55 branches in 10 years**
- **HFC would have a ATS<sup>2</sup> of 4 lakhs, interest rate of 14%, NPA<sup>3</sup> of ~1% and a disbursement growth rate that decreases from 200% to 50% over 10 years**
- **Minimum number of disbursals per branch: 750/year**
- **All critical functions (origination, verification and credit appraisal) are performed in-house, enabling greater customer visibility and controls to avoid fraud**
- **Loan documentation and processing are outsourced**

Category	Component	Assumption
Product Details	Average ticket size	Rs. 4 lakhs (30% loans: Rs. 3 lakhs; 40% loans: Rs. 4 lakhs; 30% loans: Rs. 5 lakhs)
	Average interest rate	14%
	Average LTV <sup>4</sup>	80% (maximum)
	Average loan tenure	15 years (Average loan gets repaid in 8 years and there is no repayment penalty)
	Time period between sanction of loan and commencement of re-payment	12 months
Source of Funds	Debt to Equity ratio	Year 5 - 4:1 Year 10 - 6:1
	Cost of Debt	10%
Cost Assumptions	Operating Expenditure	Year 1: Rs. 353 lakhs, Year 5: Rs. 2,085 lakhs, Year 10: Rs. 14,193 lakhs
	Capital Expenditure	Year 1: Rs. 122 lakhs, Year 5: Rs. 115 lakhs, Year 10: Rs. 130 lakhs (It is 25% more expensive to operate a branch in Metro versus in a Tier III city)
NPA <sup>3</sup>		1%

Note: All the data for the HFC model has been based off our interviews with various HFCs and our experience observing their pilots through field study - To understand how we decided on the input values, please see the *Logic for Assumptions & Inputs* slides in the Appendix and for a list of the HFCs we've spoken to please refer to the *Sources & Nodes slide* in the Appendix; <sup>1</sup>Metros are cities with population of greater than 40 lakhs, Tier I cities have a population of between 10-40 lakhs, Tier II cities have a population of between 5-10 lakhs, Tier III cities have a population of between 1-5 lakhs; <sup>2</sup>ATS: Average Ticket Size; <sup>3</sup>NPA: Non Performing Assets; <sup>4</sup>LTV: Loan to Value

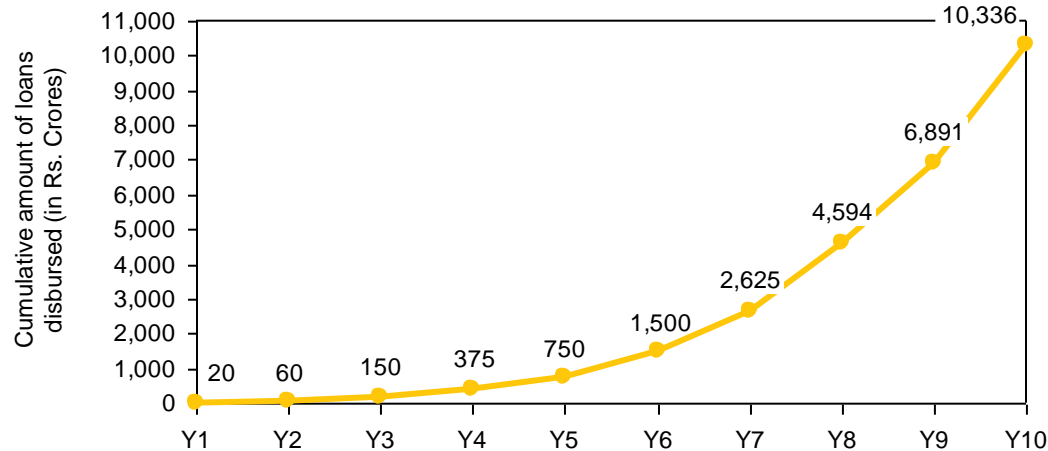
Source: Interviews with Dewan Housing Finance Company, MAS Rural Housing and Finance, MHFC and Fullerton Capital; Monitor Analysis

## Commercial Viability: HFC

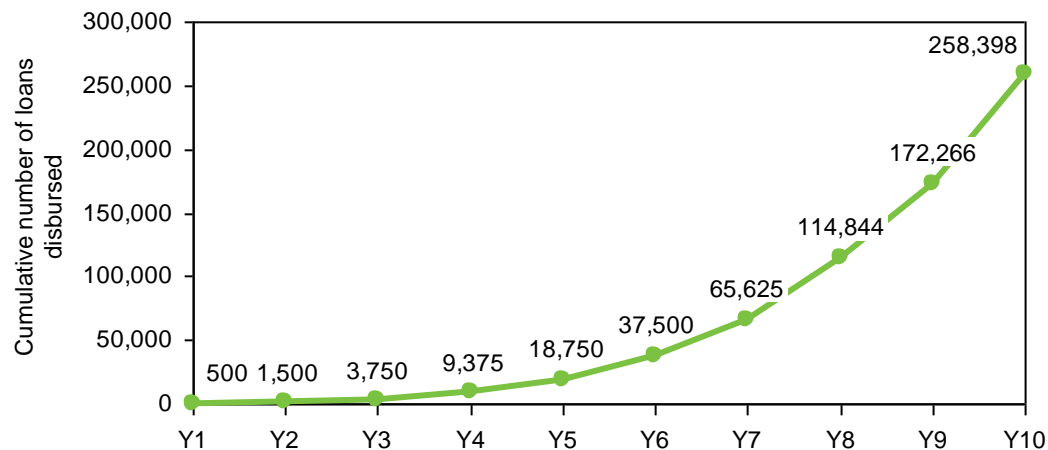
## Portfolio Growth Projections over 10 Years

*It is estimated that the HFC will achieve significant growth over 10 years – disbursing close to 2,60,000 loans worth Rs. 10,336 Crores*

**Cumulative Amount of Loans Disbursed**



**Cumulative Number of Loans Disbursed**



### Assumptions

- Since the HFC market is extremely underpenetrated – it is feasible to assume Year on Year growth rates between 50 – 200% for a start-up, decreasing yearly (MHFC assume 100% growth in the first 5 years; established companies like Dewan & LIC grow at about 25% YoY typically)
- Average Ticket size: Rs. 4 Lakhs
- Interest Rate: 14%; Gross Spread of 4%
- Loan To Value: No more than 80%
- Sanction and Disbursal: 12 month time lag between initial disbursement and commencement of principal repayment
- Scheduled Loan Tenure: 15 years
- The average loan gets repaid in 8 years and there is no prepayment penalty

### Observations

- It is possible to model more aggressive or conservative growth scenarios based on the capital reserves available, high level strategic objectives (desired share of the market) of the promoters, supply of low income housing stock etc.
- Cumulative Portfolio Size is dependent on Average Ticket Size of loan, with bigger loans resulting in a larger book size

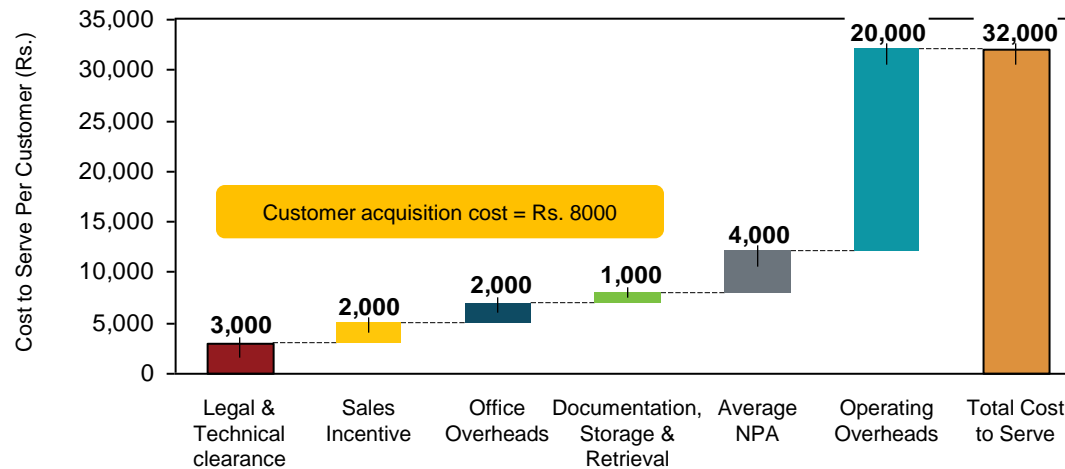
Source: Interviews with Dewan Housing Finance Company, MAS Rural Housing and Finance, MHFC and Fullerton Capital; Monitor Analysis

## Commercial Viability: HFC

## Customer Level Economics- Revenue and Costs at Branch Level

*The average cost to acquire a customer is Rs. 8,000 and the cost to service their loan over their repayment period is Rs. 20,000, while the net income earned per customer is Rs. 88,000*

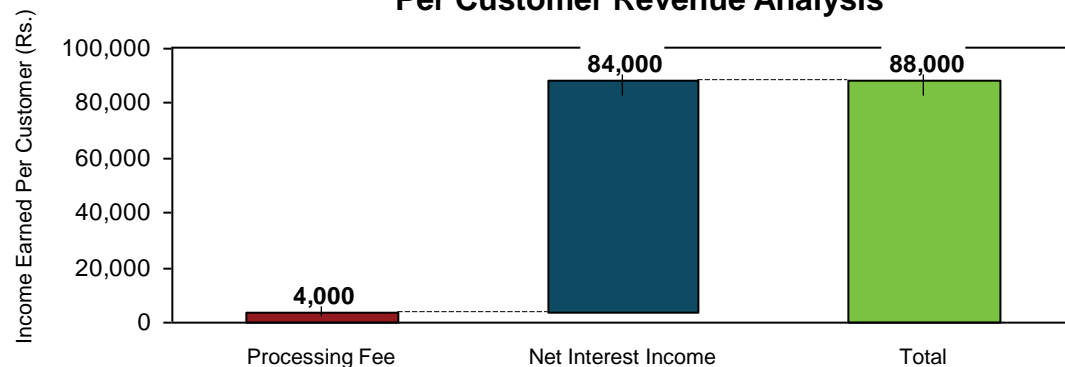
## Per Customer Cost Analysis



## Assumptions

- Average Loan Size: Rs. 4 Lakhs
- Interest Rate Charged: 14%
- Loan Processing Fee: 1%
- NPA: 1.0%
- A 0.5% of loan value bonus is provided to the branch sales force as an incentive fee for each loan generated
- These assumptions are typical for most HFCs (our data comes from DHFL, GRUH, HDFC and MHFC)

## Per Customer Revenue Analysis



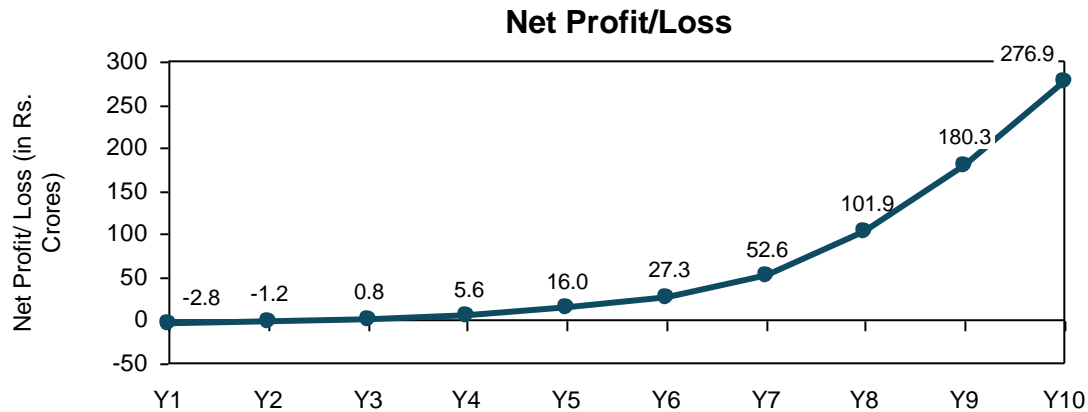
## Observations

- It costs approximately Rs. 32,000 to serve each customer, i.e. cost to serve is about 8% of loan size
- The HFC would earn approximately Rs. 88,000 in net income from each customer
- Net Profit Per Customer over 8 years (not including other costs) is approximately Rs. 56,000

# Commercial Viability: HFC

## Profitability over 10 Year Time Frame

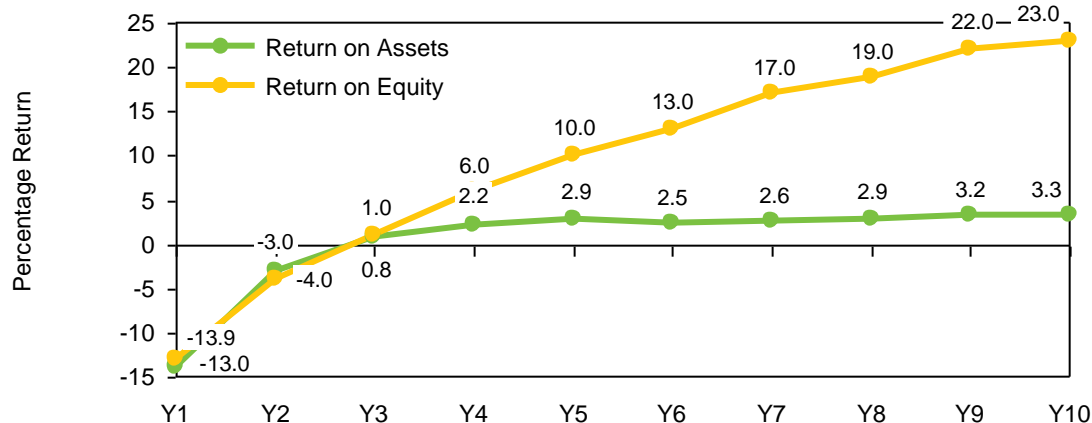
*The HFC will turn profitable after 3 years of operations and the RoE will increase every year*



### Assumptions

- Average Loan Tenure: 8 years
- Cost of debt: 10%
- Debt Equity ratio:
  - Year 5 - 4: 1
  - Year 10 - 6: 1
- Capex in Years 1 to 3 – Rs. 3 crores (towards software and hardware)
- Net Profit/Loss = Post Tax (Income – Expenses)
- ROE = (Net Profit/Loss) / Average Equity
- ROA = (Net Profit/Loss) / Average Assets

### Return on Asset and Return on Equity



### Observations

- The HFC will operate at a loss for the first few years, but will turn profitable by year 3
- NPA is assumed to be 1% of portfolio and provided on all fresh disbursements starting from Year 4. NPAs are not provided for in the initial years as the operation will be small and conservative in its approach to lending
- ROE of 23% in year 10 is very robust by the Indian financial industry standards (ROE for HDFC is 20%, ROE for DHFL is 22.2%)
- ROA of 3% in year 10 is in a range comparable to HFC industry standards (RoA for HDFC is 2.7% and RoA for DHFL is 1.7%)

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  - **Project Overview**
  - Nodes & Sources
  - Logic for Assumptions & Inputs

## Rationale for Investigation & Key Objectives

- To document the projects initiated under the earlier TA (and other projects that have started since the end of the TA), and share the information from these projects to demonstrate the feasibility and profitability of this market
  - ***The aim of doing this is to generate awareness about the opportunity, commercial viability and value of the low-income housing (LIH) and housing finance markets, and to encourage both current developers to focus on this market, and attract new players to these markets***
  - ***Additionally, it is to help build the field by sharing the experiences and challenges of players who are active in these markets, so as to inform stakeholders who can influence policy and help shape a robust market***
- To support NHB in becoming a more effective financier and market developer of such customer segments, since the NHB, the nodal agency for housing finance, can have a pivotal role in scaling this market
- Recognizing that this is a new market, for both new players and existing players, to help NHB, partners and field builders support capacity development of these players

## Activities

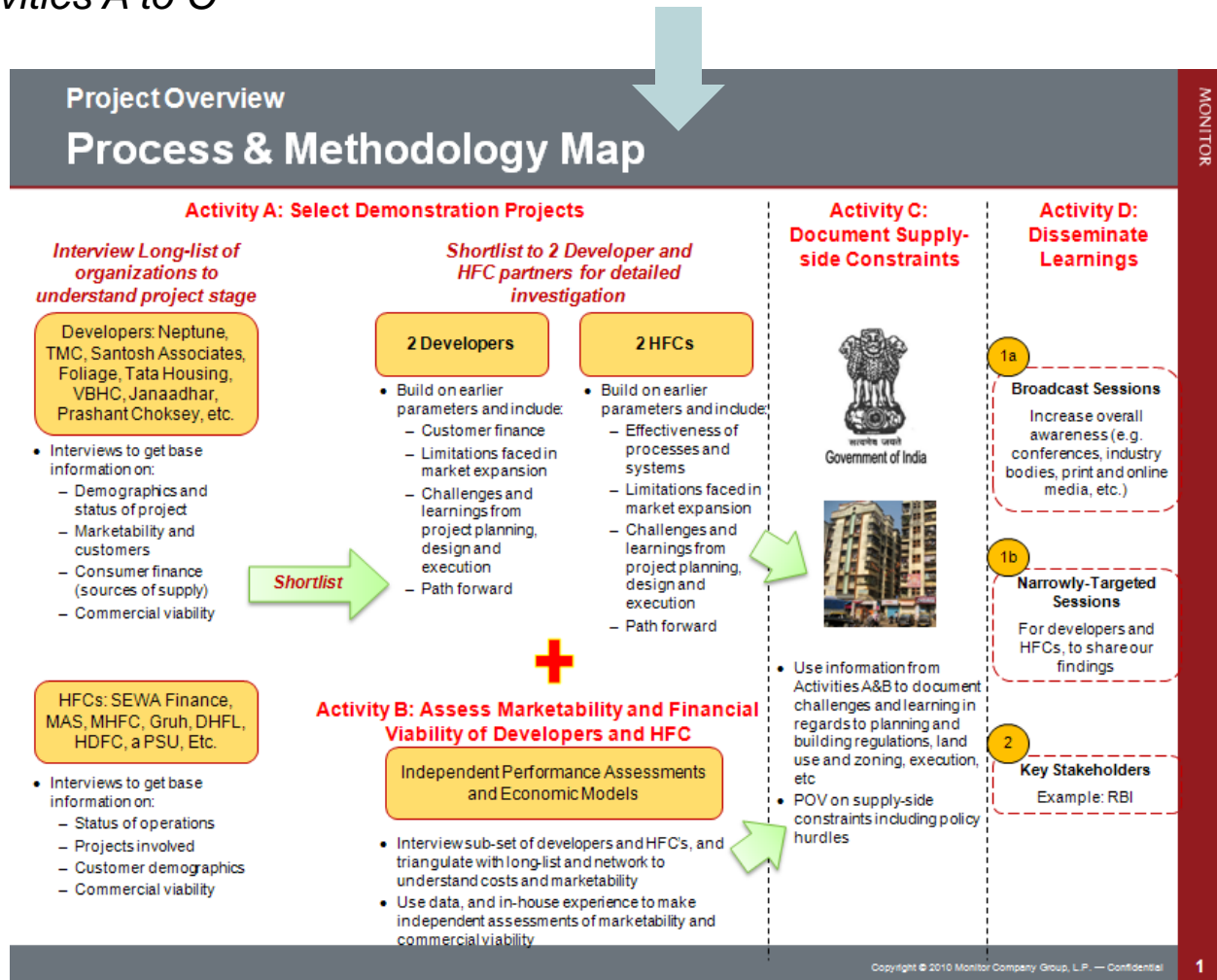
- Provide **documentation of status and detailed description of selected demonstration projects** in both housing and housing finance (in-depth case studies on 2 developers and 2 housing finance companies)
- **Assess the marketability and commercial viability** of these projects from a developer's / HFC's point of view (for 2 representative geographies: Mumbai and Ahmedabad)
- Document learnings about the **challenges of execution**, and of **supply-side constraints** and key policy-related hurdles
- **Disseminate the findings and recommendations to appropriate audiences**, including specific input to the other two components of the TA



# Project Overview

## Process & Methodology

This presentation contains the project outputs of the documentation activities, summarized below as Activities A to C



# Contents

- Summary of Findings
- Market Overview
- Low Income Developers: Operations, Commercial Viability and Marketability
- Housing Finance Companies: Operations and Commercial Viability
- **Appendix**
  - Project Overview
  - **Nodes & Sources**
  - Logic for Assumptions & Inputs

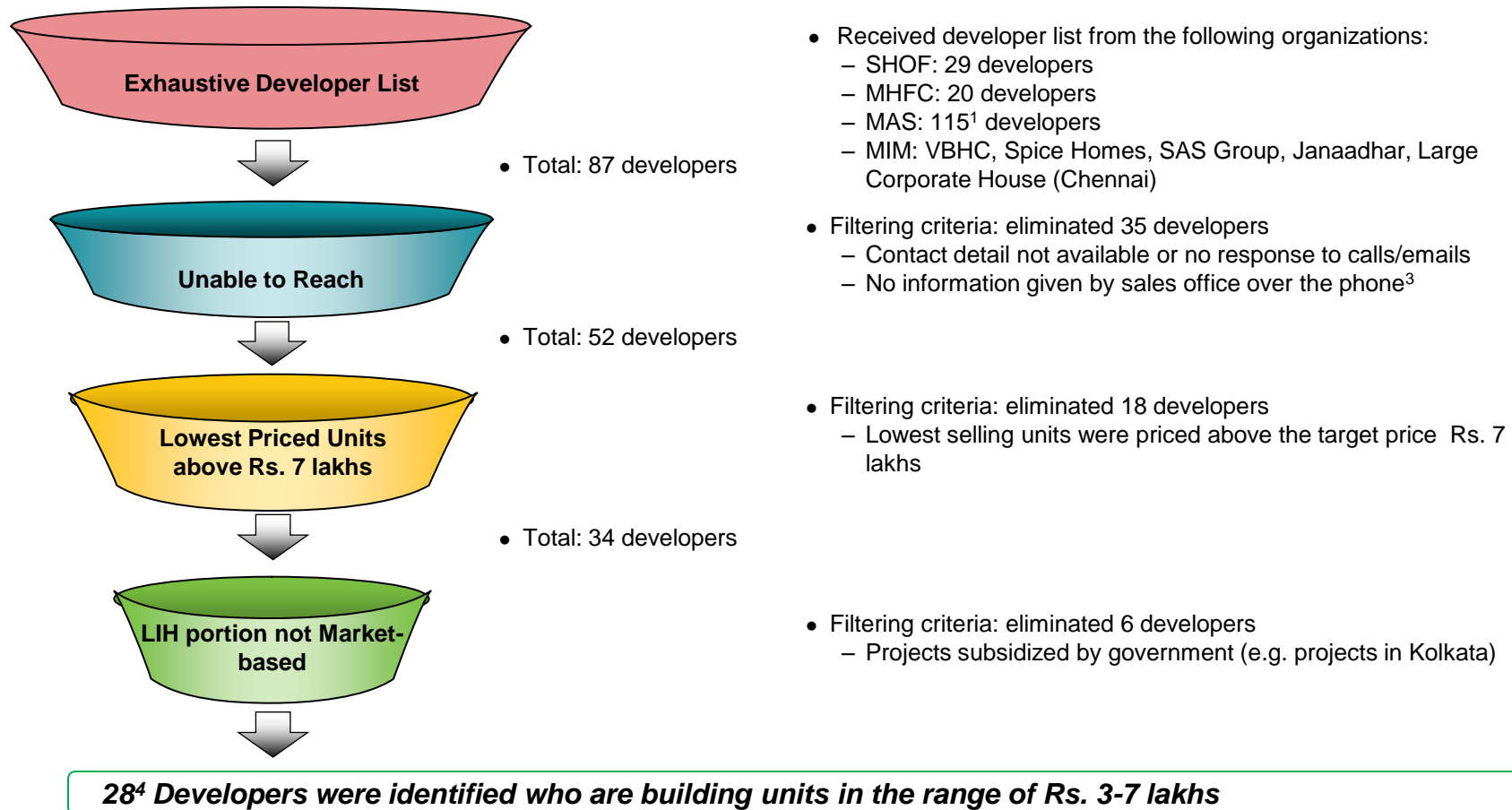
# Nodes & Sources for “Long List”

Node/Source	Details
<b>Monitor Inclusive Markets Housing Newsletter Recipients</b>	Over 2600 people on the list who either work in different aspects of the housing ecosystem or are interested in the space
<b>Developers</b>	Reached out to a number of developers Monitor Inclusive Market has relationships with
<b>Housing Finance Companies/Banks</b>	Reached out to HFCs Monitor Inclusive Market has relationships with and asked them for the list of developers they have provided project or customer finance for <ul style="list-style-type: none"> <li>- Public Sector Banks: State Bank of India, Punjab National Bank, Bank of Baroda</li> <li>- Private Sector Banks: ICICI, HDFC, Kotak Mahindra</li> <li>- HFCs serving low-income customers: MHFC, GRUH, MAS, DHFL, Sewa Finance, Mahindra Rural Finance</li> </ul>
<b>Public Sector Organizations</b>	National Housing Board (NHB), Usha Thorat (RBI Deputy) & Shyamala Gopinath (Deputy Governor) of Reserve Bank of India (RBI), Kiran Dhingra (Secretary) & Dr. PK Mohanty (Additional Secretary) of Ministry of Housing and Urban Poverty Alleviation (HUPA), Maharashtra Housing & Area Development Authority (MHADA)
<b>Multilaterals, International, Organizations or Industry Bodies</b>	Contacts in World Bank, Michael & Susan Dell Foundation, FMO, National Real Estate Development Council (NARDECO), Confederation of Real Estate Developers' Associations of India (CREDAI), etc.
<b>Consumer Financiers (apart from HFCs/Banks)</b>	MFIs, NBFCs, Chit funds, etc.
<b>Project Financiers</b>	Investors, Social funds, etc.
<b>Other</b>	Contacts involved in other activities related to housing such as consulting, architectural design, project management, suppliers, etc.

## Market Overview

# Filtering Long List of Developers for Rs. 3-7 Lakh Homes

*Our nodes generated 87 developers' names, and after filtering for appropriate criteria, we were left with over 25 developers (who were market-based, and building Rs. 3-7 lakhs units)*



Note: <sup>1</sup>MAS provided a list of 21 developers whose master plans have been passed by MAS and a separate list of 94 developers. From the list of 94, all developers were based in Ahmedabad. We called 12 project sites from different areas within Ahmedabad - all of them were selling units above Rs. 7 lakhs; <sup>3</sup>Many representatives in the sales office only wanted to share information if we went to the office; <sup>4</sup>The only exception of a developer selling units above Rs. 7 lakhs is VBHC

Source Primary research and interviews of developers, housing finance companies and stakeholders; Monitor Analysis

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# Logic for Assumptions & Inputs (1/3)

Category	Component	Basis	Data Points
Land Related	Land size	Developers are initially comfortable developing 5-15 acre plots at a time even if the land parcel is much larger. Most developers' first projects are on land parcels of around 10-15 acres	<ul style="list-style-type: none"> <li>• VBHC: 16 acres</li> <li>• Janaadhar: 11 acres</li> </ul>
	Stamp duty	Based on government regulations for Ahmedabad and Mumbai	
Plot Related	Residential portion Commercial portion	Though developers may use 5% of their land for commercial construction, our experience suggests that 3% is a more reasonable assumption	<ul style="list-style-type: none"> <li>• Navjivan Housing (Foliage)</li> </ul>
Unit Related	Flat type	Based on survey of developers constructing low income housing projects in Ahmedabad and Mumbai	<ul style="list-style-type: none"> <li>• Samruddhi Complex (Poddar Housing) has 1RK and 1BHK units</li> <li>• Vaishnavi Sai Complex (Shubh Aangan Realty) has 1RK and 1BHK units</li> <li>• While Gokul Galaxy (Gokul Developers) has 1RK, 1BHK and 2BHK units, 2BHKs account for just 10% of the units</li> </ul>
Phasing	Number of phases	Low income housing developers across Ahmedabad and Mumbai typically construct an average of 300-400 units per phase	<ul style="list-style-type: none"> <li>• Santosh Associates plans to build 674 units over two phases – which translates into 337 units per phase</li> <li>• Poddar Housing plans to construct 1088 units over three phases – which translates into 362 units per phase</li> <li>• Neptune Group is among very few large developers in this space and is an exception. It plans to construct 2446 units across two phases – which translates into 1223 units per phase</li> </ul>
	Phase wise price rise in units	Based on price appreciation in the Om Shanti Nagar 2 (Santosh Associates) between Phase 1 and Phase 2 – though we have decided to be conservative and taken a lower appreciation rate	The price of the cheapest 1BHK apartment increased from Rs. 3.88 lakhs to Rs. 4.33 lakhs over the two phases and the price of the cheapest 2BHK increased from Rs. 5.77 lakhs to Rs. 6.38 lakhs – an appreciation of 10-11%
Marketing	Marketing expenses as a % of revenue	Based on MIM experience of working with developers such as Foliage on their sales and marketing strategy	-
Revenue	Commercial yield factor	Based on Navjivan Housing (Foliage) where the commercial units are selling at twice the price of residential units	-

# Commercial Viability: Developers

## Logic for Assumptions & Inputs (2/3)

Category	Component	Basis	Data Point
Cash Flow Schedule	<b>Land and Construction Related Expenses</b>		
	Land approval timeline	Based on discussions with developers such as Foliage, Santosh Associates and Neptune Group	Taral Bakeri (CEO of Santosh Associates) and Nayan Shah (Head of Finance, BD and Investor Relationship Manager, Neptune Group) said that it took them over a year to get land approvals
	Upfront payment	Industry Norm	-
	<b>Construction Timeline</b>		
	Construction time per phase	Based on discussions with developers such as Foliage, Santosh Associates and Neptune Group and MIM experience on the field	-
	Time between start of construction for each phase	Based on discussions with developers such as Santosh Associates and Neptune Group. Developers tend to construct and handover possession of phases at intervals of 6 months. Assuming time of construction to remain the same across phases, we thus assumed a 6 months difference between start of construction for each phase	<ul style="list-style-type: none"> <li>• Neptune Group will hand over the two phases in Dec 2010 and June 2011</li> <li>• Santosh Associates will hand over the two phases in June 2010 and December 2010</li> </ul>
	Upfront construction cost	Industry Norm	-
	<b>Customer Timeline</b>		
	% of customers signing up at the start of construction Down payment by the customer	Industry Norm	-

# Commercial Viability: Developers

## Logic for Assumptions & Inputs (3/3)

Category	Basis	Data Point – Mumbai	Data Point - Ahmedabad
<b>FSI</b>	Based on government regulations for Ahmedabad and Mumbai	-	-
<b>FSI Land Cost</b>	Based on discussions with developers such as Foliage, Santosh Associates and Neptune Group. Cross checked with MIM experience on the field in Ahmedabad and Mumbai	-	-
<b>Construction Cost</b>			
<b>Average Selling Price</b>	Based on survey of developers constructing low income housing projects in Ahmedabad and Mumbai	<ul style="list-style-type: none"> <li>Units in Swarajya (Neptune Group) are priced at Rs. 1640 – Rs. 1810 per square feet</li> <li>Units in Lok Amber (Lok Group) are priced at Rs. 1600 per square feet</li> <li>Units in Samruddhi Complex (Poddar Housing) are priced at Rs. 1162 – Rs. 1238 per square feet</li> </ul>	<ul style="list-style-type: none"> <li>Units in Om Shanti Nagar 2 (Santosh Associates) are priced at Rs. 800 to Rs. 970 per square feet</li> <li>Units in New Maninagar Apartments (Dharmadev Builders) are priced at Rs. 1110 per square feet</li> <li>Units in Navjivan Housing (Foliage) are priced at Rs. 811 to Rs. 1200 per square feet</li> </ul>
<b>% Units of 1RK and 1BHK</b>		<ul style="list-style-type: none"> <li>Samruddhi Complex (Poddar Housing): 66% 1RKs and 34% 1BHKs</li> <li>Swarajya Project (Neptune Group): 76% 1BHKs and 24% 2BHKs</li> </ul>	<ul style="list-style-type: none"> <li>Gokul Galaxy (Gokul Developers): 22% 1HKs and 68% 1BHKs</li> <li>Om Shanti Nagar 2 (Santosh Associates): 30% 1BHK s and 70% 2BHKs</li> </ul>
<b>Saleable Area</b>		<p>1RK</p> <ul style="list-style-type: none"> <li>Samruddhi Complex (Poddar Housing): 300 sq. ft.</li> <li>Shubh Griha (Tata Housing): 360 sq. ft. saleable area</li> </ul> <p>1BHK</p> <ul style="list-style-type: none"> <li>Samruddhi Complex (Poddar Housing): 400 sq. ft.</li> <li>Star City (Rashmi Housing): 450 sq. ft.</li> <li>Vaishnavi Sai Complex (Shubh Aangan Realty): 500 sq. ft. - 520 sq. ft.</li> </ul>	<p>1RK</p> <ul style="list-style-type: none"> <li>Navjivan Housing (Foliage): 299 sq. ft. – 411 sq. ft.</li> <li>Gokul Galaxy (Gokul Group): 450 sq. ft.</li> </ul> <p>1BHK</p> <ul style="list-style-type: none"> <li>Om Shanti Nagar 2 (Santosh Associates): 459 sq. ft. – 589 sq. ft. (variations across two phases)</li> <li>Navjivan Housing (Foliage): 458 sq. ft. – 507 sq. ft.</li> <li>Gokul galaxy (Gokul Developers): 650 sq. ft.</li> </ul>
<b>Loading Factor</b>	Based on multiple low income housing projects in Ahmedabad and Mumbai	<ul style="list-style-type: none"> <li>Swarajya (Neptune Group): 35%</li> <li>Star City (Rashmi Housing): 38%</li> <li>Samruddhi Complex (Poddar Housing): 37%</li> </ul>	<ul style="list-style-type: none"> <li>Om Shanti Nagar 2 (Santosh Associates): 56%</li> <li>Navjivan Housing (Foliage): 50%</li> </ul>

Note: All prices are current prices unless specifically noted



## Commercial Viability: HFC

## Logic for Assumptions &amp; Inputs (1/3)

Category	Component	Logic	Data Points
<b>Operational Model</b>	"Hub and spoke" model	Most of the HFCs we interviewed follow a retail model where they have branches (hubs) in bigger cities/towns and limited presence (spokes) in the surrounding smaller towns. This helps the HFC reach maximum customers. The only exception to this model is MHFC, which is a start up	MAS has 20 branches in Gujarat, Rajasthan and Maharashtra DHFL provides services through a service branch network of 300, which includes 200 branches and alliance bank network such as with Punjab & Sind Bank
	All critical functions (origination, verification and credit appraisal) are performed in-house	Most of the HFCs interviewed believed that direct customer contact is important for reliable customer assessment. It enables greater customer visibility and helps limit fraud	MAS and MHFC have these functions in-house
	Loan documentation and processing are outsourced	These are non-core activities. As HFCs start their operations, it is advisable to outsource these activities and allocate internal resources to core activities such as credit appraisal	MHFC has outsourced these activities
	Branches spread across Metro, Tier I, Tier II and Tier III cities <sup>1</sup>	To ensure presence across urban areas	DHFL and MAS have presence across Metro, Tier I, Tier II and Tier III cities
	HFC will grow to 55 branches in 10 years	To ensure pan India presence. We have used DHFL and HDFC as base numbers. However, we have taken an aggressive estimate since the supply of housing in our target range is increasing	HDFC grew to 80 branches in 25 years DHFL grew to 75 branches in 25 years
	Minimum number of disbursals per branch	This is based on utilization capabilities. 750 disbursals per year translates into 60-65 disbursals per month, which is reasonable for a start up HFC	HDFC does 100 – 125 loans per month per branch. We have assumed approximately 50% of this number since HDFC is a large established HFC

Note: <sup>1</sup>Metros are cities with population of greater than 40 lakhs, Tier I cities have a population between 10-40 lakhs, Tier II cities have a population between 5-10 lakhs, Tier III cities have a population between 1-5 lakhs

# Logic for Assumptions & Inputs (2/3)

Category	Component	Logic	Data Points
Product Details	Average ticket size	Based on discussions with HFCs including DHFL, MAS, MHFC and Fullerton Capital	MAS: Rs. 5 lakhs MHFC: Rs. 4 lakhs Fullerton Capital: 2-5 lakhs (range)
	Average interest rate		DHFL: 12% (Self Employed: 12.5%; Salaried: 10.5 to 11%) MAS: Formal customers – 12.5%; Informal customers – 14% MHFC: 13.5%
	Maximum LTV		MHFC: 80% MAS: 75% DHFL: Average LTV – 66%
	Loan tenure		MAS: 13 years MHFC: 15 years (expects loans to get repaid in an average of 11 years) DHFL: 15 – 20 years
	Time period between sanction of loan and commencement of re-payment		Customers pay only the interest amount between construction start and possession. The principal + interest loan re-payment starts once the possession has been handed over to the customers  Based on discussions with developers such as Foliage, Neptune Group and Santosh Associates and MIM field experience, we have seen construction time line to be 12 months
Source of Funds	Debt to equity ratio	While most of the HFCs we interviewed have started their operations recently and hence not yet using debt, they believed they could reach a ratio of 6:1 in the long term, but 4:1 is more realistic for the shorter term	MHFC believes that it can attain a leverage of 4:1 in a few years MAS feels that although it can attain ratio of 6:1, 4:1 is a more realistic estimate for now
	Cost of debt	Based on current cost of capital of Fullerton Capital, DHFL and MAS	Fullerton Capital: 12% DHFL: 9% - 10% MAS: HDFC sanctioned a loan of Rs. 25 crores at 10%

# Logic for Assumptions & Inputs (3/3)

Category	Component	Logic	Data Points
<b>Cost Assumptions</b>	Operating expenditure	Based on discussions with HDFC and DHFL	-
	Capital expenditure		
<b>NPA</b>	-	Industry average for HFCs is 1% - 2%	MHFC targets an NPA of 1% - 2% since both MFIs and HFCs such as HDFC have NPA within this range DHFL: 1.53%