

September 2009

Affordable Housing,  
From those who understand the potential of

150.  
FT.

 **ICICI Property Services**

(A division of ICICI Home Finance Company Limited)

Sq. Ft.

Four letters, two words

0.09290304 in square meters.

0.0000229568 in acres.

SEZs can swallow millions of them.

Families can be happy with just 300.

In the right places, they go for 90,000.

In others they just go for Rs. 100.

The foundation of a home.

The beginnings of a business.

The birth of a global empire.

Sq. Ft.

Four letters, two words

Infinite possibilities.

## Foreword



In recent times, 'Affordable Housing' has emerged as a challenge for policy makers, town planners, housing finance practitioners, and construction agencies. While the need for affordable housing is recognised by all, the means to achieve this goal are however not clear as yet. Taking a leaf out of the international experience, any policy intervention in this sector will need to be sustainable over the long run, cutting across different markets such as land, technology, building materials, design and architecture and finance. "Affordability" reflects the ability of the individuals to pay for the house they aspire to own. In urban India itself, the housing shortage aggregates to a staggering 24.71 million units.

While the demand for housing has always outpaced the supply, the challenge, for the most part, lies in the real sector that is responsible for production and supply of housing in the market. The production and supply chain must be strengthened to deliver customized products according to demand and affordability by different segments of the market. This would require a responsive and flexible supply mechanism with an optimal mix of all inputs viz. land, infrastructure, technology, design and specifications and financing to suit the needs and affordability of different income groups. Land and infrastructure are largely influenced by public policies of the central and state governments and the urban local bodies. Construction technology and building designs tried out successfully in different countries faced with similar "affordability" challenges may offer useful lessons and should therefore be encouraged and given a fair trial. It offers challenge as much as opportunities to the private sector. There is a growing role of the informal sector agencies in this market space as well which has been sought to be harnessed and promoted in recent times.

"Affordable" housing in the Indian context is a problem of "scales" and should be tackled through a multi-agency and multi-product approach. There is role for all actors and stake holders in this pursuit and the current policies seek to create adequate space for different entities engaged in this market.

Historically, the construction industry has converged around MIG (Middle Income Group) and HIG (Higher Income Group) housing. The enormous gap in the LIG/EWS (Lower Income Group/Economically Weaker Section) market segments offer untapped opportunities for the private sector construction agencies to identify such demands and respond on a commercial and sustainable basis. This market has been largely served by the public housing agencies in the states, in the form of social housing. The financial sector has recently opened up to the housing market but their capacity to serve the lower income households is yet to be sustainably demonstrated. In these globally difficult economic times, when all other real estate asset classes have seen surplus stocks, the "affordable" housing supply is still scarce.

It is encouraging to see a number of private sector developers entering this space with intent and promise to deliver. It is the price of the dwelling unit that matters ultimately for affordability and the market has the inherent capacity to produce and deliver housing to all segments of the population. This however needs to be demonstrated. And for this to happen, the product offerings will need to cover a wide range of buyers, particularly those at the lower end of the market.

This Report has quite credibly dealt with some of the nuances associated with "affordability" and has made a very insightful analysis of the factors and issues that can have a bearing on "affordability", quite distinct from what we may call "affordable".

The Report also draws on the best practices and the role that technology and town planning have played in comparable economies. The Report provides an insightful reading which I am very happy to commend to all concerned.

A handwritten signature in black ink, appearing to be 'R.V. Verma', written in a cursive style.

(R.V. Verma)  
Executive Director  
National Housing Bank

## CHAPTER 1: MACRO TRENDS & GROWTH DRIVERS

### The Context

Once upon a time, there was a kingdom called India ruled upon by all round prosperity, the evidence for which lay in the ever rising property prices. While on one hand, nothing appeared beyond reach, on the other, all that was made available, whatever the price tag, found takers and enough of them!

Then came the waves of economic slowdown, riding the turbulent winds of the sub-prime crisis from a not-so-distant kingdom of the USA. Suddenly, the means became insufficient / scarce and the ends were no more in sight! No more was a sentence spoken or written complete without syllables like "affordable" & "affordability"!

Affordable....affordability....but aren't they the same?

While some referred to affordable in the context of the economically weaker section of the society, for the others, getting an asset within affordable limits of an individual by virtue of discounts, promotional schemes, and deferred payments was affordability! In the context of residential property, affordable housing is a term used to describe dwelling units whose total housing costs are deemed "affordable" to those that have a median income, which in effect implies the not so affluent of the society.

The advanced economies of the world like the US and Canada have a common guideline whereby affordable house is one whose cost does not exceed 30% of a household's gross income. Housing costs considered in this guideline generally include taxes and insurance for owners, and usually include utility costs. When the monthly carrying costs of a home exceed 30 – 35% of household income, then the housing is considered unaffordable for that household.

In some other advanced economies like the UK, affordable housing includes social rented and intermediate housing, provided to specified eligible households whose needs are not met by the market. Affordable housing should meet the needs of eligible households including availability at a cost low enough for them to afford, determined with regard to local incomes and local house prices.

Closer home, in India, a unit where the price in say May, 2007 was Rs. 7000/- per sq. ft. and had risen to Rs. 12,000/- by May, 2008, a builder was selling the same at Rs. 9000/- in May, 2009, thereby terming it affordable. In another instance, where an average 1BHK unit admeasuring 600 sq. ft. had a market value of Rs. 18 lakhs, new projects were announced with an area of 450 sq. ft. at a value of Rs. 13.5 lakhs, positioned as Affordable Homes!

Confused are you? Confused ourselves, we set out on a journey to decode what these two terms truly stand for. What commenced as a simple journey, turned out to be an adventure, fairly captivating but full of uncertainties. Some key excerpts of our travelogue....our **Experiments with Affordability**.

### Macro Economic Trends

The real estate sector in India had witnessed a major boom in the recent past. The developers, real estate funds and the investors were all very upbeat until the global meltdown made its impact on India and its real estate sector. The overall impact was however by far limited and the Indian markets did appear insulated to a large extent, thanks primarily to the prudent approach of the Reserve Bank of India (RBI) and the curbs & limitations imposed by the policy makers and market watchers.

One of the segments majorly impacted were builders & developers who had been seeking foreign funds through the Foreign Direct Investment (FDI) route. With the US markets diving into recession, the US private equity funds dried out leaving these builders & developers high and dry. Faced with a severe liquidity crunch from the overseas markets, coupled with the overtly cautious approach of the Indian banks towards extension of credit, while some builders had to stall their ongoing projects for want of last mile funds, others were forced to borrow from the open markets at very high interest rates.

As if there was no end to this horror story, the predicament in the global markets affected the demand for the real estate space in India. The meltdown in the US forced many of the global corporate majors to either postpone or cut their expansion plans. The cessation and deferment of the expansion plan of companies led to a situation of oversupply in office space in regions like NCR, Bangalore and Pune. This had its own adverse impact on the demand for residential space.

The common man once again found himself at the receiving end of this economic downturn. While several corporate houses forced themselves to resort to trim compensation packages across the board, several others were found contemplating laying off a-la downsizing. Fresh recruits suddenly found themselves with either cancelled offer letters or indefinitely postponed joining dates. With prices sky-rocketing in 2007 combined with the hike in interest rate, the demand for housing fell drastically.

If on one hand affordability was a question mark, the market was witnessing a huge demand-supply gap. While the demand in the market was more for 1~2 BHK units, the supply was largely of higher sized units; while demand was primarily for low to mid range units, supply was rampant with luxurious units! The pressure of piling up of inventory and forced by market forces, some of the developers did affect the southward movement of real estate prices, though the affordability still remained questionable!

While the above current situation could be best described as the adverse outcome of an economic event, with a short term impact, the larger issue is the unfulfilled housing demand! If Census 2001 figures are anything to go by, India then had about two million homeless people, which may have been under-reported for various reasons.

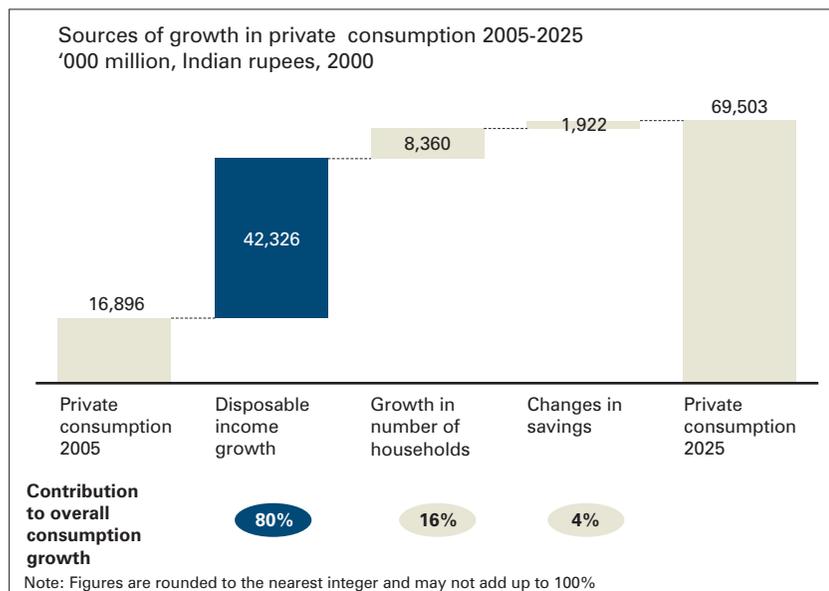
With rising income and the emergence of a new salaried class in the country, the demand for homes has far outpaced the supply. According to an estimate, India's housing shortage had increased from 19.4 million units in 2004 to 22.4 million by 2005-06 and this figure has since only headed northwards. Evidently, there is still a huge population that yearns to own a house but is unable to do so because of non-availability of affordable housing units. In a growing economy, with increasing young and working population and increasing urbanization, the demand for low cost housing is gaining popularity.

### Growing Economy

- The Indian economy witnessed a constant growth in the last few years, continuously outpacing the global GDP growth since 2000.
  - Pegged to be the fastest growing economy despite the ongoing global economic slowdown.
  - The overall strength of domestic demand has and will insulate the Indian markets from the major adverse impacts of the meltdown.
- The strong domestic demand emanates from the huge population, not just massive in quantity but also showing massive quality improvement.

- o A huge number seen upgrading itself from its current status to the next every year.
- o As per a report by McKinsey, the private consumption is estimated to go up significantly by 2025 (ref: Fig.1).
- o While this impacts all the income brackets including the LIG (Lower Income Group) and the Economically Weaker Section (EWS), it puts an equivalent overall pressure for supply of housing units.

Fig. 1.



Source: McKinsey Global Institute; 'The Bird of Gold': The Rise of Indian Consumer Market

### Growing Younger Population

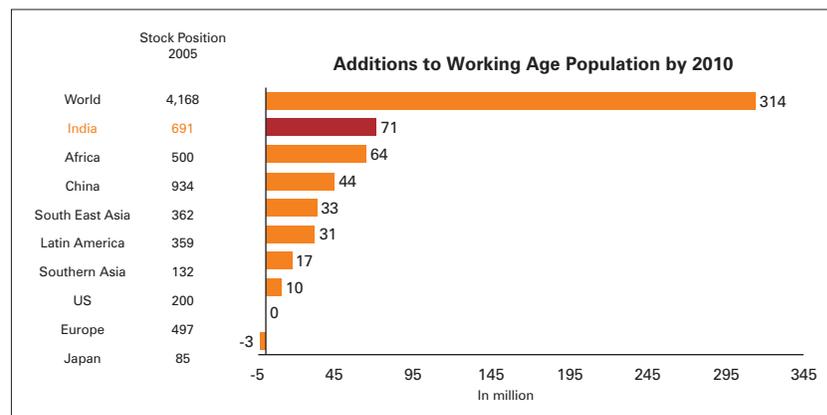
- According to The World Fact Book, India is among the world's youngest nations with a median age of 25 years as compared to 43 in Japan and 36 in USA.
- Of the BRIC - Brazil, Russia, India and China - countries, India projected to stay the youngest.
  - o Less than 25 years-age population estimated to rise to 70% of the total demographic by 2030 - the largest in the world.
  - o In congruence, the median age of homebuyers reduced from 38 years in the early 1990s to about 28 years now.
- Growth in the younger population also implies a growth in the independent earning members in a household within the LIG & MIG (Middle Income Group) as well.

### Increase in Working Population

- India is expected to register the largest addition to the working age population in the world by 2010.
  - o Expected to be powered by the largest working age population worldwide by 2050.
  - o Its labour costs, as a percentage of value added, one of the lowest among Asian countries.
  - o The country's urban population accounted for 29% of the total population in 2007, second largest in the world, projected to reach 37.8% by 2025.

(Source: ibef; Indian Economy Opportunities Unlimited)

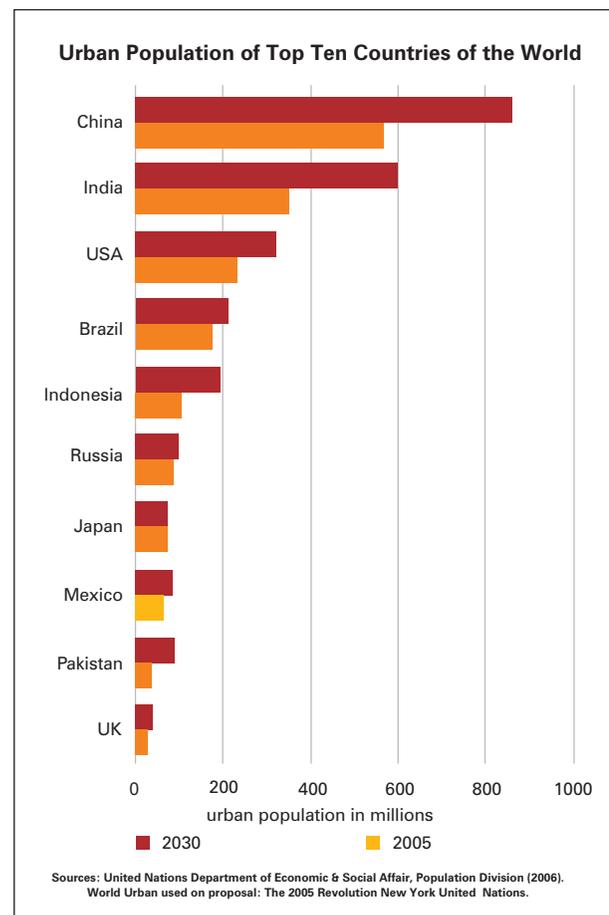
### Growth in Working Age Population (15 – 64 years) by 2010 (in million)



Source: ibef; Indian Economy Opportunities Unlimited

### Urbanisation

- Rate of urbanisation constantly ranging between 2.7% to 3.8% over 5 decades
  - o India's urban population in 2001 was 286.1 million, 27.8% of the total population; 68.7% of this lived in class I cities (defined as cities having a population of over 0.1 million).
- At the onset of the 21st century (2001), 32% of the total workforce resided in urban areas; 99% of new jobs totalling 19.3 million between 1991 & 2001 generated in urban areas and only 5 million jobs in rural.



- According to the United Nations Population Fund (UNFPA), India is getting urbanized at a faster rate than the rest of the world.
  - o By 2030, more than 40.7% of the country's population would be living in urban areas. Presently, more than 28.7% of India's area is urban as against the global average of 48.7%.
  - o As per the Census of India 2001 estimates, 30% of the population would be living in urban areas by 2011.
  - o The number of cities with one million plus population is further expected to double - from 35 in 2001 to 70 by 2025.
- Natural working population growth coupled with migratory working class (mostly LIG & MIG) from smaller to larger urban centres to put additional pressure on housing demand.
  - o This floater population, highly price sensitive, will propel demand for low cost housing largely confined to the outskirts of the cities.

### Increase in Disposable Income and Consumption

- The deprived will reduce from 101.1 million in 2005 to 74.1 million in 2015 and to 49.9 million in 2025. Also the aggregate consumption among the seekers will increase from Rs.  $2.1 \times 10^6$  million in 2005 to Rs.  $11.8 \times 10^6$  million in 2015 and Rs.  $24.6 \times 10^6$  million in 2025.
- Significant rise in aggregate disposable incomes will result in upgradation from existing income brackets to a higher bracket, leading to an increased purchasing power paving way for making investments in fixed and appreciating assets like housing.
  - o Shelter, being a basic need, would be a logical investment avenue.

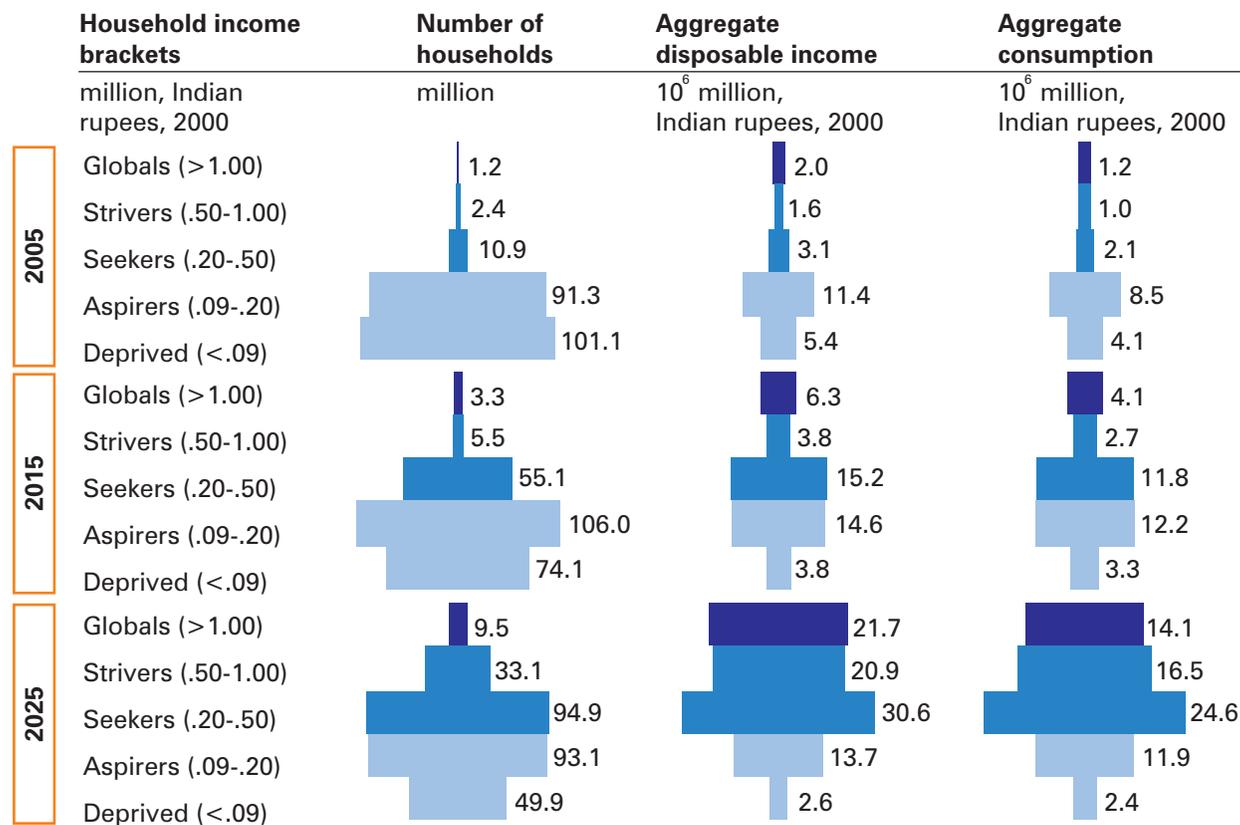
### Development of Infrastructure

- Development of infrastructure, in terms of roads, railways, flyovers, has helped improve connectivity within cities as also the connectivity of the main city with the outskirts.
  - o For example, quadrupling of railway tracks between Borivali (Mumbai suburb) and Virar (suburb located in the outskirts of Mumbai).
- Mumbai Rail Vikas Corporation (MRVC) intends to undertake work to extend suburban services from Virar to Dahanu.
  - o This will help a small town like Dahanu to connect with the city of

### Nuclearisation

- Average urban household size decreased from 6.06 in '01 to 5.5 at present (4.47 in urban areas). (Source: Indian Real Estate Sector Report, ICICI Securities).
- Changing mindset and demography like working women have led to the reduction in the household size, creating additional demand for housing units.

## THE SHAPE OF INDIA'S INCOME PYRAMID WILL CHANGE DRAMATICALLY AS INCOMES GROW



Source: McKinsey Global Institute, India Consumer Demand Model

- Mumbai, creating employment opportunities, and fresh housing demand.
- Golden Quadrilateral, launched in 1998, the largest express highway project in India. The first phase of the National Highways Development Project (NHDP) consists of building 5,846 kilometres of four/six lane express highways connecting Delhi, Mumbai, Kolkata and Chennai.
  - This highway will interconnect many major cities and ports.
  - This will aid industrial growth of all small towns through which it passes, creating employment opportunities.
  - Such developments would lead to creation of extended cities and satellite towns.

## Housing Shortage

- As per Planning Commission estimates, 10th Plan beginning 2002, urban housing backlog was 8.8 million dwelling units with a total requirement of 22.44 million dwelling units.
- According to the 11th Five Year Plan document, housing shortage as on 2007 estimated to be around 14.71 million with the housing shortage during the plan period (2007-12) including the backlog estimated at 26.53 million.
- The urban housing backlog with increased urbanisation in India is enormous, especially for the EWS and LIG, which constitute more than 99% of the total housing shortage of 24.71 million in urban areas.

The resultant is a burning housing shortage issue in India. A large section of the society is unable to own homes owing to the high real estate costs and limited resources, this coupled with the right product not being made available to the consumers. Majority of the housing stock that has been created is in the premium category which is not affordable by the common man. While a huge demand for housing exists among the economically weaker sections and low-income groups, this section of the society still remains untapped and offers a gigantic opportunity for the real estate developers. The opportunity lies in affordable housing with the objective of making "housing available for all".

## CHAPTER 2: DEFINITION & KEY ISSUES

The housing shortage is still a matter of concern in India. This is primarily because the population and the economy of India is consistently growing and thus a huge demand for housing still exists and the right supply to match this demand is not yet available in the market. This demand-supply gap, for want of the right product mix, is the root cause of housing shortage in India. The housing units which are being developed by the builders cater to the premium category and do not service the LIG & MIG section of the society. For them these units still continue to be unaffordable. Economically Weaker Sections (EWS) and Low-Income Groups (LIG) constitute more than 99 % of the total housing shortage of 24.71 million in urban areas.

Affordable housing projects need to be launched to service the need of this segment of the society. The projects, which have come up recently in certain parts on the country under the garb of affordable housing, do not exactly fit the bill of affordable housing. These projects are just a form of price correction in the market. Some of them who have priced their product in the affordable range have actually reduced the size of the apartment drastically. Some have increased the super built-up area, while in some other cases where prices had trebled to quadrupled, a slight correction of 10-15% is being claimed and re-launched as affordable housing projects.

It appears as if the concept of 'affordable housing' has not really been understood to the core in India or it could very well be a case of deliberate ignorance.

**Affordable housing** is a term used to describe dwelling units whose total housing costs are deemed "affordable" to a group of people within a specified income range.

The generally accepted definition of affordability is for a household to pay no more than 30 % of its annual income on housing. Families who pay more than 30 % of their income for housing are considered cost burdened and may have difficulty affording necessities such as food, clothing, transportation and medical care. The lack of affordable housing is a significant hardship for low-income households preventing them from meeting their other basic needs, such as nutrition and healthcare, or saving for their future and that of their families.

National Urban Housing & Habitat Policy 2007 as well as the Eleventh Five Year Plan remains silent on the actual definition of EWS & LIG housing (affordable housing); however the derived definition of the same happens to be minimum 250 sq. ft. for EWS, minimum 300 sq. ft. - 325 sq. ft. for LIG and minimum 650 sq. ft. for MIG.

A high powered task force on Affordable Housing, comprised of eminent industry leaders, has sought to redefine the parameters to 300-650 sq. ft. for EWS / LIG flats and a maximum carpet area of 1200 sq. ft. for MIG. The key highlights of the recommendations of this committee are :

- "Affordable Housing" should be put at the centre of public policy.
- Any attempt to fix a definition of affordable housing for a country as large and diverse as India, using the concept of "one-size-fits-all" could be counter-productive. However, the Task Force has suggested the following parameters for the purpose:

	EWS/LIG	MIG
Size	300-600 sq. ft. carpet area	Not exceeding 1,200 sq. ft. carpet area.
Cost	Not exceeding 4 times the household gross annual income	Not exceeding 5 times the household gross annual income
EMI/Rent	Not exceeding 30% of gross monthly income	Not exceeding 40% of gross monthly income

*The Task Force visualises the size of the household as five members.*

## Affordable Housing: Key Parameters/ Issues

Location/land cost, amenities, infrastructure, construction cost, unit size and pricing are some of the issues facing affordable housing. These form a very critical part of development of affordable housing as a concept in India. Both the government and the private players have been grappling with these issues to promote affordable housing in the country.

### Location/Land Cost

- Location and land cost play a very key role in the success of an affordable housing project.
- For an affordable housing project to be economically feasible, the land has to be available at relatively lower cost.
- For availing the land at lower costs, such projects are typically located on the outskirts of the city.
- Such land parcels which are available at lower costs further reduce the

speculative risk in the project though the location can at times act as a hurdle in the marketing of such projects.

- Since these projects are positioned at the outskirts, connectivity becomes a major challenge.
- Linkages to the city or any other commercial development have to be ensured in such cases.
- The same can be developed by starting a bus service or improving the rail frequencies to such locations.
- Also the infrastructure in the vicinity has to be developed with respect to schools, colleges, hospitals, shopping area et al.
- Government has to provide support to the builders by providing land at lower costs.
- There is a need to give additional FSI (Floor Space Index) to the developers keeping a condition that the developers will also make provision for infrastructure like wide roads, gardens, parks, playgrounds etc.
- The additional FSI should not be misused by creating congested developments solely with the purpose of increasing the number of units and thereby the topline.
- This additional FSI can be provided in areas which are located on the outskirts of the city.
- This will also help in decongesting the main city area.

### Amenities

- An affordable housing project does not call for luxury amenities.
- Basic requirements like 24 hours electricity, water supply, children's play area, bus service, community hall or a garden can be incorporated in such projects.
- Cutting down on amenities like swimming pool, club house, gymnasium etc. saves on a lot of costs.
- These cost savings can help in keeping the unit prices in such projects on the lower side.
- The monthly maintenance, a recurring monthly cost to a tenant, is also scaled down by reducing the amenities.

### Infrastructure

- Infrastructure is a key factor when it comes to affordable housing projects.
- Since such projects are located on the outskirts of the city, the connectivity to the city has to be improved.
- Apart from connectivity, facilities such as schools, hospitals, libraries, and markets for daily utilities and other commercial establishments have to be set up.
- Entertainment avenues such as a garden, playground, cinema theatre also need to be established.
- These facilities are the need of the neighbourhood.
- Government can provide support to the private players to develop such infrastructure services.

### Construction Cost

- The idea of prefabricated low-cost projects in housing is gaining momentum in the Indian markets.
- As per the industry experts, the cost of construction of precast projects (technology based construction) is lesser by 20 to 50 %, however to achieve economies of scale, a minimum of one million sq. ft. is required to be built.
- The technology has to be repeated in multiple projects (at least 4-5 times) to save costs.
- Also technology based construction saves time thus leading to faster completion of projects; however it requires more skilled labour.

(Explained in detail in the next chapter).

- Another point of contention is the cost of material required for construction. Of the total cost of construction of a building, 65 to 75 % is spent towards the building materials.

### Size of the unit

- The size of the unit is decided by the affordability of the buyer and what is economically feasible for the developer.
- For example, if the affordability of the buyer is Rs. 0.8 million, the developer can make available a 300 sq. ft. @ Rs. 1866 per sq. ft. or a 400 sq. ft. @ Rs. 1399 per sq. ft. or even a 500 sq. ft. @ Rs. 1119 per sq. ft. depending on the economic viability of the project, location, construction cost, amenities etc.
- These units can be in the form of 1 RK (Room Kitchen) or 1 BHK (Bedroom Hall Kitchen) for EWS / LIG segment.
- For the MIG & HIG segment, the housing units can also be 2 BHK & 3 BHK respectively.

### Pricing

- Pricing is another critical factor in any affordable housing project.
- Pricing depends on the affordability of the target audience, location and construction cost.
- Affordable housing projects should be priced taking into consideration the affordable segment which mainly comprises the EWS & the LIG segment.
- Separate affordability index has been created for computing the affordability of these segments.
- The affordability index has been formulated taking into consideration the median fixed gross monthly household income of an individual in a particular city falling in the affordable segment.
- Loan eligibility is derived from the fixed gross monthly household income of the individual.
- Thereafter taking 80% as the LTV (loan to value ratio), the value of the housing unit is arrived at. For example, if the loan eligibility of an individual with a fixed gross monthly household income of Rs. 9830 is Rs. 0.429 million taking 80% LTV, the individual will be able to afford a housing unit worth Rs. 0.537 million.
- This affordability will differ from city to city as the median income in each city is bound to be different for different income classes.

The affordable housing projects should be primarily targeted at the EWS and the LIG segment (affordable segment) and the pricing and the unit size should be based on the incomes of the individuals falling in this segment.

To arrive at the right product mix (unit size & pricing) we have to first define the affordable segment (target segment for affordable housing). The affordable segment will be different in different parts of the country depending on the median incomes of the cities. For example, a budget of Rs. 0.5 million may be affordable to buy a 1 BHK in one city or even a 2 BHK in some other city. The pricing of the units has to be according to the catchment population demography (primarily median income) of that particular city. Depending on the catchment analysis, a developer can decide whether to sell a 1 BHK or a 2 BHK at a particular price point and location.

The table below gives the affordability index for a test city, say Mumbai, basis the median income of its entire population.

	Economically feasible for developers
	Economically infeasible for developers

Classification	Fixed Gross Monthly Household Income (in Rs.)	Loan Eligibility (in Rs. million)	Value of the Housing Unit (in Rs. million)	Rate/sq. ft. (in Rs.)	Rate/sq. ft. (in Rs.)	Rate/sq. ft. (in Rs.)	Rate/sq. ft. (in Rs.)	Rate/sq. ft. (in Rs.)
	Overall Median Income			Case I: BUA 300 sq. ft.	Case II: BUA 550 sq. ft.	Case III: BUA 750 sq. ft.	Case IV: BUA 1000 sq. ft.	Case V: BUA 1350 sq. ft.
All India	3767	0.164	0.206	685	374	274	206	152
Mumbai	6981	0.305	0.381	1270	693	508	381	282

The median salary in Mumbai is Rs. 6981 per month. Thus a household with a fixed gross monthly income of Rs. 6981 will be eligible for a home loan of Rs. 0.305 million. At an LTV of 80%, this household can afford a house worth Rs. 0.381 million.

*Assumption: Home loan interest rate - 9.25%; Tenure - 20 years; Loan to Value Ratio - 80%*

However, a housing unit worth Rs. 0.381 million should also satisfy the criteria of the minimum unit size. It is evident from the above table that a unit worth Rs. 0.381 million is not feasible if the unit size is 550 sq. ft. or more, as the derived rate per sq. ft. of the saleable area is far below the economically feasible selling rate for a developer. From the table above, only a 300 sq. ft. unit seems feasible in Mumbai.

On similar lines, a unit costing Rs. 0.381 million is not affordable at an all India level, as going by the all India median income of Rs. 3767 per month, the affordability is only to buy a unit worth Rs. 0.206 million.

Based on the calculations, it is evident that only a specific size unit becomes economically feasible in certain cities, while in others it may be infeasible. Thus, a housing unit to be classified as affordable housing should not only be economically feasible but needs to fit into a liveable unit size as well.

Depending upon the **affordability of the individual** and the economic feasibility of the project, the unit size can vary from 300 sq. ft. to 1500 sq. ft.

As such, the value of an affordable housing unit is contingent on the median income of that particular city. It is equally important that the median incomes in each segment viz. EWS, LIG, MIG & HIG be considered separately before deciding the unit size and value of the units in any affordable housing project. What we showcased above was the overall median incomes of all the segments put together in a city or town class.

To facilitate better understanding of each segment in the show case city of Mumbai, we have further divided the income brackets into EWS (Economically Weaker Section), LIG (Lower Income Group), MIG (Middle Income Group) & HIG (Higher Income Group) in Mumbai. The distribution of income classes among these groups is as mentioned below :

- EWS : Upto Rs. 5000 per month
- LIG : Rs. 5000 - Rs. 20000 per month
- MIG : Rs. 20000 - Rs. 40000 per month
- HIG : Above Rs. 40000 per month

The affordability index for each segment is discussed in the below tables.

### EWS (Economically Weaker Section)

Classification	Fixed Gross Monthly Household Income (in Rs.)	Loan Eligibility (in Rs. million)	Value of the Housing Unit (in Rs. million)	Rate/sq.ft. (in Rs.)	Rate/sq.ft. (in Rs.)	Rate/sq.ft. (in Rs.)	Rate/sq.ft. (in Rs.)	Rate/sq.ft. (in Rs.)
	EWS			Case I: BUA 300 sq. ft.	Case II: BUA 400 sq. ft.	Case III: BUA 500 sq. ft.	Case IV: BUA 600 sq. ft.	Case V: BUA 750 sq. ft.
All India	2901	0.127	0.158	528	396	317	264	211
Mumbai	3447	0.151	0.188	627	470	376	314	251

The EWS falls in the income bracket of upto Rs. 5000 per month. The affordability of the EWS in India is restricted to a maximum Rs. 0.158 million within which affording a 300 sq. ft. also becomes difficult. Even the slum rehabilitation projects provide housing units admeasuring minimum 225 sq. ft. These are typically the slum dwellers in urban areas. According to the Census 2001, 61.82 million persons or 23.1% of the urban population reside in slums.

## LIG (Lower Income Group)

Classification	Fixed Gross Monthly Household Income (in Rs.)	Loan Eligibility (in Rs. million)	Vaule of the Housing Unit (in Rs. million)	Rate/sq. ft. (in Rs.)	Rate/sq. ft. (in Rs.)	Rate/sq. ft. (in Rs.)	Rate/sq. ft. (in Rs.)	Rate/sq. ft. (in Rs.)
				Case I: BUA 300 sq. ft.	Case II: BUA 400 sq. ft.	Case III: BUA 500 sq. ft.	Case IV: BUA 600 sq. ft.	Case V: BUA 750 sq. ft.
	<b>LIG</b>							
All India	9451	0.413	0.516	1720	1290	1032	860	688
Mumbai	9830	0.429	0.537	1789	1341	1073	894	715

The LIG segment falls in the income bracket of Rs. 5000 - Rs. 20000 per month. Their affordability is restricted to a housing unit of maximum 400 sq. ft. However, the pricing of these units in each city will differ as per the affordability of the individual in that particular city.

Since the affordability of LIG in Mumbai is a housing unit costing Rs. 0.537 million, the affordable housing projects in Mumbai have to make available units priced Rs. 0.537 million or less. The size of the units can therefore vary from 300 sq. ft. to 400 sq. ft. depending upon the per sq. ft. rate that the developer wishes to realize for his project.

Acute shortage of housing in India has led to a huge demand-supply gap in housing units which can be bridged by affordable housing projects with the

right product mix. The successful launch of such projects calls for policy focus on housing and basic services in India. However, it is very evident that just Public Sector efforts will not be enough to fulfill the housing demand given the enormity of the housing scarcity and budgetary limitations of both the Central and State Governments. Public-Private-Partnerships (PPP model) in this case have become very crucial in order to achieve the goal of affordable housing.

In the ensuing tables, we have showcased the affordability equation for the MIG & the LIG segments. As one would observe, we have scaled up the economic feasibility of the builder in MIG & HIG tables in accordance with the additional amenities that would go with them vis-à-vis an EWS / LIG housing project.

## MIG (Middle Income Group)

Classification	Fixed Gross Monthly Household Income (in Rs.)	Loan Eligibility (in Rs. millions)	Value of the Housing Unit (in Rs. million)	Rate/sq. ft. (in Rs.)	Rate/sq. ft. (in Rs.)	Rate/sq. ft. (in Rs.)	Rate/sq. ft. (in Rs.)	Rate/sq. ft. (in Rs.)
				Case I: BUA 550 sq. ft.	Case II: BUA 750 sq. ft.	Case III: BUA 1000 sq. ft.	Case IV: BUA 1200 sq. ft.	Case V: BUA 1350 sq. ft.
	<b>MIG</b>							
All India	35000	1.53	1.91	3474	2547	1910	1592	1415
Mumbai	35000	1.53	1.91	3474	2547	1910	1592	1415

## HIG (Higher Income Group)

Classification	Fixed Gross Monthly Household Income (in Rs.)	Loan Eligibility (in Rs. millions)	Value of the Housing Unit (in Rs. millions)	Rate/sq. ft. (in Rs.)	Rate/sq. ft. (in Rs.)	Rate/sq. ft. (in Rs.)	Rate/sq. ft. (in Rs.)
				Case I: BUA 1000 sq. ft.	Case II: BUA 1200 sq. ft.	Case III: BUA 1350 sq. ft.	Case IV: BUA 1500 sq. ft.
	<b>HIG</b>						
All India	84206	3.16	3.72	4437	3697	3286	2958
Mumbai	90000	3.38	3.97	4742	3952	3512	3161

As has been demonstrated above, even in a metro like Mumbai, while it is very difficult for an EWS to own even a 300 sq. ft. housing unit, for an LIG also it is difficult to afford one above 400 sq. ft. To make a 400 sq. ft. unit size affordable to an LIG, the pricing needs to be sub Rs. 1350 per sq. ft. In the

recent past, projects announced in distant suburbs of Virar, Kharghar & Kalyan also have not been anywhere closer to the above rates. It is high time that one started looking at feasible options beyond Virar, Kalyan & Kharghar.

## CHAPTER 3: TECHNOLOGY BASED CONSTRUCTION

To bridge the housing shortage in India, affordable housing projects need to be undertaken on a mass scale. Also since it is affordable housing, the end product has to be cost effective as well. To achieve both, it is imperative to adopt innovative technologies in construction. The projects should not only be cost effective but should also possess strength and durability.

Of late, India has been witnessing patented International construction systems such as “Mascon System” (Canada), “Mivan System” (Malaysia). In these systems instead of the conventional column and beam construction, walls and slabs are cast in one operation at the construction site itself. It is done by the use of specially designed, easy to handle light weight pre-engineered aluminium forms. Forms or moulds or shutters are the members into whom concrete is poured, to get the desired shape or outline when set (in this case the shape of walls & slabs). The process comprises fitting and erecting portion of shuttering as set out through survey, following which, concreting of the walls and slabs is carried out. This technique is called the pre-cast and cast-in-situ and is used for quick construction. Using this system, all the elements of a building namely, load bearing walls, columns, beams, floor slabs, stairs, balconies etc can be constructed.

This is a type of assembly line production and helps in the speedy construction of multiple units of the same type. The resulting structure has a good quality surface finish and accurate dimensional tolerances. It can be handled easily by unskilled labourers. It has a four day cycle of casting the floor together with all slabs as against 14 to 20 day cycle in the conventional method. Completed RCC structure is available for subsequent finish trades much faster, resulting in a saving of 10 to 15 days per floor. In addition, walls are cast monolithic and hence require no further plaster finish. Therefore the time required in the conventional method for construction of walls and plastering is saved. The box type construction gives more seismic resistance to the structure. It provides for 4% more efficient utilization of land than conventional construction. Other minor advantages are lesser number of joints which in turn reduce chances of leakages, simplified foundation design due to consistent load distribution and a more sound-proof structure.

Apart from all the advantages that the above technology based construction using patented formwork\* has, it does face some limitations as well. Initial investments towards buying this formwork (mould) may be up to 25% of the cost of the RCC structure in building work. Therefore, volumes need to be constructed so that multiple repetitions of the forms are possible at worksite thereby making the technique cost effective. Modifications are not possible as all members are cast in RCC. Further not only designs need to be identical for the entire development, elevations also have to be uniform as projections/cantilever extensions are difficult to construct. However, time taken for construction by above technology is much lesser than that taken in conventional construction. To handle forms & moulds, there is a need for semi-skilled labour as a slight deformation may require the whole structure to be discarded and reconstructed, thereby impacting the labour cost.

This technology, therefore, can be used only in case of mass housing to make it cost effective. Mass affordable housing is the need of the hour for the country.

*\* Formwork is the term given to either temporary or permanent moulds into which concrete or similar materials are poured.*

## CHAPTER 4: KEY ELEMENTS OF AFFORDABLE HOUSING

The increasing urbanisation & migration has put tremendous pressure on the resources & infrastructure available in cities. This has also created a pressure on the housing sectors in these urban agglomerations resulting in the deterioration of the housing conditions leading to an increasing number of slums and illegal settlements. Despite several measures in the housing policies, the urban poor still does not have access to adequate housing and basic services. The upward movement of the economy in the recent times only pushed the property prices northwards thus making housing all the more unaffordable for the EWS, LIG & the MIG segment.

The housing shortage was estimated to be 24.7 million units at the beginning of the 11th Plan i.e. in 2007. 99% of this would be for the EWS & LIG. Given the magnitude of the housing shortage and budgetary constraints of both the Central and State Governments, it is sufficiently clear that mere Public Sector efforts are not enough to fulfill the housing demand. To fill the mismatch between the demand and supply of housing units the public and private sectors have to come together and create the right product mix (as discussed in the earlier chapter) in the form of a PPP (Public-Private-Partnership) model. The ingredients of this mix are land, housing finance, FDI, rental housing initiatives, township development, legislative and fiscal initiatives, infrastructure and role of the private sector.

### Land

Availability of land at lower cost which is the biggest hurdle in creating any affordable housing project can be sorted out with the help of the government. Various measures can be taken by the government for the same. A few of them could be making land available for the builders at a lower cost, giving additional FSI, helping in getting NA permission of a barren agricultural land.

The availability of land at cheaper rates is the key to a successful affordable housing project. An affordable housing project can become economically feasible only if land is available at lower costs. Apart from making the land available at lower costs, additional FSI can also be granted to the private players to come up with mass affordable housing projects; however this additional FSI should be granted on the condition that the developer will also make provision for wide roads, play area for children, gardens, playgrounds etc. The government has to decide the pockets feasible for affordable housing projects and accordingly grant incentives like additional FSI or supply of land at lower rates to developers developing affordable housing projects in these pockets.

The 11th Five Year Plan (2007-12) Working Group on Urban Housing with Focus on Slums has suggested various initiatives to increase supply of developed urban land like:

### Streamlining Land acquisition procedures:

Land sharing and land pooling arrangements, particularly in the fringes, through public and private initiatives with appropriate statutory supports, can be evolved. Special courts may be set up to deal with land acquisition disputes speedily.

The methodology of land acquisition should be reworked to ensure equitable compensation in cash or kind to the original land owner including giving part of land, TDR (Transferable Development Rights) which can be sold, besides rehabilitation measures.

### **Land Banking:**

Reservation of land in bigger projects targeted at the HIG (Higher Income Group) would generate land availability for housing the weaker sections of the society. The National Urban Housing & Habitat Policy 2007 has suggested earmarking 10 to 15 % of land or 20 to 25 % of FAR / FSI whichever is greater in every new public/private housing project. In order to ensure the same, appropriate spatial incentives will be developed by Urban Local Bodies (ULBs) and Development Authorities. This will also result in cross subsidization for creating housing for the EWS / LIG. These units built by cross subsidy from the MIG/HIG should be sold solely to the EWS / LIG segment for which certain restrictions and guideline should be laid down to avoid resale and speculation and the plots/houses falling in the hands of anyone who does not satisfy the criteria of the EWS / LIG group.

### **Land Pooling and Land Readjustment:**

Land Pooling and Land Readjustment schemes implemented as part of Town Planning schemes in the states of Gujarat and Maharashtra can be replicated across the country thus increasing the feasibility of such projects.

Legal provisions for Town Planning Scheme (TPS) in the Gujarat Town Planning and Urban Development Act envisage a socialistic and transparent approach for preparation and implementation of Town Planning Schemes. The concept of TPS is akin to land pooling technique in which lands of different owners are pooled together and, after proper planning, the same is re-distributed in a properly reconstituted plots after deducting the land required for open spaces, social infrastructure, services, housing for the weaker section and street network.

### **Re-densification and re-assignment of land**

Supply of serviced land for affordable housing projects can be augmented by re-densification and re-assignment of land in central city areas within the framework of overall City Development Plan.

### **Housing Finance**

Affordability is a big question mark when it comes to the EWS. For example, in Mumbai, the median income of an individual in the EWS is Rs. 3447 per month. If one has to compute the loan eligibility for this segment, for an individual with a fixed gross monthly household income of Rs. 3447 per month @ 9.25% for 20 years (assuming LTV of 80%) it will come to around 0.151 million; the EMI works out to Rs. 1383. This tantamount to 40% of his income, which as per the technical definition is not affordable. At this income, the individual will be able to afford a unit less than 200 sq. ft. only. Thus an interest subsidy in home finance is very essential to increase the affordability of an individual falling in the EWS category.

The Ministry of Housing & Urban Poverty Alleviation, Government of India, has designed an Interest Subsidy Scheme which proposes a subsidy of 5% on the interest charged on the admissible loan amount for EWS and LIG, over the full period of the loan for construction or acquisition of a new house. As per the policy, households having an average monthly income upto Rs. 3300 is defined as EWS whereas households with average monthly income between Rs. 3301 upto Rs. 7300 are defined as LIG (subject to revision by the Steering Committee of the Scheme from time to time). The scheme will provide a subsidised loan for 15-20 years for a maximum amount of Rs. 0.1 million for an EWS individual for a house of at least 25 sq. mts. (269 sq. ft.) and a maximum loan amount of Rs. 0.16 million for an LIG individual for a

house of at least 40 sq. mts. (430 sq. ft.). Additional loan, if needed, would be at unsubsidized rates.

### **FDI**

The housing shortage for the affordable segment in India is huge thus creating a colossal gap between the demand and supply of the housing units which can be affordable to all. Bridging this gap will require a massive investment. State governments have been attempting to provide housing for all at affordable costs through respective State Housing Boards.

Foreign Direct Investment (FDI) could be one way of canalising the international funds to India. Government has already taken steps toward attracting FDI in the housing sector in the country. Government has allowed FDI up to 100% under the automatic route in townships, housing, built-up infrastructure and construction-development projects subject to certain guidelines. Such policy initiatives for FDI in real estate will definitely prove to be a boon for the affordable housing sector. However, to attract more FDI in affordable housing, it is necessary that the procedural delays in sanctions and approvals are minimised.

### **Infrastructure**

- Infrastructure development has to be an integral part of every housing project - whether public or private.
- Local bodies or the developer himself can take up the responsibility to develop infrastructure like roads, water supply, sanitation and other amenities at the proposed project location. Infrastructure development can also be undertaken by adopting a Public-Private-Partnership model.
- Open space for parks, gardens and play grounds should be made mandatory.
- It is also important to develop mass rapid transport corridors between existing medium and large towns and new green-field towns so that the relationship with the industry and commerce is developed to an optimum level.

### **Role of the private sector**

As per the Maharashtra Housing Policy, July 2007, the State would facilitate the participation of private sector in:

- Construction of LIG houses through Inclusionary Zoning. The term inclusionary zoning is derived from the fact that these ordinances seek to counter exclusionary zoning practices which aim to exclude affordable housing from a municipality through the zoning code.
- Development and maintenance of infrastructure.
- Technical support in City Planning process.
- Technology upgradation and human resource development in housing construction.
- Development of slums and urban renewal.
- Rental housing.

### **Rental Housing**

Rental housing schemes will aid those individuals falling in the EWS/LIG segment who cannot afford to buy a house. It will definitely help reduce the housing shortage of 24.7 million units in the country. The scheme can be applicable to only those who do not have a residence in their name.

The Mumbai Metropolitan Region Development Authority (MMRDA) has taken a step forward in this direction and has plans to come up with rental housing in Mumbai Metropolitan Region (MMR). MMRDA intends to construct residential complexes of self-contained tenements having 160 sq. ft. (14.86 sq. mtrs.)

carpet area each from the interested developers / NGOs with own land / development rights or on MMRDA land (at one or more locations in Mumbai Metropolitan Region). The complex will have all basic required infrastructures such as internal roads, SWD, sewer lines, water supply lines, electricity etc. All the plans shall get approved from MMRDA before starting the construction. (Source: MMRDA)

### Township Development

In view of the rapid urbanisation process and growing population in the urban areas, connectivity and communication tools to the Satellite Towns need to be improved. For example, the Mumbai Trans Harbour Link connecting the Island City of Mumbai to Navi Mumbai will open up the hinterland around Nhava Sheva for development and boost housing and other development activities. Such future development zones have to be identified for setting up mass affordable housing projects. Integrated townships can be developed in such satellite towns.

According to the Report of the 11th Five Year Plan (2007-12), Working Group on Urban Housing with Focus on Slums land parcels which are comparatively degraded excluding prime agricultural areas growing more than one crop with the help of assured irrigation should be selected for such projects. These townships have to be self sufficient in terms of facilities and amenities like schools, hospitals, parks, garden, markets, commercial establishments etc. and should be located at a reasonable distance from medium or large existing towns.

### Special Township Policy

Government of India has announced its policy to permit 100% Foreign Direct Investment (FDI) for development of integrated township. In order to encourage private investment in housing sector and to facilitate housing at affordable prices, Maharashtra State Government has given the following incentives which will be available for projects under Special Township Area:

- Non-agriculture permission will be automatic.
- Exemption from Urban Land (Ceiling and Regulation) Act, 1976.
- Government Land falling under township area shall be leased out to the developer at the current market rate.
- The condition that only agriculturist will be eligible to buy agriculture land shall not be applicable in Special Township Area.
- There shall be no ceiling limit for holding agriculture land to be purchased by the owner/developer for such project.
- There will be floating FSI in the township. Unused FSI of one plot can be used anywhere in the whole township.
- The stamp duty rates applicable in the Special Township area shall be 50% of prevailing rates.
- A Special Township Project shall be partially exempted from payment of scrutiny fee for processing the development proposal.
- 50% concession in payment of development charge.
- Development of basic infrastructure and amenities shall be an integral part of the project.

It shall be mandatory to provide at least 10% of the layout for EWS / LIG tenements and another 10% of the layout for MIG tenements. The size of the EWS/LIG tenements shall not exceed 30 sq. mtrs. and it should not exceed 50 sq. mtrs. for MIG tenements in such a composite layout. Higher FSI will be available if more area is allotted for EWS / LIG.

Source: Maharashtra State Housing Policy, July 2007

## CHAPTER 5: AFFORDABLE HOUSING PROJECTS

Affordable housing has become fashionable these days in the realty circles of India; however it is actually yet to take off in many a city. West has been the leader in taking the concept on field though. Projects like Tanaji Malusare City in Karjat and Nirman Nano City in Neral have already set foot in this arena. Housing units in Tanaji Malusare City start from Rs. 0.21 million onwards whereas Nirman Nano City is offering units starting from Rs. 0.443 million onwards. These projects have aptly identified the target segment and priced their projects accordingly.

East has also taken steps in this direction. Shapoorji Pallonji had developed Shukhobrishti, a mass housing project, meant for the lower and middle-income groups in Kolkata. Starting from Rs. 0.5 million onwards, Shukhobrishti has also targeted the right audience. Bengal Ambuja Housing Development Ltd., in joint venture with Gujarat Ambuja Cements Ltd., had also launched an affordable housing project in Kolkata in the past. The project was a result of a PPP (Public-Private-Partnership) model targeted at the lower and middle income group.

### Affordable Housing Projects under way -

Project Name	Developer	Location	Starting Price of the housing unit (in Rs.)
Tanaji Malusare City	Matheran Realty Pvt. Ltd.	Karjat	0.21 million (225 sq. ft. carpet)
Nirman Nano City	Nirman Realtors	Neral	0.399 million (235 sq. ft. carpet)
Shukhobrishti	Shapoorji Pallonji	Kolkata	0.35 million (320 sq. ft. carpet)

Several top developers like Puravankara, Unitech, Ansal Properties & Infrastructure, Ozone Group and others have plans to launch affordable housing projects in India. A few of them are listed below.

## Proposed Affordable Housing Projects

Project / Developer	Location	Investment (in million)	Land size	Other Details
Vijay Shanthi Builders	Thaiyur near Chennai	3000 million	11 acres	The project will have 1,200 units with single, two and three-bed room apartments between 400 sq. ft. and 1,157 sq. ft. priced between Rs. 0.999 million and Rs. 0.28 million
'Cosmocity'/ Provident Housing (wholly-owned subsidiary of Puravankara Projects)	Chennai	3000 million	31 acres	Plan for over 2000 units on a G+3 plan
Avinash Bhosale Infrastructure (ABIL)	Talegaon	4000 million	5 acres	The units to range between 375 sq. ft. to 450 sq. ft. and will cost between Rs. 0.45 million and Rs. 0.5 million. Over 1000 units have been planned.
Ansal Properties & Infrastructure	Uttar Pradesh & Rajasthan	5000 million	N.A.	Plan to develop 10,000 affordable homes, which are expected to be priced between Rs. 0.25 million to Rs. 0.95 million.
Omaxe Ltd.	Primarily in two and three-tier cities	5000 million	N.A.	Plan to build one million affordable homes across the country in the next eight years. The proposed units would be of 300 to 1,000 sq. ft. in the price band of Rs. 0.299 million to Rs. 0.99 million.
Tata Housing's Shubh Griha	Boisar	1000 million	67 acres	Plan for over 3000 units costing between Rs. 0.39 million and Rs. 0.67 million (excluding stamp duty)
Neptune's Swarajya	Ambivali, Kalyan	3500 million	100 acres approx.	Plan to build 10,000 units costing between Rs. 0.47 million to 0.83 million

North & South have not really seen affordable housing projects as yet. What sells under the garb of affordable housing does not really fit the bill. Builders reduce the carpet area to reduce the total cost of the house. Also projects selling for Rs. 0.15 million, Rs. 0.20 million and Rs. 0.30 million are being marketed as affordable housing projects. Such projects are out of the reach of the EWS and LIG sections where 99% of the housing shortage lies.

More and more affordable housing projects need to be developed which will satisfy both the criteria of area, cost and affordability as discussed in the earlier chapters.

Such projects when launched will mark the entry of affordable housing in India in full swing. The housing shortage in India can be overcome to a large extent only with the advent of such projects.

## CHAPTER 6 : PROMOTING AFFORDABLE HOUSING

Acute shortage of housing in India has led to a huge demand-supply gap in housing units. Thus these shortages call for policy focus on housing and basic services in India. However, it is very evident that Public Sector efforts alone will not be enough to fulfill the housing demand given the enormity of the housing scarcity and budgetary limitations of both the Central and State Governments. Public-Private-Partnerships (PPP model) in this case have become very crucial in order to achieve the goal of affordable housing.

Given the fact that 50% of India's population is forecasted to be living in urban areas by 2041, integrated townships comprising affordable housing units in these cities have to be planned.

For promoting affordable housing in India, National Housing & Habitat Policy 2007 has prescribed some important deliverables such as shifting to a demand driven approach and from subsidy based housing schemes to cost recovery-cum-subsidy schemes, innovative spatial incentives like relaxation

of Floor Area Ratio (FAR) for ensuring that 20-25 % of the FAR are reserved for EWS / LIG, increase supply of land, etc.

The Working Group on Urban Housing pertaining to 11th Plan has estimated total investment for meeting the housing requirement upto 2012 to be of the order of Rs. 3613 x 10<sup>3</sup> million consisting of Rs. 1472 x 10<sup>3</sup> mn for mitigating housing shortage at the beginning of 11th Plan and Rs. 2141 x 10<sup>3</sup> million for new additions to be made during the 11th Plan period (This includes construction of pucca houses & upgradation of semi-pucca and kutcha housing units).

Institutional structures and policy interventions for affordable housing need to be evolved. The objective of the government is to provide social housing (housing for all), but does not have the infrastructure to achieve it. Private parties cannot take up such projects because of various procedural issues. Therefore a joint venture between the government and private parties proves to be the best route to provide affordable housing for all. The joint venture companies in housing are either provided land at a subsidised rate for development or provided more FSI (Floor Space Index). This initiative will help people from lower and middle income groups to own a house at an affordable price.

### Public-Private-Partnerships in affordable housing

Joint sector projects attempted in a few cities as well as slum re-development projects in Mumbai have set a trend and these need to be emulated widely.

### Some of the housing projects are:

- Gujarat Ambuja Housing Project jointly undertaken with West Bengal Housing Board at Kolkata wherein housing is provided for both EWS / LIG and MIG / HIG
- SRA (Slum Re-development Authority) projects taken up in Mumbai

& Pune wherein slum re-housing is taken up with cross subsidies generated by providing housing for MIG and HIG

- Integrated Housing Townships taken up by Karnataka Housing Board as joint venture projects in collaboration with private companies in the vicinity of Bangalore and other major towns in the state of Karnataka provides housing for both EWS/LIG as well as to the higher income groups

### Private Equity Funds in Affordable Housing

Affordable housing, the most neglected segment of the real estate sector, is now attracting large-scale investments not only from the developers but also from the private equity funds.

- Private equity firm Red Fort Capital (RFC) plans to invest Rs. 4300 mn over the next two years in affordable housing on the outskirts of Bangalore and Hyderabad.  
*Source: Economic Times, Delhi Edition, 06-Nov-08).*
- Global private equity fund Warburg Pincus recently announced an investment of Rs. 3000 mn in Jaipur-based Mannat Group company, Unique Affordable Homes, for projects in North and West India.  
*(Source: Economic Times, Delhi Edition, 06-Nov-08).*
- Fire Capital Fund (FCF) is investing over Rs. 6000 mn in seven of its affordable housing projects in Indore, Bangalore, Chennai, Nagpur, Dehradun, Ahmedabad and Jaipur.  
*(Source: Business Standard, 16-June, 08).*

### Government's Initiatives

- **National Housing Bank (NHB):**
  - The National Housing Bank (NHB) has launched the Rs. 40000 mn refinance facilities that the Reserve Bank of India had announced to support home loans for affordable housing.
  - The NHB is refinancing the housing finance institutions at 8 per cent. – According to Mr. S. Sridhar, Chairman and Managing Director, National Housing Bank, the refinance facility to help housing finance companies extend home loans for up to Rs. 20 lakh for a dwelling unit was launched with an initial disbursement of Rs. 3100 mn to a group of housing finance institutions.  
*(Source: The Hindu Business Line, 28 Dec, 2008)*
- **Reserve Bank of India**
  - The central bank has increased the cap for home loans under priority sector to Rs. 20 lakh from Rs. 15 lakh earlier.  
*(Source: Financial Express, 01 May 2007)*
- **Public Sector Banks**
  - Announcement was made by public sector banks to boost the segment by cutting homeloan interest rates, putting caps of 9.25% for Rs. 5-20 lakh and 8.5 % for loans of up to Rs. 5 lakh.
- With the interest rate cuts announced by the nationalised banks, some of the leading housing finance companies have also announced a cut in rates and the others are likely to follow suit. This will be a key factor in reviving the housing market.
- 5% subsidy on housing loans for EWS
  - The Union Cabinet approved interest subsidy of 5% on housing loans taken by economically weaker sections
  - The 5% subsidy will be given on loans upto Rs. 1 lakh which means people from economically weaker sections (EWS) and low income group (LIG) will have to pay an interest of 3.5% on home loans

compared to prevailing market rate of 8.5% with a repayment tenor of 15-20 years.

- A panel was set up by the central government for affordable housing. Some important propositions of the panel to the housing ministry with respect to providing "affordable housing for all".
  - To impose a cess of 0.5% on all central taxes to establish a dedicated "Shelter Fund" to meet the ambitious target of "affordable housing for all" and to make India slum-free by 2020.
  - Broadening parameters of affordable housing to include flats with carpet area of upto 1,200 sq. ft.
  - Affordable housing be brought under the infrastructure definition, stamp duty rates and registration fees for such units be pegged at just 2% in all states.
  - Funds raised through sale of land by state housing boards must be ring fenced, with a defined proportion to be redeployed only for affordable housing.
  - Reinstating income tax deduction under Section 80 (1) B of the IT Act which was available in respect of exempting 100% profit from building residential projects for LIG/MIG houses may be restored for two years.
  - Upward revision in the FAR/FSI across cities commensurate with investment in infrastructure and imposition of impact fee on those benefitting from additional FAR/FSI to fund housing for low and middle income groups.
  - Simplifying procedures and processes for land acquisition and conversion of agricultural land for urban use.
  - Increasing JNNURM funds for affordable housing by 100% and a part of the funds be used for direct provisioning of housing for urban poor.

### Impact of Government Initiatives

- Public sector banks' move to reduce interest rates for home loans up to Rs. 2 million may induce some buying in the property market and will prompt developers to build more low-cost homes.
- The average home loan size in India is estimated at Rs. 0.75 million. So the rate cuts for loans up to Rs. 2 million can potentially have tremendous impact.
- The 5% subsidy on loans upto Rs. 0.1 million, which has been fixed keeping in mind the repayment capacity of weaker sections, will help meet the housing demand of LIG and EWS categories.
- According to the housing ministry's estimates, the scheme, which will apply on loans taken during the 11th Five Year Plan, will create 0.31 million houses for EWS / LIG segments over the next four years (2008-12) out of which 0.21 million units will be for EWS section and 0.097 million for LIG.
- The scheme will also help lending banks and financial institutions get market-related return on the perceived higher risk on lending to this segment of society.

The 5% subsidy approved by the Cabinet for economically weaker section (EWS) and low income group (LIG) has to be supported by land supply at affordable cost. A combination of both will help in bringing down the costs of affordable housing projects.

## CHAPTER 7: CHALLENGES & BEST PRACTICES

### Challenges in Affordable Housing

- **Land Cost**
  - Land cost is one of the biggest bottlenecks in affordable housing as it constitutes 25-30% of the total project cost.
  - Land prices have been on the rise in the past few years.
  - For augmenting affordable housing, the supply of land must be essentially at affordable prices else housing for all at affordable costs would only remain a pipe dream.
  - The supply of well-developed and commercially viable land would bring down the prices in the current markets.
- **Supply of land**
  - Affordable housing projects require large tracts of land, which are not easily available within the city.
  - The land parcels are generally located on the outskirts and are of agricultural use.
  - Conversion of agricultural land into non-agricultural land creates bureaucratic / procedural issues.
- **Connectivity**
  - Land acquisition at affordable prices can happen only on the outskirts of the city.
  - This creates hurdle to connectivity with the commercial developments or the employment place which are generally located within the city.
- **Rising input cost**
  - Rising costs of cement & steel increase the cost of construction.
  - For any housing unit to fit the bill of affordable housing the cost of constructions should not exceed a certain limit.
  - Apart from the cost of construction, cost of acquisition, conversion and development of land also increase the project cost.
- **Government Support**
  - Additional FSI needs to be provided
  - Land should be made available at lower cost

### Best Practices outside India

#### SINGAPORE

##### Land acquisition at low costs

The Housing and Development Board (HDB) has been instrumental in implementing the public housing policy in Singapore. The availability of land for public housing is the first consideration of the HDB as land is scarce in Singapore. Various favourable land laws passed by the government enabled the authorities to acquire land at extremely affordable costs and by the 1980s, a considerable land bank was already in existence. HDB bids for land from the authorities, competing with other land users and government agencies. The eventual cost of the land is still considerable, yet still well below the free-market price. By 1985, the HDB owned more than three-quarters of the land in Singapore.

##### Low production cost

Besides acquiring land cheaply, the HDB also keeps the cost of production low, so that the low cost can be passed on to the consumer. Construction costs are kept down through technological innovation such as increased use

of the metal-form concrete framework system and the prefabricated system. In the area of housing supply, to build cheap and fast, a strategy of standardization by building prototype flats and blocks was adopted. In addition, the HDB uses long-term supply contracts and bulk purchase strategies to ensure continuous supply of essential building materials at steady prices.

#### Central Provident Fund

Government has made arrangements for the financing of the HDB's public housing programme through the Central Provident Fund (CPF). Both employers and employees contribute a certain percentage of the employee's monthly salary to the fund. Contributions can only be withdrawn on retirement at age 55, on permanent incapacitation or for certain approved purposes. In effect, the CPF is a compulsory savings scheme which earns interest and which is tax-exempt.

#### Home ownership

To increase ownership of public housing, government's housing policy has encouraged public housing tenants to become home owners. Initially, the HDB's policy was to only provide rental units. Then in 1964, when the government believed that the acute housing shortage had been eased, the 'Home Ownership for the People' scheme was introduced to provide and assist people to purchase low-cost flats. This scheme marked the decline of the rental proportion of public housing over the years.

*Source: Excerpt from "Provision of Public Housing in Singapore", <http://tcdc.undp.org/Sie/experiences/vol4/Public%20housing.pdf>*

#### MALAYSIA

In Malaysia, need for low cost housing is deeply felt at Kuala Lumpur, capital of Malaysia. Kuala Lumpur occupies 0.07% land of the country's total area and accommodates about 10% of Malaysian population. Considering high population density, housing is costly in relation to income and quality of dwellings available. As a result of this, about 12% of people are living in squatter settlements.

#### Govt guidelines for low cost houses:

Under 5 yearly govt plans, low cost houses are meant for families whose household income does not exceed RM 750 per month and houses must cost RM 25000 or less. The type and size depends on whether it is a walk up flat or high rise flat. Built up area is between 45-56 sq. mtrs and it should have at least 2 bedrooms, a hall, a kitchen and a bathroom/toilet.

#### Implementation of low cost housing with private sector participation:

Until 4th Malaysia Plan, provision for low cost housing was a sole responsibility of public sector. But as public sector failed to achieve the targeted supply, private sector was called upon to play an important role in 4th, 5th and 6th Malaysia plans. In the fifth Malaysian plan period, to increase the supply of low cost houses, Govt launched Special Low Cost Housing Programme (SLCHP) in 1986 with target of 0.24 million units and target completion in 1989. Special privileges accorded under the scheme are :

- Establishment of one stop approval agency
- Flexibility in rules, regulations and standards
- Greater accessibility to financial facilities from commercial banks

The private developers are to undertake a mixed development type of project with modern amenities and at least 25% of the project was to be devoted to low cost units. The scheme received good response from private sector but was average in terms of target achievement.

*Source: Excerpt from "Housing for the urban poor". Is low cost housing the solution?" by Fadhlin Abdullah.*

## CHINA

China being a socialist economy, has followed 'low income and low rent' policy. Urban housing was mainly provided by work unit so that low wages were compensated for by cheap rental housing and rationed commodities. There was not much choice for the urban workforce other than to concentrate on industrial production and live on 'work unit' housing provided by state enterprises. Low rentals often resulted into the minimal maintenance and substandard buildings. Political leadership in China then realised the need to raise rentals to market levels and consequent raise in wages.

### Housing Reform Process:

#### The Housing Reform Plan 1988

At the 1988 National Housing Reform Conference, it was recognized that housing reform could bring economic and social benefits. Therefore the overall objective of housing marketisation became central government policy in 1988, which sought to continue raising rents to competitive level and begin implementing sale of public sector housing.

### Green Light for Housing Reform 1990

In tandem with the 8th Five Year Plan (1991-1995), the State Department endorsed the Shanghai Housing Reform Plan in May 1991. Based on the former subsidy model, it was characterised by innovative device such as the Housing Provident Fund, rent subsidy, and housing bonds. Thus, there was a shift of housing finance burden from central government and work units to individuals and the market.

### State Department's Reform Decision 1994

In 1994, the State Department issued a policy called 'State Department's Decision on the Deepening of City and Township Housing Reform' in a bid to push ahead the housing reform process towards the market. Five policy measures were proclaimed:

1. Co-ownership of Housing Responsibility: where housing responsibility would be shared by the state, work unit and the individual.
2. Housing Provident Fund: The state made use of the Housing Provident Fund to assist home finance. Both the work unit and the individual would contribute to a common account. Designated banks would supplement the fund with individual loans through a mortgage system.
3. Socialization and Professionalization of Housing Management – diminishing role of the state and work unit in housing production and allocation. The housing stock would be managed by professional bodies.
4. Selling of Former Public Rental Housing to Sitting Tenants: the state would progressively sell all existing public housing stock to sitting tenants at a discount rate of 50% and down payment should not be less than 30% of the purchase price.
5. More Housing for Middle-and Low-Income Groups: the state would continue to produce economic comfort housing for those groups who could not afford to buy.

### Housing Subsidies in Cash

The 1994 policy provided a framework for monetization of housing subsidies in 1998. It involved termination of welfare housing allocation, which would be replaced by direct housing subsidies in cash. The government paid the workers money to allow them to buy or rent from the market.

Source : Excerpt from "Housing reforms in China : A Paradigm shift to Market Economy" by Peter Li

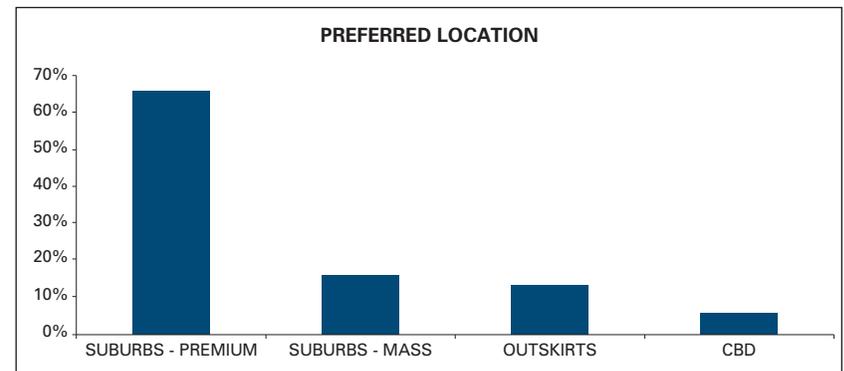
## CHAPTER 8 : CONSUMER BEHAVIOUR AND ATTITUDE

To have a better understanding of the attitude & behaviour towards housing and to experiment with the affordability equation of the various consumer segments, we conducted a survey among 8000 respondents in one of the key macro-markets of the country between 15 Feb 2009 and 15 March 2009; these were random footfalls in the various property exhibitions conducted by leading industry bodies.

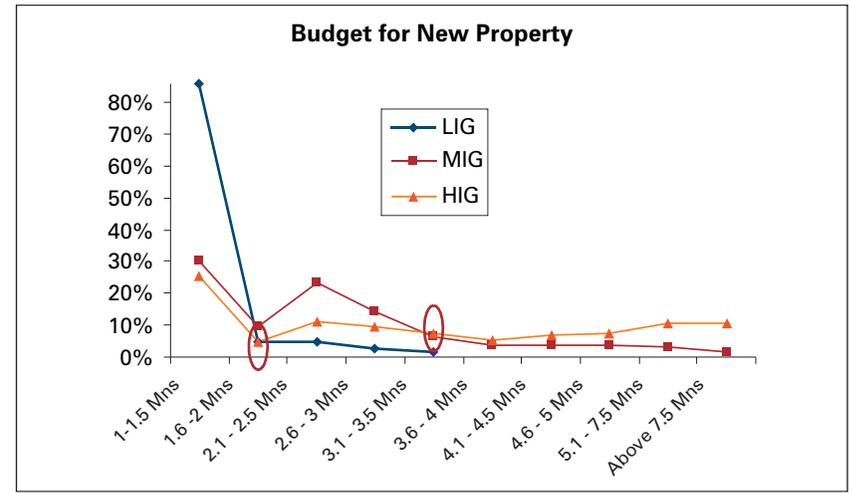
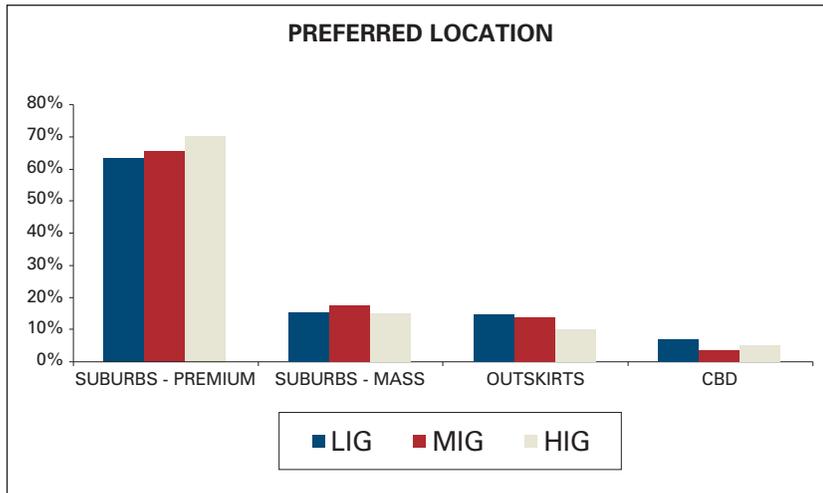
The behaviour pattern in this macro-market was found to be symptomatic of the sentiments elsewhere's in the country. Here are some of the highlights of the survey.

### Preferred Location:

- Suburbs are the most preferred location followed by relatively less developed suburbs and city outskirts.
  - Suburbs in this macro market have developed in quick time in the recent past driven by space shortage and high prices in the main city.
  - Improving transport facilities has aided travel from suburbs to prime commercial destinations of the city.



- A higher proportion of HIG is seeking a home in the premium suburbs, while the proportion of LIG & MIG seeking home in mass suburbs is higher.
- A higher proportion of LIG & MIG seeks a house in the city outskirts for want of affordable housing projects.
- The aspirational quotient does come into play for both the LIG & MIG, thus the preference for premium suburbs.
- It is worthwhile to note that there is some incidence of HIG as well seeking home in the mass suburbs and outskirts! While affordable housing is meant for a specific income class, affordability is a relative term and comes into play for every home seeker, irrespective of his income class!

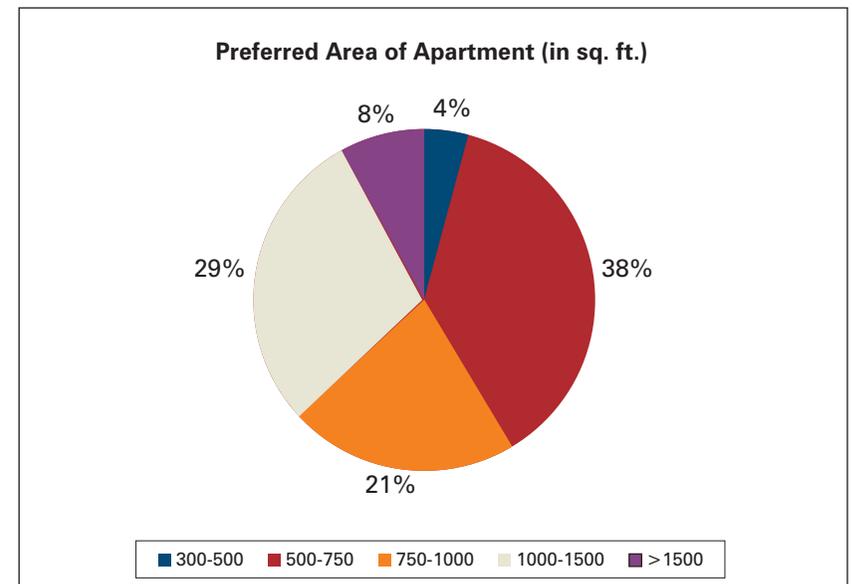
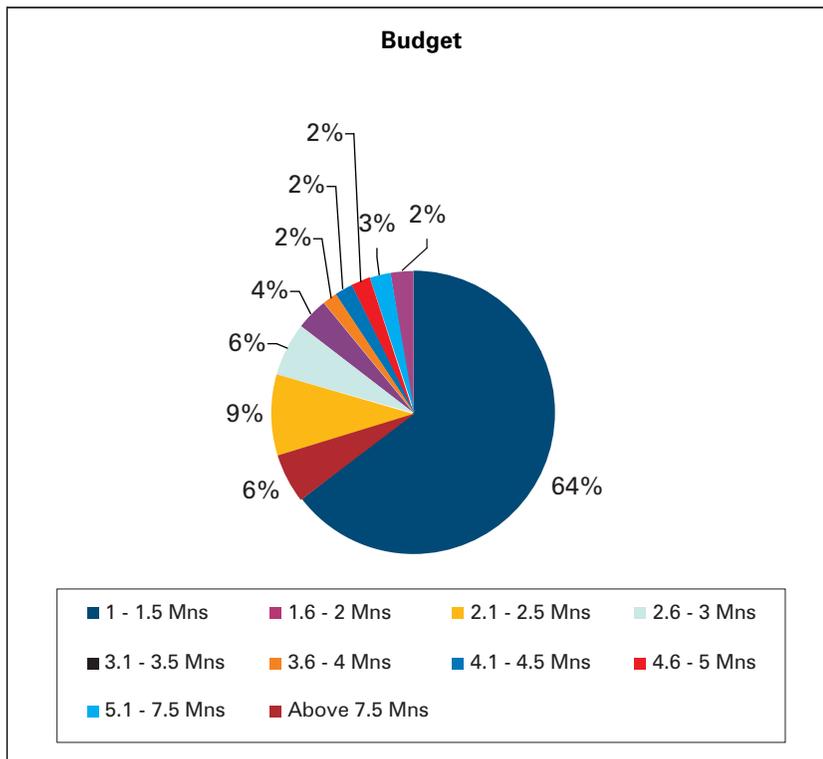


#### Budget:

- Over 66% of the home seekers interviewed were seeking homes upto Rs. 2 million; only 15% in the range of 2.1-3 million.
  - Only about 5% of the respondents had a budget over 5 million.
- Even metros need housing units in Rs. 1-1.5 million range (affordable housing) in mass scale to bridge the housing shortage in the country.

#### Unit Size:

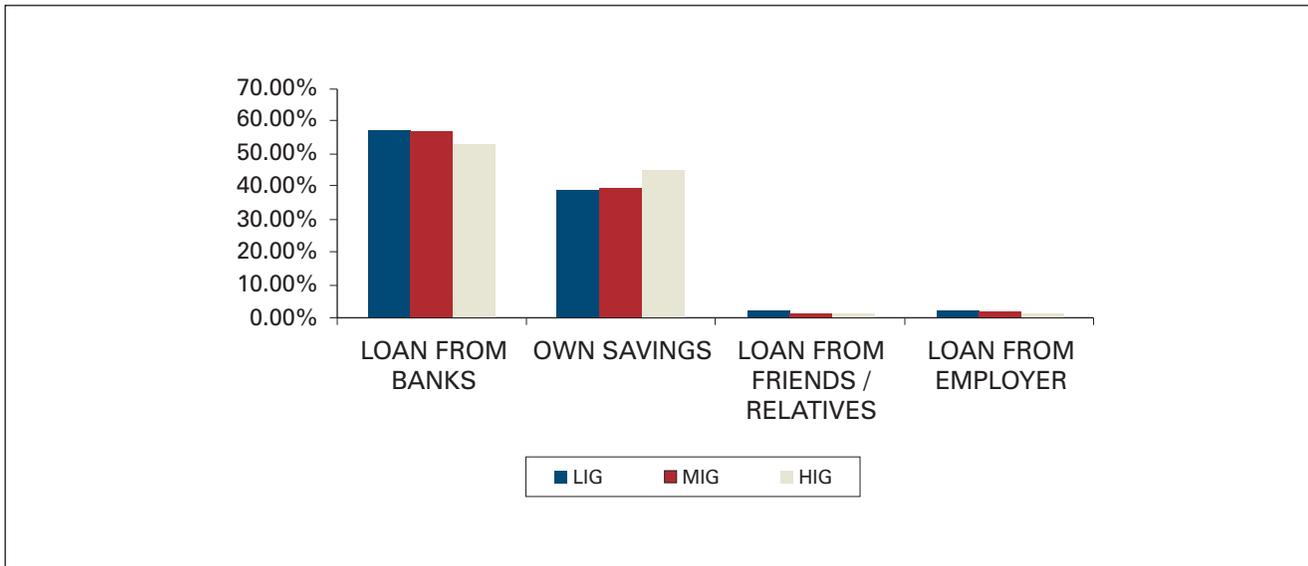
- Majority of the respondents intended to purchase 2 BHK apartments and the median floor area preferred was reported to be around 800 sq. ft.
- 38% preferred an apartment size of 500-750 sq. ft., 21% preferred 750-1000 sq. ft. range and 29% were aspiring for a unit size of 1000-1500 sq. ft.
- Basis empirical data, the median size of the flat required by an LIG segment has been reported to be 725 sq. ft., 750 sq. ft. for MIG and 1000 sq. ft. for HIG.
- Prima-facie, there seems to be more takers for a 2 BHK (45%) than 1 (36%)
  - The anomaly can be explained by the phenomenon of aspirational demand that might have crept in during the last quarter; those who could afford only a 1 BHK till about six months back, now have started aspiring to fit in a 2 BHK in a slightly stretched budget, taking advantage of both the softening of the interest rates as well as property rates.



- The budget break-up shows that for MIG, the flip over point, i.e. the point where the MIG budget line crosses over LIG is at Rs. 2 million. The flip over point for HIG over MIG is Rs. 3.5 million.
- The data seems to be suggesting that the budget for LIG is upto Rs. 2 million, ranges from Rs. 2 million to Rs. 3.5 million for MIG and above Rs. 3.5 million for HIG.

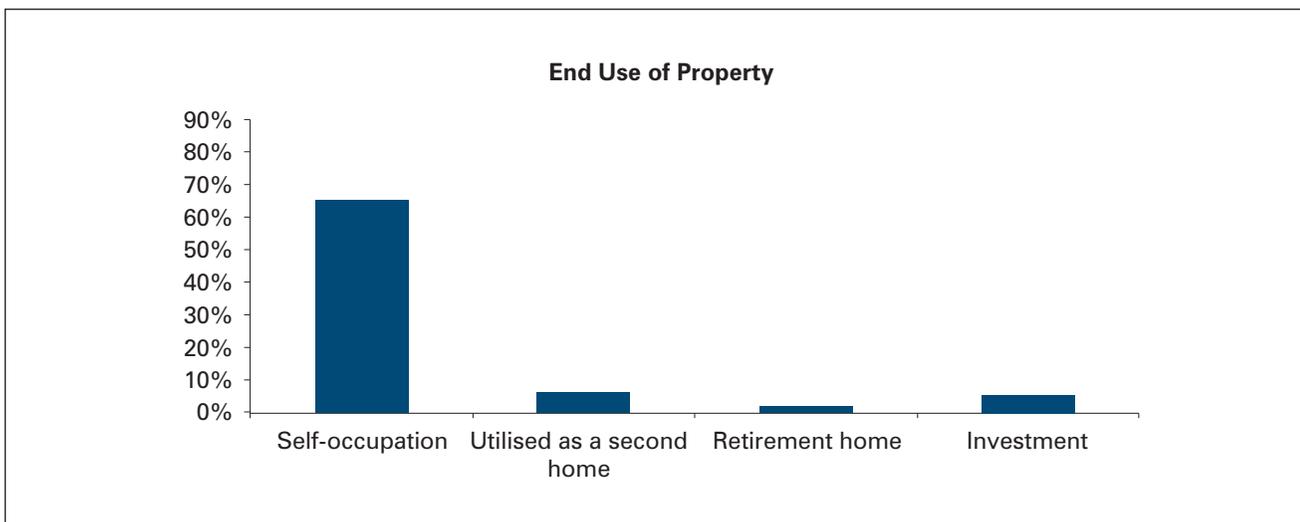
### Source of Funds:

- Loan seems to be the best source of funds for a home seeker with a Loan to value ratio (LTV) of around 85%, irrespective of income class.
- Banks are the preferred source of loans, however, since the banks don't fund 100% of the property value, own savings also has a good incidence.



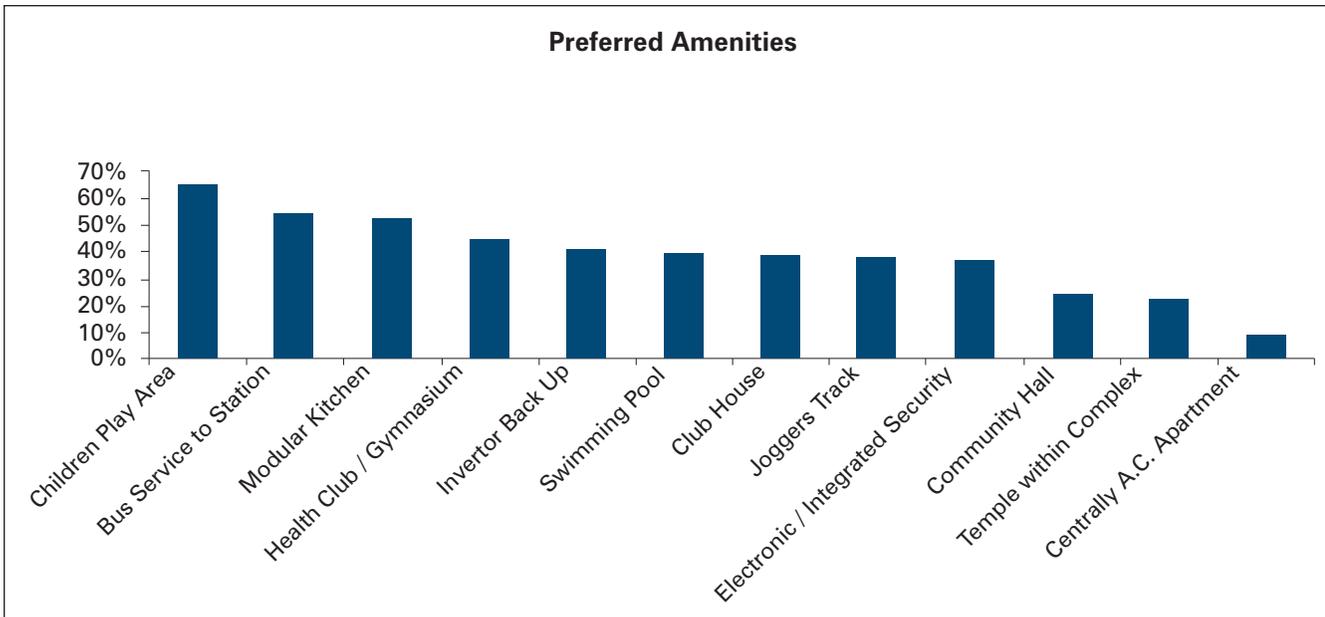
### End Use of New property:

- 83% of the visitors intended to purchase the new property for self-occupation while 8% of them were scouting for a second home.
- Only a 7% investor group now as compared to a sizeable chunk in the past seems to suggest that the investors are virtually in a shell.
- The above indicators only strengthen the hypothesis that a huge potent demand for self occupation still exists, and people are still willing to take the plunge provided property rates become affordable.

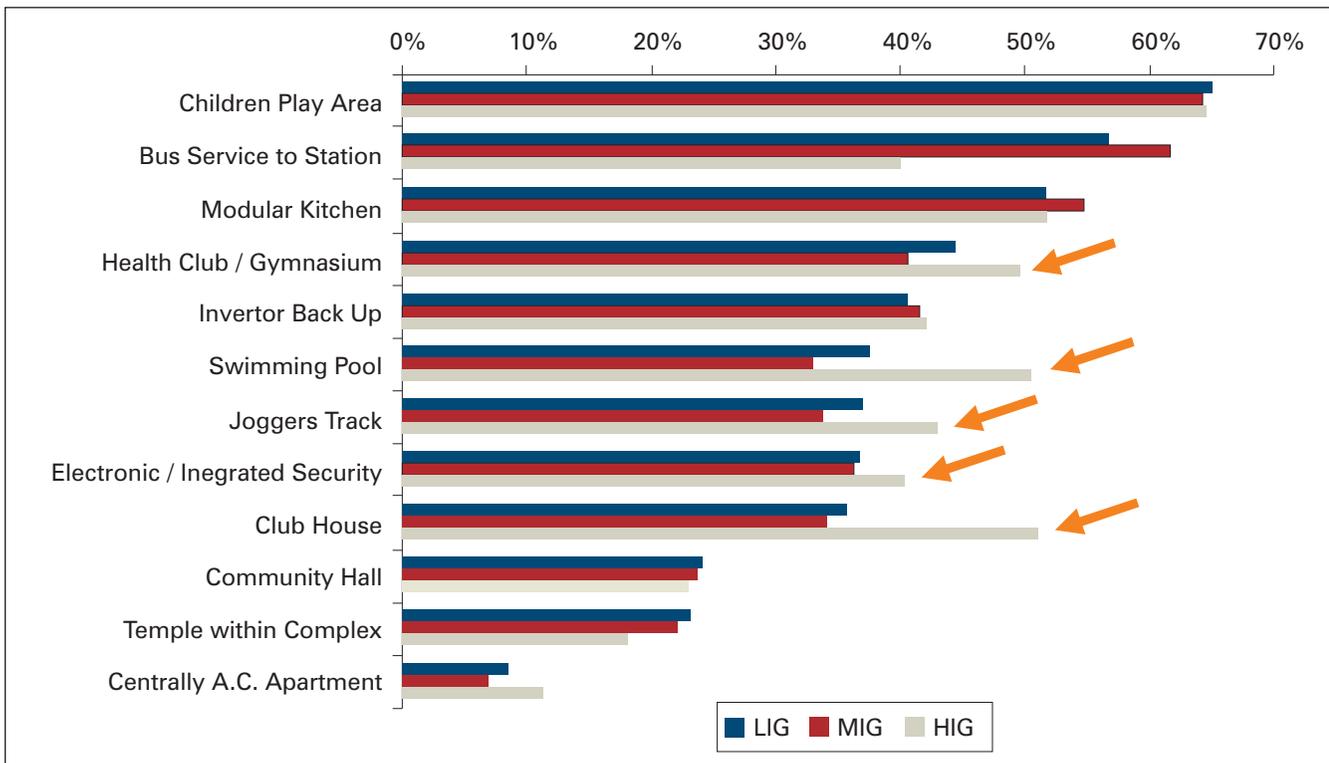


**Amenities:**

- Basic utilities like children's play area (65%) and bus service (54%) were the most preferred amenities.



- Amenities like swimming pools, club house, air-conditioned apartments which are generally associated with premium projects, didn't find much popularity amongst the respondents.
  - This suggests there is still huge demand for an affordable project, sans privileges like the swimming pool, club house, amphitheatre et al.
  - Functionality of a housing unit is paramount for the LIG & MIG while the HIG can afford some opulence, as reflected by the preference of amenities in the below graph.



### Affordability Factor:

From the survey data, reported average monthly income was determined as Rs. 15,000/- for the LIG, Rs. 37,500 for MIG and Rs. 90,000 for HIG. The median size of the flat required by an LIG segment was reported to be 725 sq. ft., 750 sq. ft. for MIG and 1000 sq. ft. for HIG.

	LIG	MIG	HIG
Avg. monthly income (in Rs.)*	15,000	37,500	90,000
Median preferred apartment size (in sq. ft.)*	725	750	1000

\*Source: Survey conducted by ICICI Property Services Group

Basis the average property rates of the various projects in the macro market in which the survey was conducted, we arrived at the average per sq. ft. prices for the projects targeting LIG / MIG / HIG consumers. This helped arrive at the estimated cost of the property if an individual were to make a purchase decision. The following table throws up the disparity between the affordability of the various income groups and what was on offer for them.

		LIG	MIG	HIG
Median Preferred Apartment Size (in sq. ft.)*		725	750	1000
Avg. Property rates prevailing in the market (in Rs. Per sq. ft.)*		3000	4000	5000
Capital Value of the properties based on the quoted preferred avg. appt. size (in Rs. millions)	A	2.18	3	5
Avg. monthly income (in Rs.)*		15000	37500	90000
Estimated Loan Eligibility (in Rs. millions)**		0.655	1.638	3.795
Estimated Cost of the Property (in Rs. millions)**	B	0.745	1.86	3.972
Stretch Budget	(A-B)	1.356	0.952	0.256

\*Source: Survey conducted by ICICI Property Services Group

\*\*Loan Tenure: 20 years & LTV: 80%

It is evident from the above chart that a huge gap exists between the demand and the supply available in the market. The stretch budget clearly indicates a massive mismatch between the prevailing property rates and the affordability to buy a house.

Among the LIG segment, owing to the phenomenon of aspirational demand, as against a realistic area of 425 sq. ft., this segment has exhibited an aspiration of buying a 725 sq. ft. unit instead. Correcting the aspired unit size and taking into account an individual's loan eligibility, the table below showcases the derived rates at which properties need to be made available to the respective consumer segments.

		LIG	MIG	HIG
Avg. monthly income (in Rs.)*		15000	37500	90000
Estimated Loan Eligibility (in Rs. millions)**		0.655	1.638	3.795
Estimated Cost of the Property (in Rs. millions)**	A	0.819	2.048	4.744
Realistic Apartment Size	B	425	750	1000
Estimated Realistic Property Rates (in Rs per sq. ft.)	A/B	1927	2730	4744

\*Source: Survey conducted by ICICI Property Services Group

\*\*Loan Tenure: 20 years & LTV: 80%

Thus, in lines with the discussions of Chapter 2, the affordability to buy a housing unit of a household earning Rs. 15,000 per month is Rs. 0.819 millions. A developer should ideally provide a unit admeasuring at least 425 sq. ft. at this price. Depending on the economic feasibility of the project, the area of the unit can also go up from 425 sq. ft. to say for example, for e.g., 550 sq. ft., however the unit selling price per sq. ft. will then come down to Rs. 1489 per sq. ft. from Rs. 1927 per sq. ft.

Majority of the projects which are ready for possession today are luxury projects with amenities like a swimming pool, club house, gymnasium, Italian tiles etc, thereby increasing the cost of the project. Besides, very few projects are coming up in the outskirts of the city; those that are seemed to be charging a premium for being in short supply. There are only a handful of projects which have been developed in the outskirts truly keeping in mind the requirement of the LIG and MIG segments of the society.

All the above factors collectively only seem to point towards the fact that

majority of the demand for housing in the country is for units which are available at affordable rates. The consumer wants a unit with basic amenities like children's play area and bus service to the station. He is happy staying in the suburbs or the outskirts provided they are well connected to the commercially developed areas of the city. There is thus a strong need to make such affordable housing projects readily available to the public at affordable prices. It will help reduce the housing shortage in the country to a very large extent. In the longer run, it may only help decongest over grown cities whereby improving living conditions & standards.

**Space and light and order,  
Those are the things that men need.  
Just as much as they need  
Bread or a place to sleep.**

~ Le Corbusier

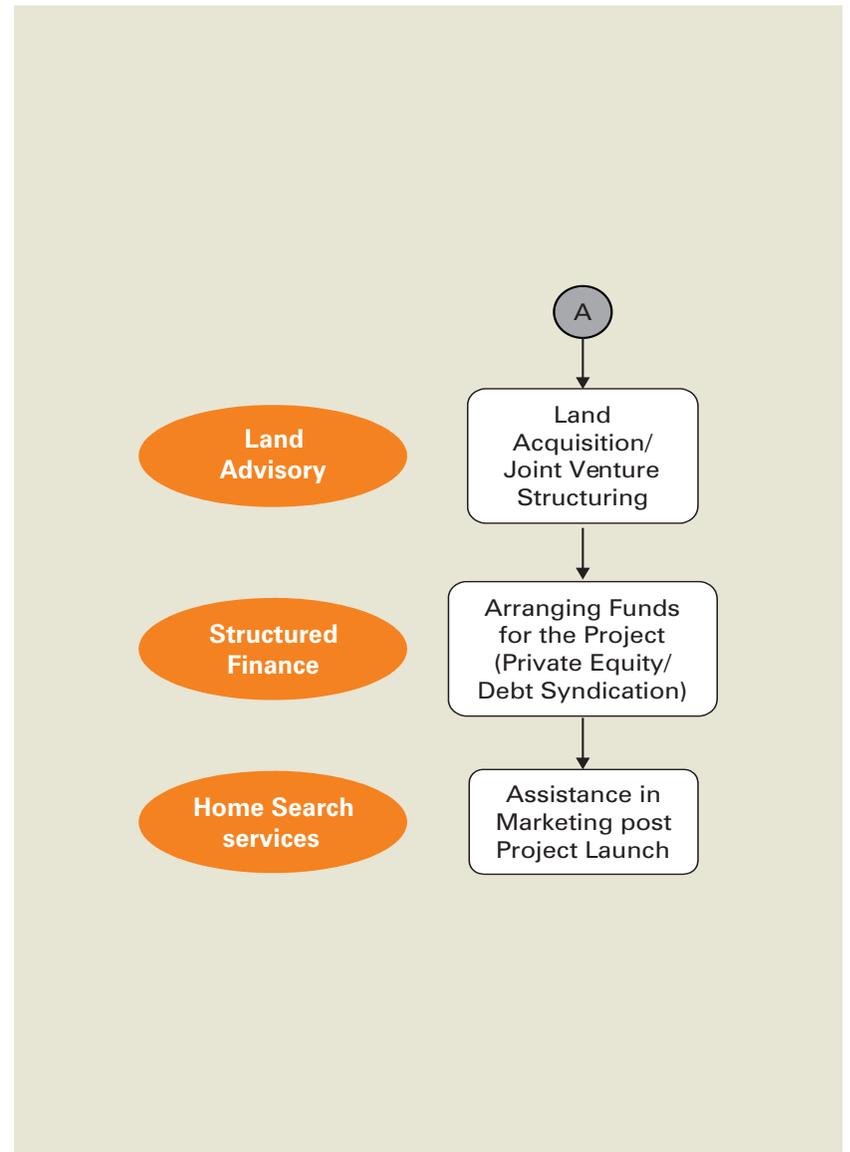
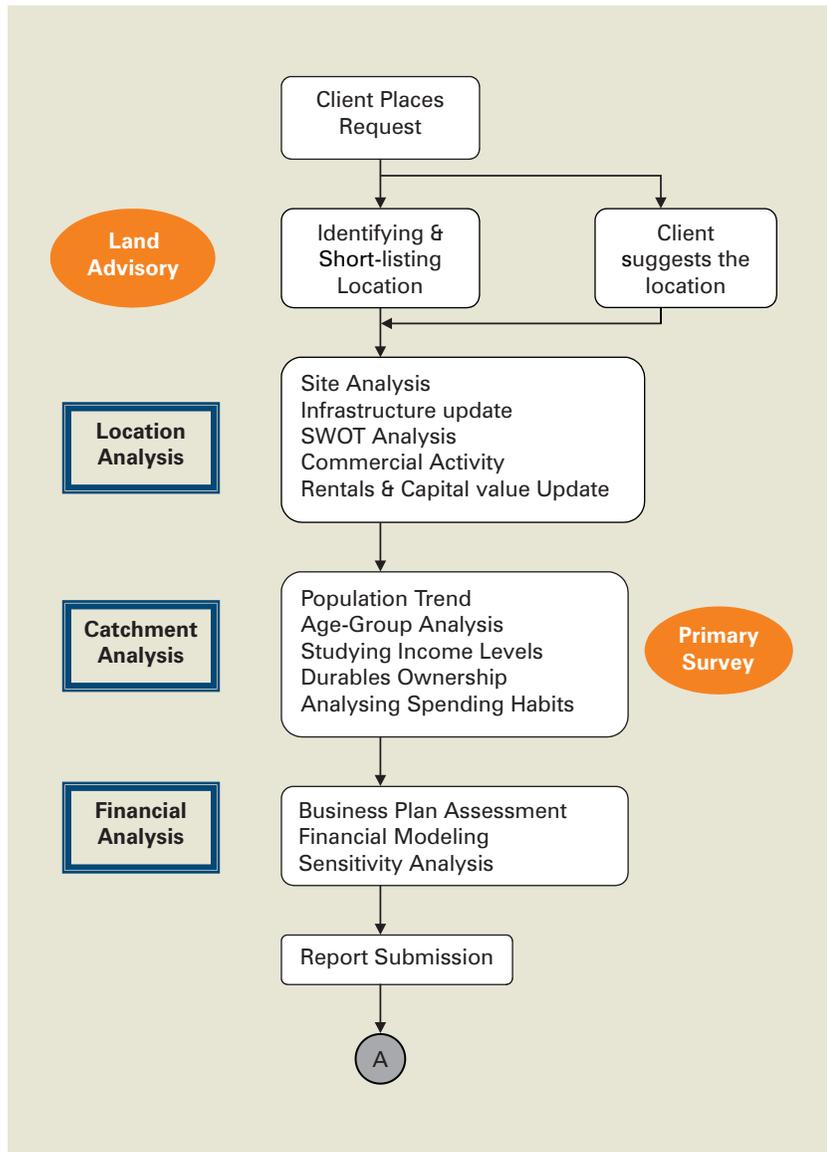
## About Research & Consultancy

ICICI Property Services is a division of ICICI Home Finance Company Limited, a 100% subsidiary of ICICI Bank. ICICI PSG provides real estate solutions to home seekers, corporate investors, space occupiers and developers /landlords. ICICI Property Services addresses the entire bandwidth of a real

estate deal from concept to conclusion. Research & Consultancy (R&C), a specialised group within ICICI PSG, offers both real estate advisory and consumer demographic analysis backed by both primary & secondary research. The following chart explains in brief the various services offered by R&C.

Feasibility Studies	Asset Advisory	Strategic Advisory	Market Research
<ul style="list-style-type: none"> <li>• Location Analysis</li> <li>• Market Analysis</li> <li>• Size, Pricing, Phasing and Positioning (Space Programming &amp; Demarcation for optimum Utilisation of space)</li> <li>• Financial Analysis</li> </ul>	<ul style="list-style-type: none"> <li>• Optimum Land Use Analysis</li> <li>• Site Analysis &amp; SWOT</li> <li>• Catchment Analysis</li> <li>• Trade &amp; Tenant Mix</li> <li>• Land Valuation</li> </ul>	<ul style="list-style-type: none"> <li>• Entry Strategy</li> <li>• Pricing Strategy</li> <li>• City and Region Prioritisation and Expansion Strategy</li> </ul>	<ul style="list-style-type: none"> <li>• Supply Estimation</li> <li>• Demand Projections</li> <li>• Expected Absorption Trends</li> <li>• Demographic Analysis</li> <li>• Consumer Trends</li> <li>• Consumer Behaviour Analysis</li> </ul>

BELOW FLOWCHART DEPICTS THE PRODUCT OFFERING FROM ICICI PROPERTY SERVICES SPECIFIC TO AFFORDABLE HOUSING PROJECT





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