

URBAN LAND PRICE BUBBLE

- by A.M.Godbole

".... when you cannot express it in numbers, your knowledge is of a meager and unsatisfactory kind: it may be the beginning of knowledge, but you have scarcely, in your thoughts, advanced to the stage of science, whatever the *matter* may be.".....Lord Kelvin, Electrical Units of Measurement, 1883.

In this essay the '*matter*' is the demand for housing at affordable prices. Isn't 'affordable' a subjective term? Consider the following test for affordability: if someone gets a full time job in an urban location then housing (non-slum) should be affordable to that person if he/she wants to take up that job. Thus, someone with prior access to housing should not be able to out-price the competition in the labour market simply because his/her housing is at lower historical cost(on ownership or rental)! In urban India, those with access to housing have an overwhelming advantage over those do not have access to housing. This is the case because of the exorbitant ownership costs and rental rates in urban India.

The demand for urban housing can potentially be many times the population of major metropolises. Addressing this demand is at the heart of inclusive growth.

I argue that small incremental solutions will fuel the land price bubble in urban India leaving the affordability criteria unaddressed. And not addressing the affordability criteria renders incremental solutions meaningless for most people.

The rest of this essay is organized in four sections.

In SECTION I we consider whether a land price bubble exists? In this section, the author infers that a land price bubble indeed exists and that this bubble is feeding the APARTMENT price bubble. The author also notes that a supply side intervention in housing can only manage to slow the growth of the land price bubble.

In SECTION II we try to quantify the demand for affordable housing and try to get a sense of the size of the required supply side intervention. The investment required for building the apartments is computed. Such an intervention will only manage to slow the growth in the land price bubble.

In SECTION III an attempt to co-opt the supply side intervention in housing (of Section II) with the proposed Delhi Mumbai Industrial Corridor is made. This becomes necessary as it may not be possible to realize a large supply side intervention in existing cities alone. In this section a solution for bursting the land price bubble is also proposed—in order to address the affordability criteria.

In SECTION IV the fall-out of a urban land price crash is discussed. I infer that the benefits are much larger than the loss that would be incurred by land price speculators—who assumed land prices to be a perpetual one-way bet.

I. Is it a land price bubble?

Many solutions for easing the acute shortage of housing in Mumbai and some other urban areas, have focused on a low Floor Space Index or FSI(currently 1.3 in Mumbai, it was reduced to this low number in an attempt to decongest the city!) and non-development or under-development of land- including those currently occupied by slums. The FSI(also called Floor Space Ratio or FSR) is the ratio of floor area to the area of the land on which the building is constructed. In this essay I argue that any solution which does not radically change the Supply<<Demand (Supply much lesser than Demand) situation would hardly be a desirable solution.

Consider three scenarios: '*Scenario Old*', '*Scenario New-A*' and '*Scenario New- B*'. In *Scenario New-A* there is no material change in the Supply<<Demand situation in comparison to *Scenario Old*. i.e. *Scenario New-A* is a simple incremental 'improvement' over *Scenario Old* wherein the shortage of housing has only marginally reduced. *Scenario New-B* incorporates a major supply side intervention resulting in a genuine inventory of housing.

Scenario Old (FSI:1.3 and Supply<<Demand)

Let the price of a certain representative land+building be Rs1bln.

This building has 10 apartments, which utilizes the FSI fully.

Now, if 90% of the value of the land+building is in the land while the remaining 10% of the value is in the building then the standalone value of each apartment is Rs10mln while the price of the land is Rs900mln. (While reliable data is hard to come by, anecdotal information suggests that often the value of the land is more than 90% of the value of the land+building. An assumption of 90% seems reasonable to the author. However the essence of analysis and the proposed solution would remain unaltered even if the figure is somewhat lower.)

The price of each APARTMENT(not standalone i.e. value of apartment and apportioned price of land) would be Rs100mln.

Scenario New-A (FSI:13 and Supply<<Demand):

FSI is increased to 13 and additional vacant land is released into the market. This ten-fold increase in FSI means that 100 apartments can be built on a land similar to the representative land. Hence, the seller of a vacant land which is of the same size as the representative land would now quote a price using the following equation

Price of land

=Number of apartments*Price of each APARTMENT(not standalone)-Number of apartment(standalone)*Value of each standalone apartment

viz $100 \times \text{Rs}100\text{mln} - 100 \times \text{Rs}10\text{mln}$
= Rs9bln

Thus, the price of the land has escalated from Rs900mln to Rs9bln. So there is a ten-fold increase in price of land for a ten-fold increase in FSI assuming that the price of each apartment is stable(i.e. there is no material change in the Supply<<Demand situation in the housing market. The assumption that the price of each apartment is stable is rather conservative considering that the pricing power in a scarcity market is almost entirely with the seller. In fact in general, when both the buyer and seller are conditioned to think that the prices can go only upward(considering the predominant trend for more than half a century) the price will go up even if the demand and supply situation is unchanged!

Scenario New-B (FSI=13 and Supply>Demand):

FSI is increased to 13, additional vacant land is also released and more importantly massive housing construction is undertaken such that *Supply now exceeds Demand significantly*(say by 20% i.e. there is a genuine inventory of 20%).

Now the price of each APARTMENT would crash in comparison to *Scenario Old*.....say by 80%. Thus, each APARTMENT(not standalone) would now be at a price of Rs20mln.

The price of land would now be

$100 \times \text{Rs}20\text{mln} - 100 \times \text{Rs}10\text{mln}$
=Rs1bln

Thus the price of the land has dropped from Rs9bln in the *Scenario New-A* to Rs1bln in *Scenario New-B*. In comparison to *Scenario Old* the price of land has increased from Rs900mln to Rs1bln i.e. an increase of 11.1% for a assumed 80% drop in the price of an apartment.

The value of the standalone building is the same in *Scenario New-A* and *Scenario New-B*. Thus, profitability of the builder is not adversely affected for the main economic value addition undertaken by him/her i.e. in constructing the building. The value of the building is now 50% of the price of land+building!

There seems to be a big land price bubble in India which is responsible for feeding the APARTMENT(not standalone) price bubble.

II. What the demand really means and what is the order of investment required?

At what point is the Supply significantly greater than Demand? In order to appreciate the required increase in supply in the housing market - I attempt to understand the numbers involved.

For an additional 100 million people desirous of living an urban life; 100,000 new buildings of 25 floors each with 10 apartments on each floor (assuming 4 persons occupy one apartment) would be required. In a country of more than 1080 million people surely this number may not be improbable! The main hurdle in addressing such a demand is the absence of large housing construction firms which can dramatically increase the supply in the housing market of urban India. Housing construction is literally a small-scale or 'cottage industry' in India (and even in many developed countries, where supply already exceeds demand and manifests itself in the form of large housing inventories- *and hence a qualitatively different case*). Most builders may build a very few buildings in their entire career and this is a part of the problem. At Rs1,000 per sq ft (*viz* an indicative rate given in 'A profile of escalating construction costs', The Hindu, 16th June 2007) these 100,000 buildings with an average apartment size of 1,000 sq.ft. would require an investment of the order of Rs25trillion (approximately US\$600bln)- approximately 60% of the GDP of India.

III. Solving the housing problem by extending the Government of India's ambitious industrial corridor project between Mumbai and New Delhi (the corridor is to be built by Japanese Government's assistance)

The proposed Industrial corridor from Mumbai to New Delhi (to be built with assistance from the Japanese Government) presents a unique opportunity for providing urban housing in meeting the latent demand all over the country. The concept paper on development of Delhi Mumbai Industrial corridor says that the Project Influence Area (PIA) constitutes 178mln people and 13.8% of the geographical area of India. It also recognizes the importance of residential infrastructure in creating the required investment climate. The required availability of good quality power and water along with building of schools, colleges, vocational and technical institutes is also mentioned. In addition to the end terminals the proposed corridor will have nine junction stations for exchange of traffic between existing railway system and Dedicated Freight Corridor (along which the industrial corridor would be aligned with). The implementation of identified nodes is expected to be completed by December 2016. These nodes are named in the concept paper as Vasai Road, Gothangam, Makarpura, Amla Road, Palanpur, Marwar Junction, Phulera, Rewari and Pirthala. The end terminals are at J.N.Port in Navi Mumbai and Tughlakabad and Dadri National Capital Region(NCR) of Delhi.

These twelve nodes could form the new nuclei of urban India.

The Japanese Government explicitly conveyed to the Indian Government that investors view: *“avoidance of speculative behaviors on land within the ‘Project Influence Area (PIA)’ of project”* as one of the *“keys to success of the DMIC project”*. Let us take the forewarning on land price speculation within the PIA, given by our Japanese friends very seriously.

Government of India’s clarification that ‘The investment regions / industrial areas identified are brownfield, meaning thereby that most of the ownership of land is already with state infrastructure agencies. Keeping in view, the size of the project influence area at 436,486 sq. kms. such speculations may not be practically possible. Here it will not be out of place to mention that the DMIC Project influence area is 20% more than the total land area of Japan i.e.377, 835 kms.’ could turn out to be incorrect if we have not correctly estimated the demand for housing in this corridor.

India needs to correctly estimate the demand from migrants to urban centres in the corridor from both within and outside the corridor.

A supply side intervention in apartments will only slow down the growth in land prices. We need to burst the land price bubble. And this would further bring down the selling price of apartments. Leasing Government owned land cheaply(i.e. piercing the land price bubble) to those who meet time-bound targets in terms of number of apartments built(while utilizing a much higher FSI) and monetary penalties for those who do not, will help avoid a land price bubble in the future. Investment in such large scale housing projects would require foreign capital in addition to growing cutting-edge project management expertise.

IV. Who will lose from a land price crash?

Speculators who assumed that betting on land prices is a one-way bet will make huge one-time losses. Surely, we must care more for those without housing rather than speculators in land prices. While lenders could see some increase in willful defaulters (those borrowers whose ability to repay is unchanged, but who are simply dishonest), and also lower realization of collateral in the case of other defaulters ; the opportunity of lending to a much larger number of customers would dwarf the small default problem.

If India under-estimates the demand for urban housing and does not act proactively to ensure adequate supply of houses at affordable prices, she will deny those of her citizens who desire an equal opportunity to participate in, and enjoy the benefits of arguably the biggest endeavor in industrialization since her independence !

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Note: The 'Delhi Mumbai Industrial Corridor Concept Report' is available at the website of Department of Industrial Policy and Promotion, Government of India at http://dipp.nic.in/japan/japan_cell/DMIC_Concept_Report_10Aug2007.pdf.