Urbanization and the Housing Market in China

Li Gan
Texas A&M University and Southwestern University of Finance and Economics
Nov 6, 2014
China Household Finance Survey (CHFS)

The mystery of the vacancy rate

The mystery of urbanization

Trend in China’s housing market

Effect of new housing policies in 2014
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Effect of new housing policies in 2014
Coverage of CHFS
China Household Finance Survey

- Biannual survey: more than 28,000 households and 97,000 individuals, in 262 counties, 29 provinces in the country. The sample is representative at both the national level and at the provincial level.

- Quarterly survey: randomly drawn about 5,000 households from the sample. Nationally representative.
China Household Finance Survey (CHFS)

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Effect of new housing policies in 2014
High and rapid growing home ownership rates

- Aug.2011: 84.8% Urban, 87.0% Rural
- Aug.2013: 96.0% Urban, 87.0% Rural
- Aug.2014: 95.8% Urban, 89.0% Rural

Urban: dark blue
Rural: light blue
Urban home ownership rate much higher than in OECD countries

Data Sources: Germany, France, UK; 2012 Eurostat; South Korea: 2005 Statistics Korea; USA: 2013 Survey of Consumer Finance; Japan: 2008 Statistics Bureau of Japan; China Urban Area: 2013 CHFS.
Differ mostly at young households
Rapid increase of multiple-house families

- Aug. 2011: 15.9%
- Aug. 2013: 18.6%
- Mar. 2014: 21.0%
Definition of Vacant Housing

- Uninhabited family-owned but not occupied housing in urban areas, including:
  - The only apartment owned by a family living in a different city.
  - Apartments owned by multiple-house families are not occupied by either renters or owners.
22.4% vacancy rate in 2013, or 49 million vacant units
Comparing with other countries or regions

<table>
<thead>
<tr>
<th>Region</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hong Kong 2010</td>
<td>4.7%</td>
</tr>
<tr>
<td>European Union 2014</td>
<td>9.5%</td>
</tr>
<tr>
<td>Japan 2008</td>
<td>13.1%</td>
</tr>
<tr>
<td>Taiwan 2001</td>
<td>17.6%</td>
</tr>
<tr>
<td>China 2013</td>
<td>22.4%</td>
</tr>
</tbody>
</table>

Data source: Hong Kong, 2010 Hong Kong Property Review; Japan, Japanese Statistics Bureau; Taiwan, Taiwanese Housing Census; China: 2013 China Household Finance Survey (CHFS)
Vacancy rates by regions in 2013

<table>
<thead>
<tr>
<th>Region</th>
<th>Come from one house family</th>
<th>Come from two more houses family</th>
</tr>
</thead>
<tbody>
<tr>
<td>East</td>
<td>4.5%</td>
<td>17.7%</td>
</tr>
<tr>
<td>Middle</td>
<td>5.5%</td>
<td>17.0%</td>
</tr>
<tr>
<td>West</td>
<td>5.9%</td>
<td>16.9%</td>
</tr>
</tbody>
</table>
Vacancy rate by city tiers

- **First-tier cities**
  - Family owns one house: 3.0%
  - Family owns two or more houses: 18.2%

- **Second-tier cities**
  - Family owns one house: 5.4%
  - Family owns two or more houses: 16.4%

- **Third-tier cities**
  - Family owns one house: 5.5%
  - Family owns two or more houses: 17.7%
Vacancy rates by six different cities

Chongqing: 25.6% (4.2% Family owns one house, 21.4% Family owns two or more houses)

Chengdu: 24.7% (9.2% Family owns one house, 15.5% Family owns two or more houses)

Wuhan: 23.5% (5.2% Family owns one house, 18.3% Family owns two or more houses)

Tianjin: 22.5% (5.1% Family owns one house, 17.4% Family owns two or more houses)

Beijing: 19.5% (2.9% Family owns one house, 16.6% Family owns two or more houses)

Shanghai: 18.5% (2.3% Family owns one house, 16.2% Family owns two or more houses)
Commercial and affordable housing have higher vacancy rates

<table>
<thead>
<tr>
<th>Inventory Accounting</th>
<th>Commercial house</th>
<th>Affordable house</th>
<th>Demolition house</th>
<th>Get from housing reform</th>
<th>House built by individual funds</th>
<th>Others</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>26.3%</td>
<td>23.3%</td>
<td>18.2%</td>
<td>13.5%</td>
<td>9.5%</td>
<td>18.4%</td>
</tr>
</tbody>
</table>

Note: Others include “self-built” housing, inherited housing or housing gifted from others in urban areas.
Commercial housing: first-tier cities have a lower vacancy rate
## Why households own vacant housing

<table>
<thead>
<tr>
<th>Factors related to vacant housing</th>
<th>Marginal effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>If income doubled</td>
<td>+ 0.6 percentage points</td>
</tr>
<tr>
<td>Head one more year of education</td>
<td>+ 0.6 percentage points</td>
</tr>
<tr>
<td>With unmarried young men</td>
<td>+ 2.2 percentage points</td>
</tr>
<tr>
<td>Own businesses</td>
<td>+ 11.2 percentage points</td>
</tr>
<tr>
<td>High risk-taking altitude</td>
<td>+ 5.3 percentage points</td>
</tr>
<tr>
<td>House price rental ratio doubles</td>
<td>+ 6.1 percentage points</td>
</tr>
<tr>
<td>First house yields a double return</td>
<td>+ 0.2 percentage points</td>
</tr>
<tr>
<td>Urbanization rate increases by 10 percentage points</td>
<td>- 2.6 percentage points</td>
</tr>
</tbody>
</table>
A pressure test reveals a substantial risk for China’s housing market

A comparison of the loss ratio of vacant and non-vacant housing in accordance with different levels of falling housing prices

Note: The graph refers to a comparison of housing prices that are lower than their purchasing prices.
The mystery of the housing vacancy

- According to CHFS
  - The nationwide housing vacancy rate is 22.4%, or about 49 million units.
  - Vacancy rate for commercial housing is 26.3%, or about 27 million units.
  - Vacancy rate for social welfare housing is 23.3%, or about 2 million units.
The mystery of the vacancy rate

- Most developers/government officials/researchers may disagree:
  - Between 2000 and 2010, about 70 million additional families in the city.
  - From 2000 to 2013: net increase 70 million units of housing

<table>
<thead>
<tr>
<th>Completed new construction</th>
<th>10.4 billion sq meters</th>
</tr>
</thead>
<tbody>
<tr>
<td>Demolition and reallocation</td>
<td>3 billion sq meters</td>
</tr>
<tr>
<td>Net increase</td>
<td>7.4 billion square meters</td>
</tr>
</tbody>
</table>

- The aggregate housing demand/supply in urban China are roughly balanced.
- Where to find 50 million vacant units?
China Household Finance Survey (CHFS)

The mystery of the vacancy rate

The mystery of urbanization

Trend in China’s housing market

Effect of new housing policies in 2014
Mystery of urbanization

- Most researchers would equalize urbanization as migrants who leave their rural homes to go to urban to work and to live, or “Relocating Migrants”.

- Urbanization also includes reclassification.
  - If a rural area is reclassified as urban, residents living in the area becomes urban residents. They are migrants by reclassification, or “Redefined Migrants”.

- NBS publishes classification codes for each of the all 700,000 neighborhoods in China from 2009 to 2013. During this period, 3.8% of neighborhoods are reclassified as urban neighborhoods.
Between 2009 and 2013, the proportion of urban neighborhoods has increased from 25.67% to 29.48%
Neighborhood Reclassification 2009-2013

Most increases occur at two-village connection areas. City-village connection also have some increases.

<table>
<thead>
<tr>
<th>Location</th>
<th>2009</th>
<th>2013</th>
</tr>
</thead>
<tbody>
<tr>
<td>City center</td>
<td>8.33%</td>
<td>8.69%</td>
</tr>
<tr>
<td>City-village Connection</td>
<td>2.85%</td>
<td>3.84%</td>
</tr>
<tr>
<td>Town Center</td>
<td>6.64%</td>
<td>6.29%</td>
</tr>
<tr>
<td>Town-village Connection</td>
<td>6.92%</td>
<td>9.84%</td>
</tr>
<tr>
<td>Special Zone</td>
<td>0.93%</td>
<td>0.81%</td>
</tr>
<tr>
<td>Village center</td>
<td>3.32%</td>
<td>2.97%</td>
</tr>
<tr>
<td>Village</td>
<td>71.01%</td>
<td>67.55%</td>
</tr>
</tbody>
</table>

Urban vs. Rural
Recently reclassified urban areas are more like rural.

<table>
<thead>
<tr>
<th></th>
<th>Percentage own agricultural land</th>
<th>Percentage in agricultural work</th>
<th>Percentage with rural Hukou</th>
</tr>
</thead>
<tbody>
<tr>
<td>Urban before 2009</td>
<td>23.1%</td>
<td>10.5%</td>
<td>38.8%</td>
</tr>
<tr>
<td>Rural to Urban in 2009-2013</td>
<td>75.0%</td>
<td>53.0%</td>
<td>89.9%</td>
</tr>
<tr>
<td>Rural at 2013</td>
<td>78.5%</td>
<td>57.5%</td>
<td>96.4%</td>
</tr>
</tbody>
</table>

90% of the local officials of the neighborhoods reclassified to urban in 2009 – 2013 still believe themselves to be rural.
More Redefined Migrants than Relocating Migrants

Urban residents
- Urban Hukou
- Redefined Migrants
  - Newly Urban
  - Housing demolition and land requisition: 20.9%
  - Housing purchase, schooling, and employment: 6.0%
- Relocating Migrants
  - Housing purchase, schooling, and employment: 14.3%
  - 11%

Rural residents
- Rural Hukou
- Urban Hukou
- Relocating Migrants
  - Housing purchase, schooling, and employment: 41.9%
  - 3.3%

Data Source: CHFS
Redefined migrants’ housing are similar to urban *hukou*

<table>
<thead>
<tr>
<th></th>
<th>% No house</th>
<th>% One house</th>
<th>% Multiple houses</th>
<th>% Rent</th>
<th>Average square meters</th>
</tr>
</thead>
<tbody>
<tr>
<td>Urban <em>Hukou</em></td>
<td>18.1%</td>
<td>67.5%</td>
<td>14.4%</td>
<td>14.6%</td>
<td>25.4</td>
</tr>
<tr>
<td>Redefined migrants</td>
<td>10.2%</td>
<td>75.0%</td>
<td>14.9%</td>
<td>7.1%</td>
<td>35.8</td>
</tr>
<tr>
<td>Relocating migrants</td>
<td>45.1%</td>
<td>45.8%</td>
<td>9.2%</td>
<td>47.4%</td>
<td>22.2</td>
</tr>
<tr>
<td>Rural</td>
<td>6.5%</td>
<td>81.9%</td>
<td>11.6%</td>
<td>7.1%</td>
<td>37.3</td>
</tr>
</tbody>
</table>

Every redefined migrant family brought 0.70 unit of self-built house into the urban areas. As a whole, they brought in **38 million self-built houses** into the urban areas.
Redefined migrants’ housing environment are different to urban *hukou*

![Tidiness of the road graph](image)

- Redefined Migrants mean: 5.24
- Urban hukou mean: 5.88
- t = 20.2
Redefined migrants’ housing environment are different to urban *hukou*

**Tidiness of the architectural pattern**

Redefined migrants mean: 5.26  
Urban hukou mean: 5.86  
*t* statistic: 18.67
Redefined migrants’ housing environment are different to urban *hukou*

![Graph showing crowdedness of housing environment for redefined migrants and urban hukou](image)

- **Redefined Migrants mean:** 5.47
- **Urban hukou mean:** 5.61
- **t statistic:** 5.16
Redefined migrants’ housing environment are different to urban *hukou*

**Landscaping**

Redefined Migrants mean: 5.43  
Urban hukou mean: 5.39  
t statistic: -1.55
Redefined migrants’ housing condition are different from the urban *hukou*

![Type of housing construction chart](chart.png)
## Redefined migrants has less housing demand

<table>
<thead>
<tr>
<th>Variables</th>
<th>Overall demand</th>
<th>Rigid demand</th>
<th>Upgrading demand</th>
</tr>
</thead>
<tbody>
<tr>
<td>Redefined migrants (in percentage points)</td>
<td>-10.7</td>
<td>-8.1</td>
<td>No difference</td>
</tr>
<tr>
<td>Relocating migrants (in percentage points)</td>
<td>-7.6</td>
<td>No difference</td>
<td>-4.7</td>
</tr>
</tbody>
</table>
Redefined migrants has less housing demand than urban hukou

Plan to buy or build houses in the next five years

- Redefined migrants: 19.1%
- Relocating migrants: 35.0%
- Urban hukou: 22.3%
Vacancy rates and Redefined Migrants

Vacancy Rates

Proportion of Redefined Migrants
Summary

- There are more **Redefined Migrants** than **Relocating Migrants**.

- Treating these two types of migrants the same lead to a substantial overestimate of housing demand.

- Misunderstanding urbanization is likely a cause of 38 million overbuilt units of commercial housing in China.
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Effect of new housing policies in 2014
Average expectation on housing price is going down, from positive to neutral at 100.6

Multiple-house families and plan-to-buy families, however, start to have negative expectation in the third quarter.
Average expectation on stock price turn to positive at third quarter.

Multiple-house families are substantially more positive than the rest.
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Effect of new housing policies in 2014
New housing policies in 2014

Round 1
• Since April, the local governments started to abolish the purchasing restriction.

Round 2
• At the end of September, new mortgage policies started.

Round 3
• On October 9th, new housing accumulation fund policies was announced.
The overall effect of abolishing the purchasing restriction is not obvious

- Compared with cities without housing purchasing restriction, the housing purchasing ratio didn’t go up after abolishing the purchasing restriction.

- Compared with cities without housing purchasing restriction, the housing purchasing ratio of the homeowners didn’t go up after abolishing the purchasing restriction.
After the housing purchasing restriction was abolished, the structure of the home buyers becomes different. The ratio of homeowners in home buyer goes up.

<table>
<thead>
<tr>
<th></th>
<th>2013.09-2014.03</th>
<th>2014.04-2014.09</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cities with housing purchasing restrictions</td>
<td>75.0%</td>
<td>82.9%</td>
</tr>
<tr>
<td>Cities without housing purchasing restrictions</td>
<td>86.9%</td>
<td>74.9%</td>
</tr>
</tbody>
</table>
Effect of the New Mortgage Policy: may encourage 5.5 million units of demand

<table>
<thead>
<tr>
<th>Total</th>
<th>5.5 million</th>
</tr>
</thead>
<tbody>
<tr>
<td>First-tier cities</td>
<td>0.5 million</td>
</tr>
<tr>
<td>Second-tier cities</td>
<td>2.0 million</td>
</tr>
<tr>
<td>Third-tier or below cities</td>
<td>3.0 million</td>
</tr>
</tbody>
</table>

- 68.9% of urban households own only one apartments. Among which, 19.7% have no mortgages and plan to buy another house in next five years.
  - If 60% down payment, 57.8% can afford.
  - If 30% down payment, 76.3% can afford.
  - The difference is the effect of the mortgage policy, assuming the same market expectation.
New policy of housing accumulation fund

Employee with housing accumulation funds deposited in a continuous 6 months or more, can apply for Housing accumulation fund loan.

The housing accumulation fund deposit can be used not only in work cities.
The ratio of purchasing housing in other cities of un-local families increased year by year.

The proportion of purchasing commercial housing in other cities of un-local households in the total commercial housing sales.
Offsite using of housing accumulation fund may encourage 1 million units of new demand at most.

<table>
<thead>
<tr>
<th></th>
<th>Un-local households with non-agricultural industry work</th>
<th>Households with housing accumulation fund</th>
<th>Marginal effect of housing accumulation fund</th>
<th>Stimulated housing demand</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>First-tier cities</strong></td>
<td>45.8%</td>
<td>31.7%</td>
<td>9.3%</td>
<td>0.3million</td>
</tr>
<tr>
<td><strong>Second-tier cities</strong></td>
<td>28.4%</td>
<td>17.9%</td>
<td>8.8%</td>
<td>0.45million</td>
</tr>
<tr>
<td><strong>Third-tier or below cities</strong></td>
<td>26.2%</td>
<td>16.6%</td>
<td>6.3%</td>
<td>0.25million</td>
</tr>
<tr>
<td><strong>Average</strong></td>
<td>28.9%</td>
<td>18.8%</td>
<td>7.3%</td>
<td>1million</td>
</tr>
</tbody>
</table>
No significant difference between those who are paying the housing accumulation fund for more than 12 months from the those paying more than 6 months.

<table>
<thead>
<tr>
<th></th>
<th>more than 12 months</th>
<th>more than 6 months</th>
</tr>
</thead>
<tbody>
<tr>
<td>First-tier cities</td>
<td>95.3%</td>
<td>97.4%</td>
</tr>
<tr>
<td>Second-tier cities</td>
<td>92.9%</td>
<td>96.1%</td>
</tr>
<tr>
<td>Third-tier cities</td>
<td>95.4%</td>
<td>97.7%</td>
</tr>
<tr>
<td>average</td>
<td>94.2%</td>
<td>96.9%</td>
</tr>
</tbody>
</table>
Lowering the threshold for using housing accumulation fund may encourage 1.7 million units of new demand at most.

<table>
<thead>
<tr>
<th></th>
<th>Percentage in non-agricultural work</th>
<th>Less than a year - Less than 6 month</th>
<th>Percentage with increasing household</th>
</tr>
</thead>
<tbody>
<tr>
<td>First-tier cities</td>
<td>45.8%</td>
<td>2.1%</td>
<td>0.96%</td>
</tr>
<tr>
<td>Second-tier cities</td>
<td>28.4%</td>
<td>3.2%</td>
<td>0.91%</td>
</tr>
<tr>
<td>Third-tier cities</td>
<td>26.2%</td>
<td>2.3%</td>
<td>0.60%</td>
</tr>
<tr>
<td>average</td>
<td>28.9%</td>
<td>2.7%</td>
<td>0.78%</td>
</tr>
</tbody>
</table>
Summary

- The overall effect of abolishing home-purchase restrictions is not obvious.
- The new mortgage policy may encourage 5.5 million units of new demand. Its effect is limited.
- Offsite using of housing accumulation fund may encourage 1 million units of new demand at most.
- Lowering the threshold for using housing accumulation fund may encourage 1.7 million units of new demand at most.