Discussion of “Changes in Buyer Composition and the Expansion of Credit During the Boom”

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Credit supply view of the crisis is wrong.
  - Because MS 2009 did it wrong.

Credit expanded all throughout the income distribution.
  - Middle/High income families had a much larger contribution.

Majority of default comes from middle class. not the poor.

Expansion of credit to poor was through the extensive margin not the intensive margin.
Summary of the discussion

- Why do we care?
- Who is the marginal buyer?
- Who leveraged? Where leveraged?
- Methodology: local GE spillovers
- Defaults
Why do we care?

This is super important because:

- If the problem was that banks relaxed their collateral requirements/income requirements/... then a better “banking regulation” could have prevented the crisis.
- If there was no change in the type of contracts offered by the banks, only some “macro-prudential” policies can help.
  - i.e. whenever the economy is too HOT, reduce the max LTV
Who is the marginal home buyer?

- Definitely not the bottom 20%.
- “Poor” home buyer means on average in the 30th percentile of income distribution.
What about marginal buyer in the Bay?

The map shows the bottom tier house prices as of 2005.

The annual income of a marginal buyer in the Bay is:

\[ \$400k \times 6\% \times 3 = \$72k \]
If we forget about the geography, it seems that all the way to 95% of income leveraged up.

(from Kumhof, Ranciere and Winant (2015). Source: SCF)
Where leveraged?

All the calculations are at the county level. No gentrification.

From 2003 afterward something put different regions on a very different trend.
The very same regions experienced a large boom and bust in house prices (and consumption)
Loan Amounts Increase and the Fraction of Subprime Borrowers

- Within inelastic regions, the fraction of subprime borrowers explains 40% (i.e., $R^2 = 40\%$) of the variation in the change in purchase loan amounts.
To Whom or To Where? That is the question.

- Why not to where? Because of gentrification / change in the composition of buyers / ...
  - Almost all of this can be avoided by looking at variations at the county (or CZ) level instead of zipcode level.

- Why not to whom?
  - Relaxing the borrowing constraint of the constraint agent can change the price of homes for everyone mainly when the supply is inelastic.
    - House prices are determined by the marginal homebuyers (less than 10% of the market)
    - Also look at Landvoigt, Piazessi and Schneider (2015). You only need one guy in the chain to be constrained.
    - Every single homeowner can refinance and cash-out.
  - On the downturn, subprime homeowners default, house prices decline.
    - Of course, once house prices decline and people are underwater, the main determinant of default is unemployment shock. (Palmer 2014, Gerardi et al. 2014)
    - Again the main question is that why regions with higher fraction of subprime borrowers experienced much larger decline in house prices.
Default results
Default results

(Caveat: This is only Privately Securitized loans)
Total Loan Origination

Total Origination by FICO Score

<table>
<thead>
<tr>
<th>FICO Score</th>
<th>Total Origination</th>
</tr>
</thead>
<tbody>
<tr>
<td>560-620</td>
<td>5.0e+11</td>
</tr>
<tr>
<td>620-680</td>
<td>1.0e+12</td>
</tr>
<tr>
<td>680-720</td>
<td>1.5e+12</td>
</tr>
<tr>
<td>720+</td>
<td></td>
</tr>
</tbody>
</table>
Conclusion

- The importance of identifying marginal buyer income in each region before showing any result on income and loan amounts.
  - My suggestion: \( \text{Marginal Buyer Income} = \frac{(\text{Bottom Tier House Price} \times \text{FRM Interest Rate})}{\text{DTI}} \)

- To whom methodology, by itself, can be very misleading as it ignores all the local GE effects.
  - To where approach can be also very misleading if it requires very large GE effects. A calibration exercise can be very good “smell test”.
  - Within inelastic regions, fraction of subprime borrowers predict most of the variation in the data.

- There is a huge gap between showing MS QJE 2009 is wrong and concluding the credit supply view is wrong.
  - (disclosure: we have some horses in the race including a paper titled “credit induced boom and bust” ;-))

- My view (Kermani 2012): It was a combination of the systemic risk (cheap credit/ optimism about future) and the relaxation of credit
Who financed this debt?

- Definitely not the bottom 90%.
Top 0.01% account for about half of the increase in total fixed assets holding. (Saez and Zuckman 2014)

And another one third of it came from foreigners.