Discussion of "Leveraging the Disagreement on Climate Change: Theory and Evidence" by WONG, BAKKENSEN, and PHAN

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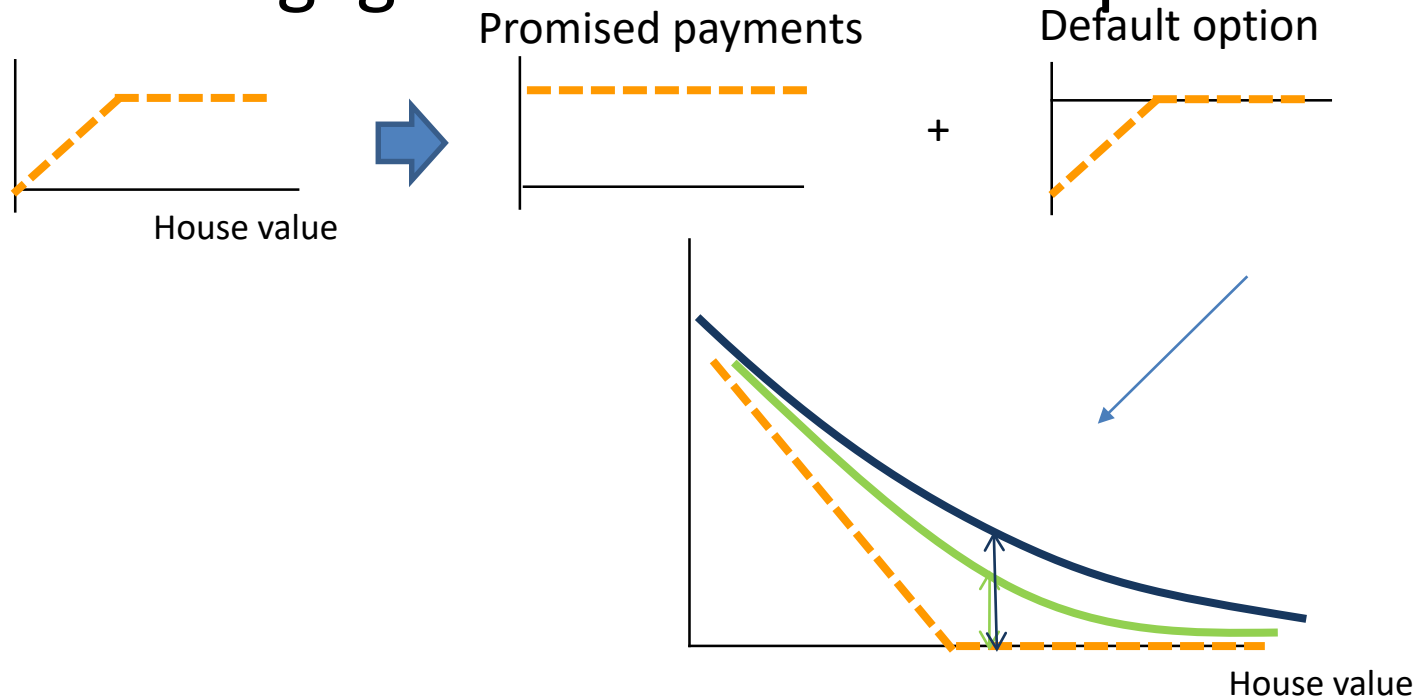University of Tokyo (Guest)
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Summary

- Theme
  - Climate risk perceptions and financial contracting

- Key takeaway
  - Counterintuitively, climate-risk-pessimistic homebuyers leverage more and longer

Intuition

- ## US mortgage is a bundle of two products

Promised payments   Default option

House value

+

Pessimistic borrower's value   Optimistic lender's pricing

House value

- ## Option is sold at green <-- lenders' free entry

General comments

- Important? Yes!

- Surprising results? Yes!

- Solid and careful? Yes!
  - Most of my initial comments have been addressed later in the paper (appendices)

- Still several suggestions

Comment 1: Key mechanism

- Results are specific to non-recourse mortgages
  - Not all loans in general (limited/full recourse)
- Not bad; a variation is good for research
  - Obtain **a proposition for a recourse loan**
    - → Borrower pays up to R_{T_f} from other assets:

    Borrower default payoff $= \max\left\{p_{T_f} - B_{T_f}, -R_{T_f}\right\} - f$
  - **Test this proposition** using variations by deficiency judgment, loan type, FICO, borrower asset/income

Comment 2: Variation in f

- Default cost f affects Propositions 1 (default time and loan limits) and 2 (equilibrium contracts)

- **Empirical variation** in f exists for judicial/non-judicial foreclosure states

- **Test comparative statics**

Comment 3: Internal consistency

- Time to default: lender $T_{\bar{\lambda}} >$ borrower T_λ

  is assumed ("reduced form" or "short cut" model)

- In a model with a stochastic house value, a shorter time to default T_λ comes either from

  1. a smaller drift or negative jumps for borrowers

  2. larger volatility for borrowers

- Pessimism suggests #1

  – Then, borrower and lender should have different house values, but price is common: **inconsistency**

Comment 4: A pessimist's choice set

1. Select a safe location

2. Select a safe house

3. Buy insurance (Table A11)

4. **Use long-term mortgage finance**

- Choices 1-4 all interact → Just "controlling for" selection is insufficient. Need full interactions or a full selection model

  – eg, #4 will be more important if #1 is unavailable

Comment 5: PessBuyer location choice

- Tab A5 shows that PessBuyers are more likely to choose coastal homes (#1 not satisfied)
  - Why? Puzzling
- PessBuyer may be proxying for other features
  - [Buyer county x SLR] cannot address correlations between PessBuyer and county characteristics
 - Contrast Pess and Opti counties in economic and demographic characteristics. If different, **use matched counties**.

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Comment 6: PessBuyer house choice

Tab 4: $\ln P = -0.039 SLR - \mathbf{0.059 SLR \times PessBuyer} + \cdots$

- Puzzling:
  - Why does a seller accept a lower price for a PessBuyer while OptiBuyers are around?
  - Nash bargaining (Prop. 5) is **not realistic**

- PessBuyers can pay lower prices if they are
  - selecting the houses that OptiBuyers do not like (loan contracts are for "special" houses)
  - **proxying for some house/buyer characteristics**

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Comment 7: Under-specification

- Hedonic model is underspecified
  - Age, sqft, bedroom fe, zip fe
- Then, PessBuyer can proxy omitted house characteristics
  - Hedonic eqbm. is a sorting eqbm→Natural house-buyer correlations
  - Buyer type captures omitted characteristics
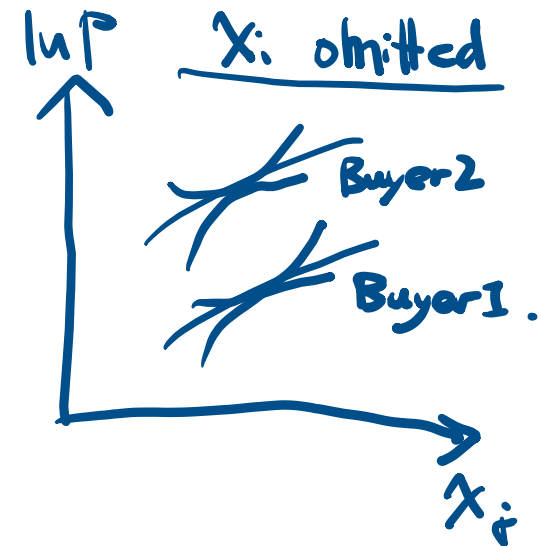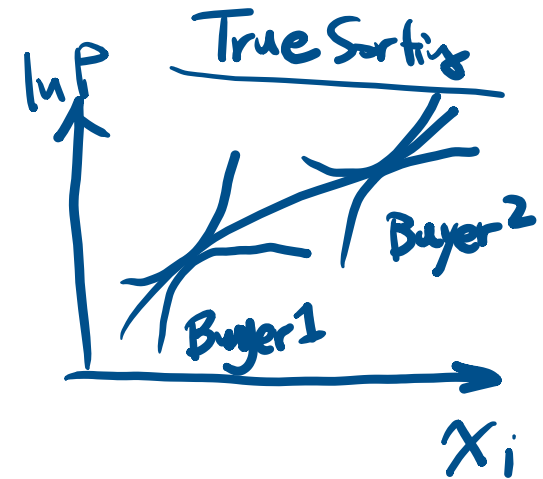
Conclusion

- An already well-developed paper

- Suggestions

  1. Generalize the model and use variations in recourse limitations and foreclosure costs

  2. Resolve internal inconsistency in the model

  3. Address the concern about PessBuyer variable

     - w.r.t. location choice: Use matched counties

     - w.r.t. house choice: Use a fuller hedonic model