Deductible Choice in Homeowners Insurance
Are There Implications for Disclosure?

FTC Behavioral Conference
April 20th, 2007

Justin Sydnor
Case Western Reserve University
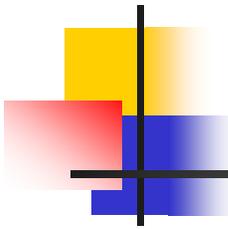
Overview of Sydnor (2006)

Sample of 50,000 standard HI Policies

Available Deductibles:
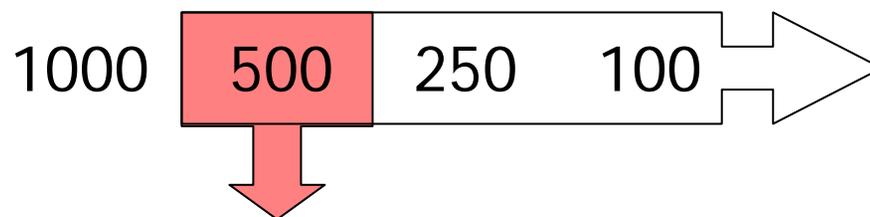
1000 | 500 | 250 | 100 ⟹ **83% full sample**

61% new customers

Prototypical Homeowner:

4% claim rate ⟹ **EV < $20**

pays **$95** for extra **$500** of insurance

BoE: Over 30 years, could save average of $6,000, with only 1/455 chance of losing.

Overview of Sydnor (2006)

- In EU(W) model these choices imply implausible risk aversion.

- Variant of prospect theory (NLIB) accounts for typical choice using preexisting PT parameter estimates
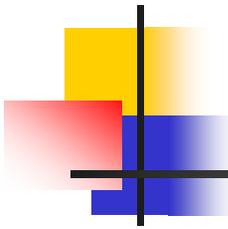
Possible Disclosure Implications

- **Renewal Disclosures**
  - Consumer Inertia: Information? Present bias?

- **Presentation of the Menu**
  - Low Deductibles: Ignorance of menu? Agents?

- **Framing/Focusing**
  - Probabilities
 - Time Horizon
  - Menu Framing and Defaults
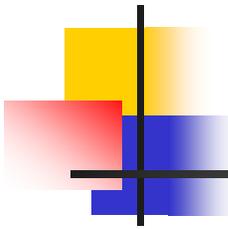
Renewal Notices

- Standard rating scheme leads to increasing difference in premium for different deductibles over time.

- Renewal notices do not list current menu

Ded Choice by Tenure

% Choosing Each Deductible by Number of Years Insured by Company
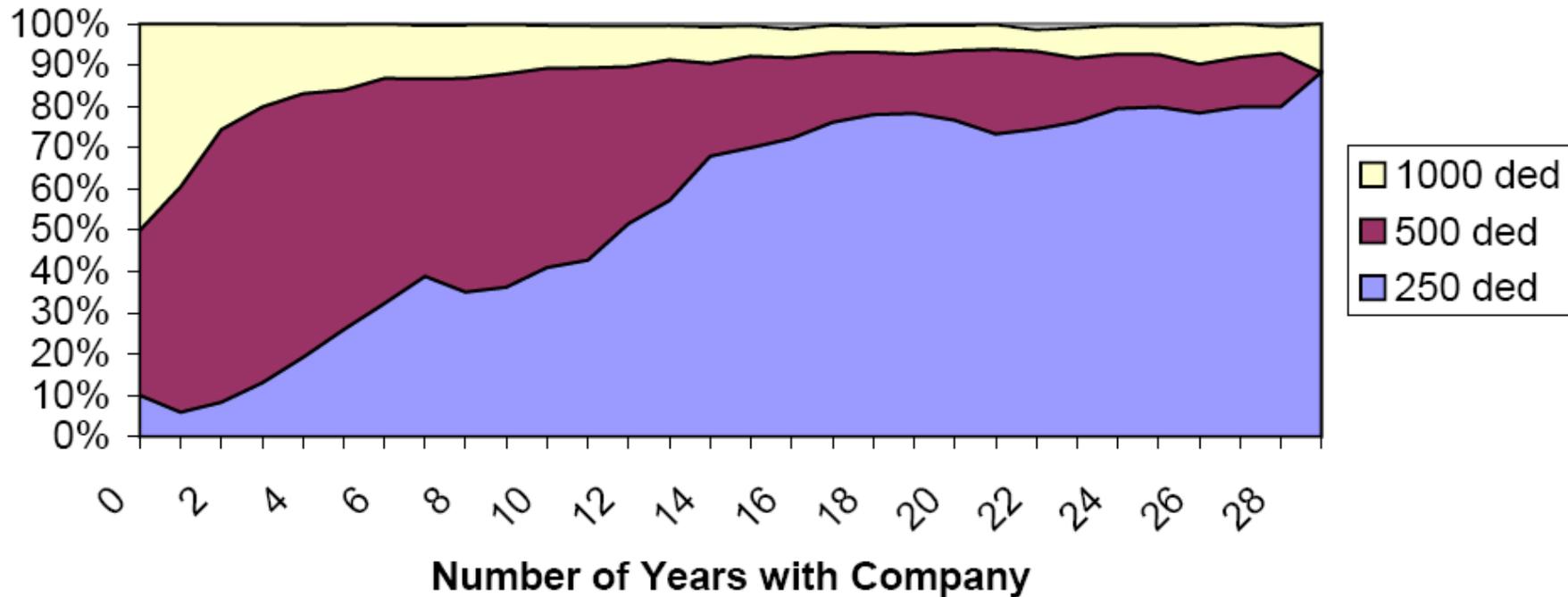
Fraction Choosing $500 or Lower Deductible
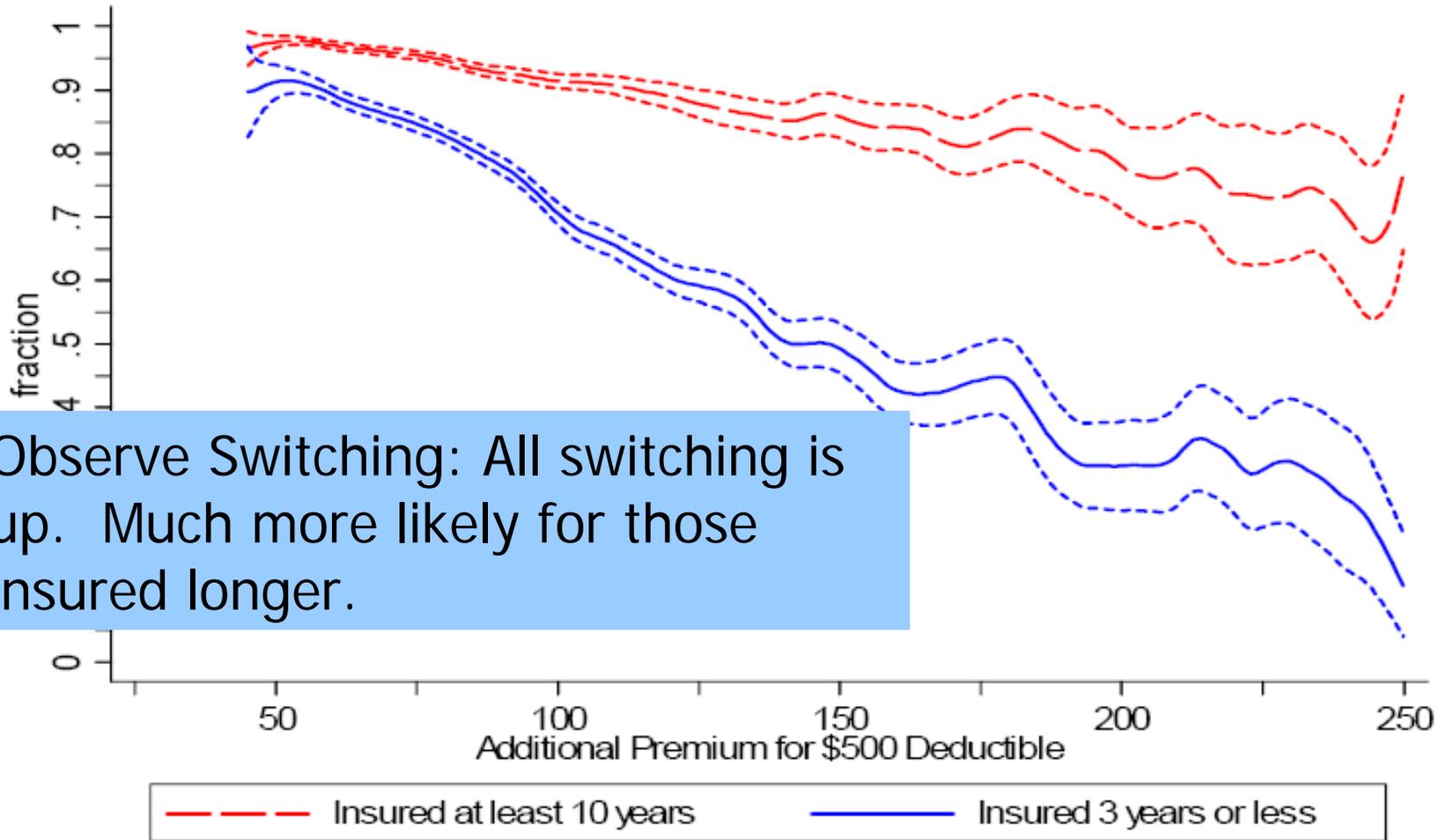
Observe Switching: All switching is up. Much more likely for those insured longer.

Quartic kernel, bw = 10
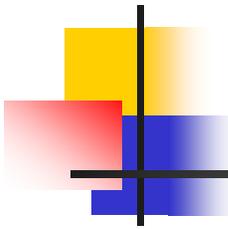
Disclosure Implications

- Renewal notices should list current menu
  - Make customers aware of price differences
  - Make customers aware of options
- Present Bias?
  - Even with information, they may not update (e.g. 401k inertia).
  - Menu Design
    - Active choices
    - Ease switching
    - Create choice deadlines?
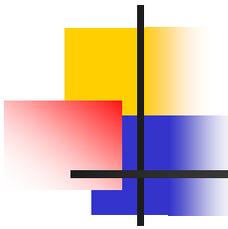
Presentation of Initial Menu

- Purchased through agents
  - Paid commissions on total sales $\Rightarrow$ some incentive to push expensive low deds
  - No standard for menu presentation
  - $500 deductible is "standard" in industry and company – Default Effect?
- Ignorant of Cost of Low Deductibles or Alternative Options?
  - My conclusion: I doubt this is a primary factor
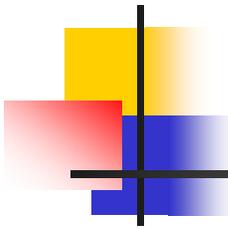
Responding to the Menu?

- Choices fit with established preferences

- Patterns of responsiveness in the data

  ▶

- Survey evidence

  ▶

- Online purchases show similar patterns
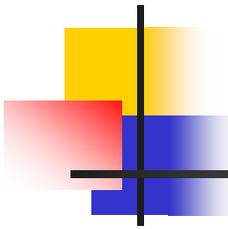
Disclosure Implications

- Controlled study of disclosure valuable (necessary) for strong conclusions here

- But should not be surprised if we find that main choice patterns are unaffected by disclosure manipulations
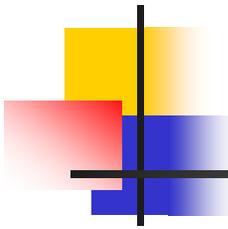
Other Implications of Reference-Dependent Risk Preferences

- **How do people use probabilities?**
  - Big open question for insurance
  - Prospect Theory: probability weighting does not imply misprediction of likelihood
    - Tversky and Fox (1995)
  - Possible areas for further research
    - Studies of subjective belief formation
      - Support Theory – how possible events are "unpacked" matters. (e.g. All losses to home vs. Fire, Wind, Water,...)
    - How are insurance choices affected by information on claim likelihood?
    - Can probability weighting be moderated?
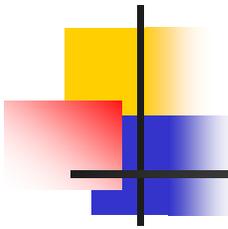
Other Implications of Reference-Dependent Risk Preferences

- ## Time Horizon
  - Ref-dep theories of risk (esp. Koszegi-Rabin) imply that broader bracketing should decrease choice of low deductibles
  - EU(W) implies no difference or possibly increased preference for low deductibles
- ## Menu-framing
  - Present annual premiums (as in survey)
  - Present annual premium for a "base" deductible and changes for others (possible in online)
    - May induce status quo bias.

% Choosing Each Deductible by Number of Years Insured by Company

Number of Years with Company

Legend: 1000 ded, 500 ded, 250 ded

Fraction Choosing $500 or Lower Deductible

Additional Premium for $500 Deductible

Legend: Insured at least 10 years — Insured 3 years or less

Quartic kernel, bw = 10
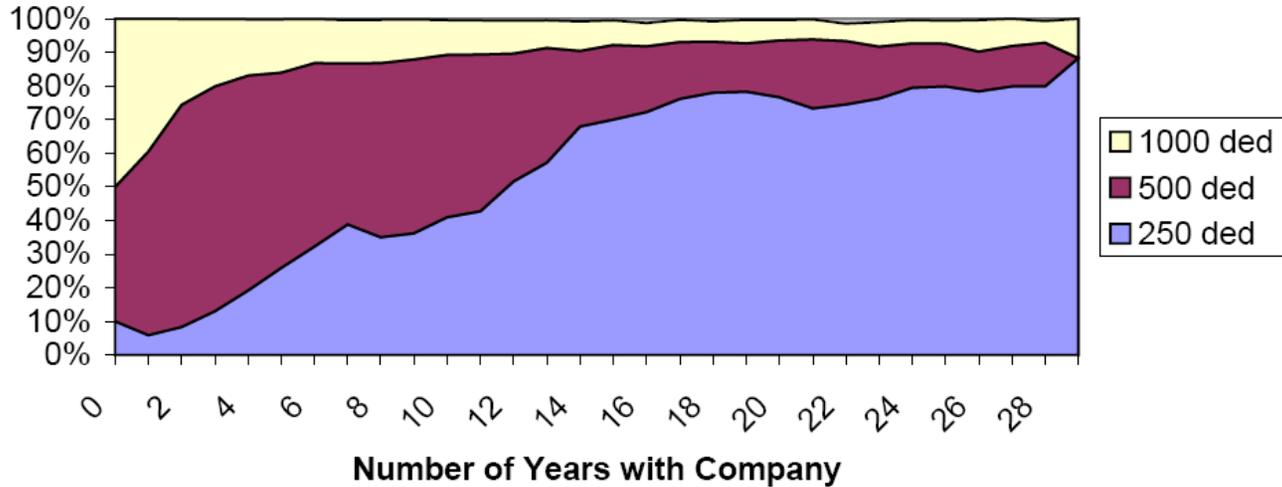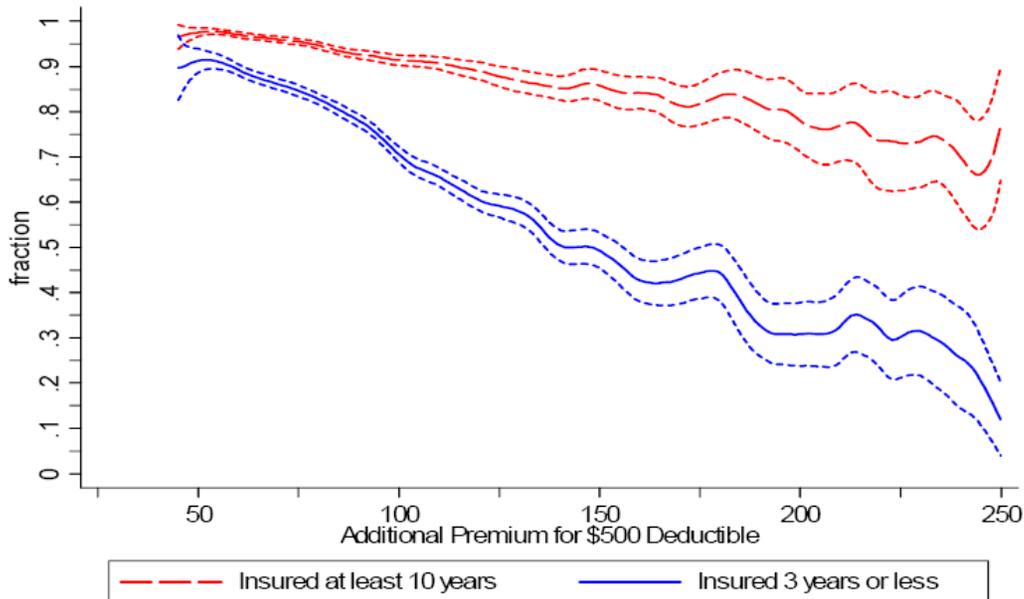
Survey Evidence on Ded Choice

- Schindler, Conlin & Kornberger (2006)

Deductible Level	Annual Premium	Risk Neutral Claim Rate	% Choosing
250	863	42.8%	29.5
500	756	20.8%	27.6
1,000	652	7.0%	26.8
1,500	617	4.8%	2.9
2,000	593	3.0%	3.8
2,500	578	NA	9.5

N = 105