Insurance Markets, Transactions, and Regulation

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Economic Problem

- Insurance companies must set prices before costs are known
- Adverse selection
  - Underwriting and pricing options are limited by regulation
- Moral hazard
  - Consumer behavior can affect losses
  - People respond to incentives
- Rate regulation

Adverse Selection

- Adverse selection occurs when
  - policyholders have different expected losses
  - insurers cannot classify
  - ==> same price to all
- At a given price,
  - higher risk consumers will buy more coverage
  - lower risk consumers will buy less coverage
- Thus adverse selection ==> low risk people obtain less coverage

Adverse Selection Example

- High-risk insureds → $1,000
- Low-risk insureds → $500
- Equal number in each risk group
  - Say 10 in each
- No competing insurers, or no pricing freedom

- Charge $750?

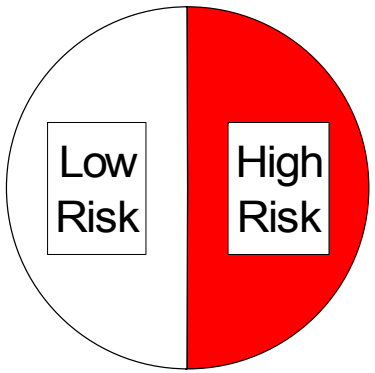
The insurer would initially cover its costs, but it would not be an optimal outcome.

High Risk

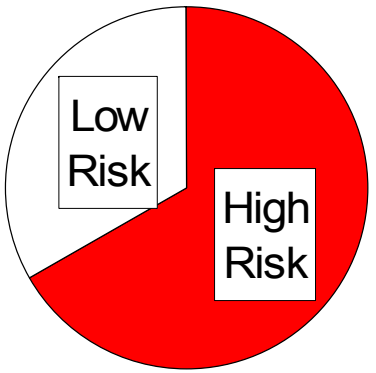
What is the rational response from low-risk group?

Low Risk

Premium share



Loss share



Low Risk Insureds Look for Other Options

- No longer an even number in each group
- Assume 50% of low-risk exit risk pool
  - Go without coverage, or buy it elsewhere
- Insurer still charges $750

- What happens?

Premiums < Losses

- Expected Premiums:
  - H-R pay: 10 x $750 = $7,500
  - L-R pay: 5 x $750 = $3,750

  → $11,250
- Expected Losses:
  - H-R loss: 10 x $1,000 = $10,000
  - L-R loss: 5 x $500 = $2,500

  → $12,500
- How does insurer react?

Insurer Raises Premium

- Alternative is insolvency
- Viable premium for this period is
  $12,500÷15 = $833

- What will happen next period?

The Cycle Repeats

- More low-risk consumers leave the risk pool
- Price increases again
- Repeat...
  - Until price = $1,000

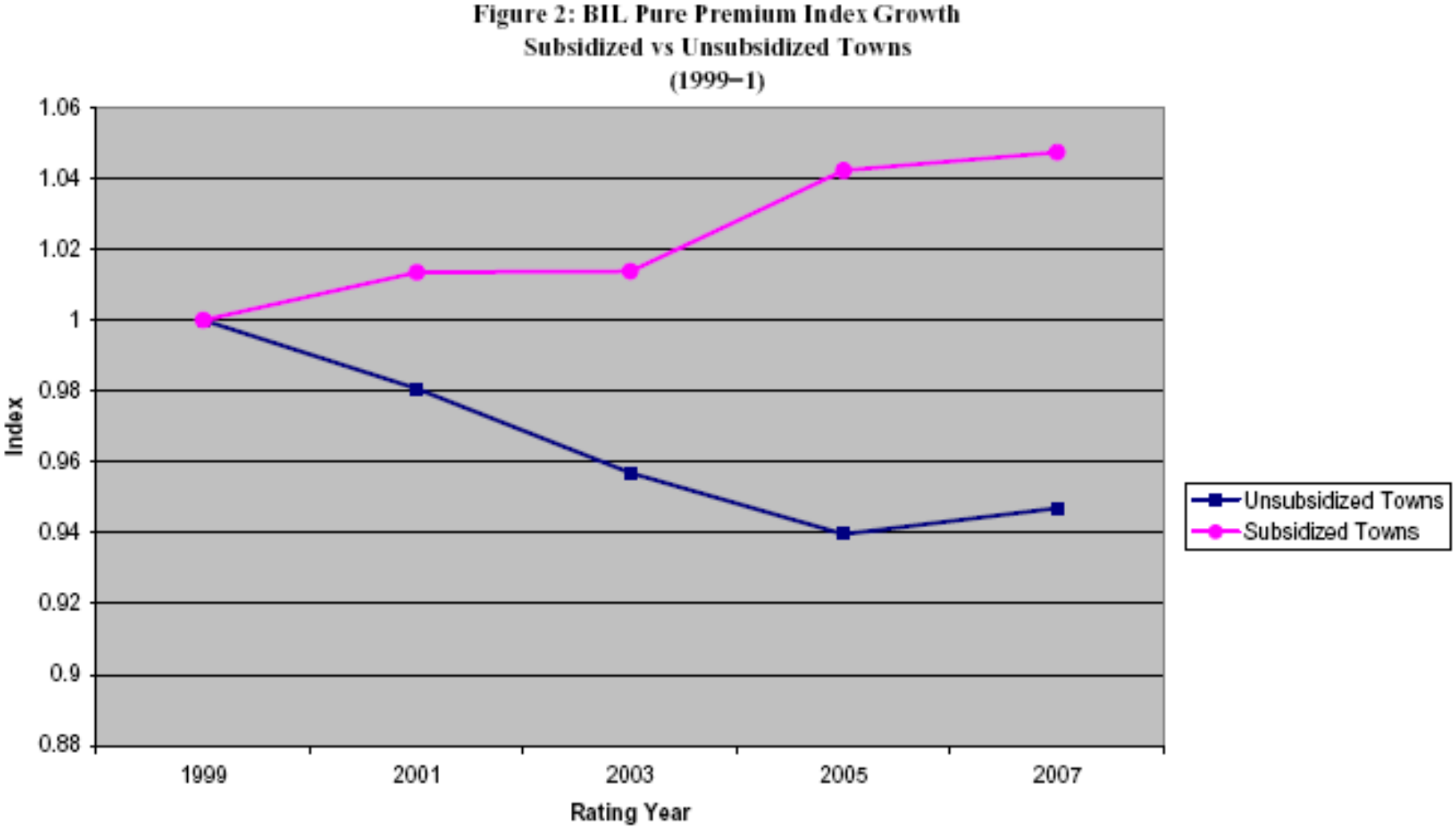
Low Risk

Known as the adverse selection “death spiral”

Moral Hazard

- Not really a "morality" problem
- People take less care if they know losses are transferred to a risk pool.
- Charging uniform rates exacerbates the problem
  - No expectation of increased rates after loss
- People take more risk
  - Build in risky areas
  - Fail to mitigate losses

Effect of Subsidies on Losses



More on Accurate Rates

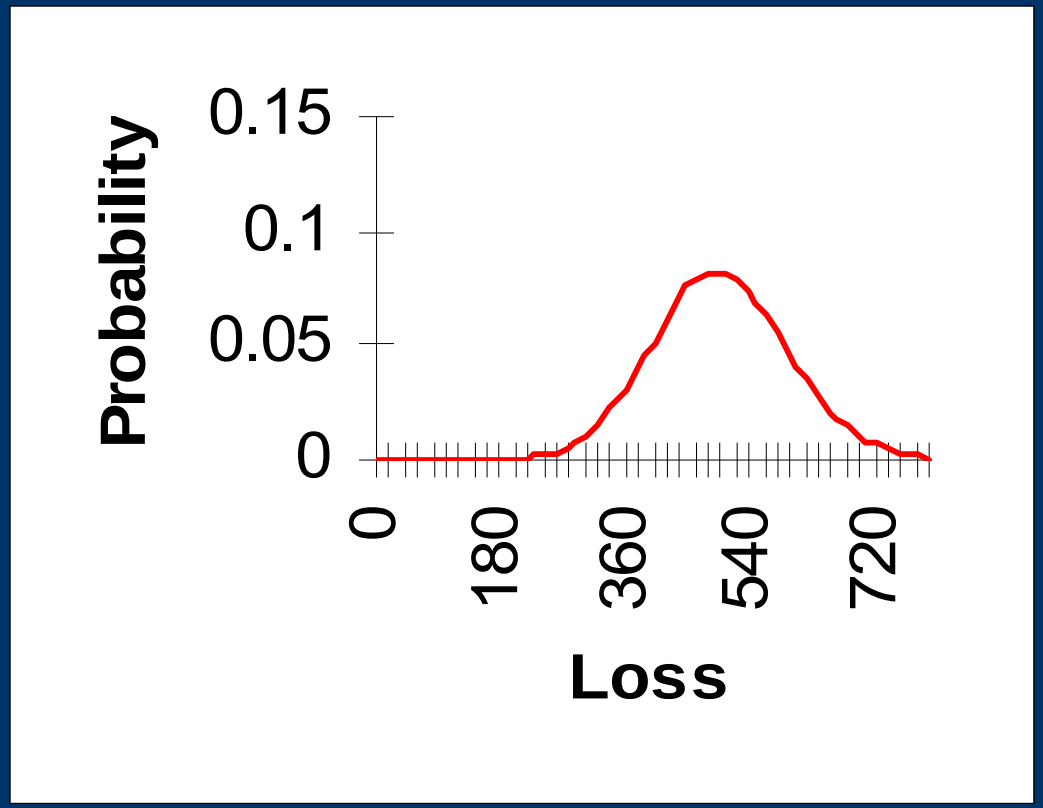
- Once we identify a variable that accurately predicts loss, Rating Restriction = Tax
- Tax on low-risk to specifically benefit high-risk
  - Calling it insurance regulation does not change this fact

Rate Regulation

- Usually well-intended
- Initially developed to prevent insolvency
- Can cause severe market problems when it causes rate suppression
  - Increase losses
  - "Sticky" rates
    - If increases are not considered fairly and efficiently, decreases will never be requested
    - Limits consumer incentive to reduce risk
  - Increase probability of insolvency

Insurer Capital Structure

- Surplus = Assets – Liabilities
- Surplus determines financial strength
- Must compete with other investments on risk adjusted basis
  - Surplus is costly



Improper Rate Regulation ↓ Surplus

- If insurers must choose between financial strength and reasonable return
  - The best insurers exit the market
  - The rest choose to reduce financial strength
    - Klein, Phillips, & Shiu, 2002. "The Capital Structure of Firms Subject to Price Regulation: Evidence from the Insurance Industry," *Journal of Financial Services Research*

A (Conceptually) Simple Solution

- Charge risk-based premium
  - high-risk pays $1,000
  - low-risk pays $500

- Everyone gets the benefit of insurance reducing risk
- No intentional unfair outcomes
- Better incentive to take care
- Optimal for society

Why are Insurance Issues Politically Difficult?

Political Economic Theory

- Why are insurance issues politically difficult?
- Issues differ by Complexity & Salience
  - Complexity: knowledge or resources required to understand an issue
  - Salience: the number of people the issue affects in a significant way
- Insurance regulation is usually complex but not salient

Reactions to Large Losses

- **Loss-related** events
- Regulatory reaction involves ratemaking and underwriting restrictions
  - Can actually exacerbate availability and affordability problems
- Why not address **LOSSES**?
  - Risky development, building codes

Employ Market Forces

- Enhance underwriting and pricing freedom
  - Let insurance rates and underwriting classifications reflect the risk of insureds
    - Eliminate harmful and unfair cross-subsidies that:
      - Increase risky behavior
      - Redistribute wealth from low-risk to high-risk insureds
  - Allow insurers to respond to changes in expected losses and economic conditions
    - Mitigate the "sticky-rate" problem

Examples

- Massachusetts
- South Carolina
- Illinois
- Florida

Conclusions

- Insurance is necessarily complex
- Fundamental problems make rate regulation “tempting”
- Even well-intended rate regulation harms consumers
  - Cross-subsidies
  - Increased losses
  - Sticky rates