Not Just a Florida Problem

- Cape Cod
- Long Island
- Coastal NJ
- Maryland
- North Carolina
- South Carolina
- Florida
- Alabama
- Mississippi
- Louisiana
- Texas
- US Caribbean
- A long run problem


*http://oceanservice.noaa.gov/programs/mb/supp_cstl_population.html

40-50% of US Population lives in east coast Coastal Area*
Not Just a Hurricane Wind Problem

INFLATION ADJUSTED U.S. CATASTROPHE LOSSES BY CAUSE OF LOSS, 1990-2009¹
(2009 $ billions)

- Hurricanes and tropical storms: $152.4 (45.2%)
- Tornadoes: $97.8 (29.0%)
- Wind/Hail/Flood: $11.1 (3.3%)
- Geologic events: $17.6 (5.2%)
- Winter storms: $25.0 (7.4%)
- Terrorism: $23.6 (7.0%)
- Fires: $8.0 (2.4%)
- Other: $1.8 (0.5%)

Total: $337.3 billion

¹Catastrophes are all events causing direct insured losses to property of $25 million or more in 2009 dollars. Adjusted for inflation by ISO. ²Excludes snow. ³Does not include flood damage covered by the federally administered National Flood Insurance Program. ⁴Includes wildland fires. ⁵Includes civil disorders, water damage, utility service disruptions and non-property losses such as those covered by Workers Compensation.

Source: ISO’s Property Claim Services (PCS) unit.

From III Insurance Fact Book 2011
Consumer’s are Sensitive to Insurance Prices which means insurance costs may impact home values.

> **Elasticities**

  - **Flood** ~ 1.00 (Brown & Hoyt 2000)
  - **Home owners** (Grace et al. 2004)
    - ~1.08 (Florida)
      - Wind ~ 1.95
      - Non wind ~.40
    - ~.86 (New York)
      - Wind ~2.06
      - Non wind ~.33

> **Interpretation:** If elasticity = .4 it means that a 10% increase in price yields a 4% decrease in the demand for insurance.

> **Private insurance is not the only way to finance risk.**
Major Types of Risk Financing

> **Public**
  - Subsidized private insurance [Inland v. Coastal]
  - Subsidized by assessments on lower risk policy owners in state – *raises home prices in Short Run*
  - Public Insurance-*raises home prices in SR*
  - Public Reinsurance-*raises home prices in SR*

> **Private Insurance**-increases prices lowers home value

> **Self Insurance & Mitigation**-*unknown effect on prices*
Major Actors

> Insurers
> Reinsurers
> Hurricane Modelers
> State (Regulators and State Insurers)
> Homeowners (domestic and foreign)
> Home Builders
> Realtors

> Consumer Advocates
> State legislators and Governors
> Congress
> US Department of the Treasury
> State Residents & Tax payers
> State creditors
> To a lesser extent -- commercial property owners
No Free Lunch

Insurers are constitutionally permitted to earn a reasonable rate of return.

- It may take 30 years to determine if this is the case!
- Most regulators and consumers get impatient after a year or two of no hurricanes.
- Impatience leads to disruptions of insurance markets which, in turn, hurts home values.

Insurance is a voluntary business.

Large amounts of Property Risk has become concentrated in relatively small areas.
“Simple” Hedonic Model

Housing Value

Availability of Insurance
Affordability of Insurance
Insurance Price Relative to Risk

Bldg Code Strength & Enforcement

Environmental risk

Availability & Affordability of Financing
House specific amenities
Locational Amenities
Fiscal Amenities Relative to Taxes
“Simple” Dynamic Hedonic Model

Voter saliency -> Regulation

Availability of Insurance

Affordability of Insurance

Insurance Price Relative to Risk

Housing Value

Bldg Code Strength & Enforcement

Environmental risk

Fiscal Amenities Relative to Taxes

Locational Amenities

Local & State Govt Fiscal Situation

Macro Economic Influences

Availability & Affordability of Financing

House specific amenities
What’s Good for Home Owners in Short Run Might not be in the Long Run

> **Risk Based Pricing (RBP)** is Important for Long Run Loss Mitigation

> Tremendous pressure to reduce RBP
  
  - Flood
  - Wind
  - We may see it after this year’s tornado season too,

> Increased Building Codes are a response to lack of RBP

> Solvency (& Supply) of Insurers is influenced by RBP.
Major Problem

> Risk is costly to bear
  
  o It takes money to
    ▪ Transfer it (through insurance)
    ▪ Mitigate it (ex post refits or ex ante building codes)
    ▪ Bear it (self insurance)

> Regulation does not eliminate risk nor does it reduce the social cost of risk.

> Transferring the risk to the public does not reduce the social cost of risk. It may actually make matters worse as “others” pay for the risk.
A solution (almost)

> What will reduce the social cost of risk is
  
  o to allow prices of property to reflect risk which requires us
  o to allow insurers to price property based upon risk.

> Problem: what is the real price of risk?
  
  o $Price = E[Loss] + Expenses + Risk Capital$
    
    ▪ Regulators choose to undervalue the cost of risk capital