

Weathering the Storm

Placing the National Flood Insurance Program on Actuarial Solid Ground

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American Academy of Actuaries

■ American Academy of Actuaries

- The American Academy of Actuaries' mission is to serve the public and the United States actuarial profession
- Assists policymakers on all levels by providing leadership, objective expertise, and actuarial advice on risk and financial security issues
- Actuaries have extensive experience in dealing with risk management and solvency issues within the financial services industry and have unique qualifications that can aid the discussion of the National Flood Insurance Program

■ Casualty Practice Council

- Provides objective technical expertise to policymakers and regulators on property and casualty insurance issues

■ Flood Insurance Subcommittee

- Provides actuarial support, advice, and communications on topics that involve flood insurance and the National Flood Insurance Program



Agenda for Today's Briefing

- Review of the [Academy monograph](#): *The National Flood Insurance Program: Past, Present ...and Future?*
- National Flood Insurance Program
 - History, goals, and role
 - Structure and administration
 - Premium rate structure and actuarial principles
 - Key differences with private-sector insurance
 - Other specific issues
- Proposed Congressional Reforms
- Summary and Conclusions



The National Flood Insurance Program: Past, Present ... and Future?

- Purpose – to inform the public policy debate on the NFIP with a financial frame of reference
- Readers – federal and state policymakers and regulators, actuaries, agents, and other insurance professionals
- Overview
 - History and structure of NFIP and key differences between NFIP and private-sector insurance
 - Some important issues – background and how the financial condition of NFIP would be affected
 - Intended as educational foundation for discussion of key issues – not as in-depth examination of financial soundness of program



NFIP History

- Private sector insurers deem flood uninsurable
- National Flood Insurance Act of 1968
- Flood Disaster Protection Act of 1973
- Coastal Barrier Resources Act of 1982
- National Flood Insurance Reform Act of 1994
- Flood Insurance Reform Act of 2004



NFIP Goals and Role

- Three foundations
 - Flood risk identification
 - Flood plain management
 - Flood insurance
- Additional long-term goal – reduce demand for and reliance on disaster assistance after floods
- Partnership with private sector insurers and servicing contractors
- Encouragement of participation – at times at the expense of rate adequacy



NFIP Structure and Administration

■ Structure

■ U. S. Dept of Homeland Security

■ FEMA

– Federal Insurance & Mitigation Administration

» NFIP

■ Administrative issues

■ Write-your-own (WYO) companies

■ Sunset provisions

■ Periodic need to borrow from the U.S. Treasury



NFIP Premium Rate Structure

- Enabling statute
 - Risk-premium rates (AKA full-risk or “actuarial” rates)
 - Other than risk-premium rates (AKA discounted or subsidized rates)
- FEMA actuarial staff
 - Annual NFIP Actuarial Rate Review



Actuarial Principles and the NFIP

- NFIP rates:
 - Full-risk rates – expected value of annual losses
 - Subsidized rates – less than expected losses
 - Both include expenses and small contingency load
 - Neither have provision for cost of capital
- NFIP risk classes:
 - Grandfathering of pre-FIRM structures; that is, buildings built before the effective date of the first Flood Insurance Rate Map (FIRM) for a community, circa 1973
 - Small number of risk classes
 - Statutory cap on premium increases



Actuarial Principles and the NFIP

■ Actuarial soundness

- Actuarial Soundness: lacks a uniformly accepted definition, actuarial profession has dealt with the issue
 - Basic principle – an actuarial rate should reflect the hazard of the insured risk
 - Casualty Actuarial Society (CAS) Statement of Principles Regarding Property and Casualty Insurance Ratemaking
 - Principle 1: A rate is an estimate of the expected value of future costs.
 - Principle 2: A rate provides for all costs associated with the transfer of risk.
 - Principle 3: A rate provides for the costs associated with an individual risk transfer.
 - Principle 4: A rate is reasonable and not excessive, inadequate, or unfairly discriminatory if it is an actuarially sound estimate of the expected value of all future costs associated with an individual risk transfer.
 - Actuarial Standard of Practice No. 12 – *Risk Classification*



Key Differences – Private Sector Insurance and NFIP

- Goals
- Policy language
- Types of coverage and insurance limits offered
- Rate development
- NFIP coverage, administration, and operations through federal statute and/or regulation
- Congress provides NFIP oversight
- NFIP must insure any eligible property
- NFIP has sunset date



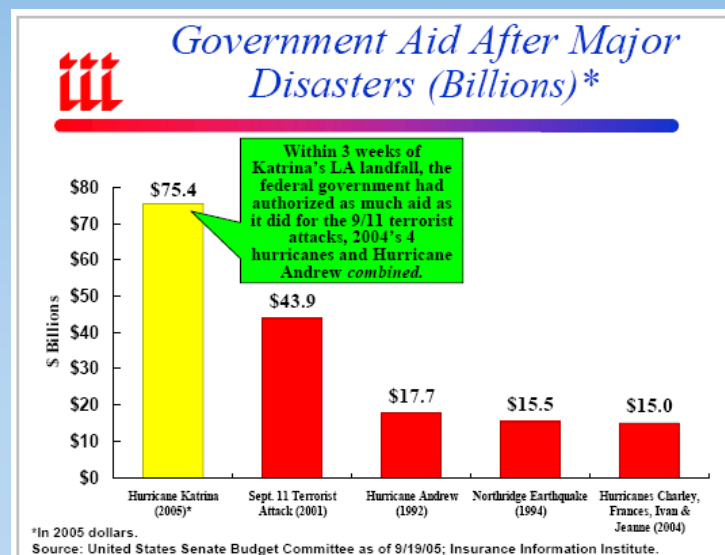
Mandatory Purchase Requirement

- Flood Disaster Protection Act of 1973 made flood insurance mandatory for certain property owners
- National Flood Insurance Reform Act of 1994 made adjustments
- Who? – property owners in Special Flood Hazard Areas (SFHAs) with loans from federally regulated institutions
- How well does this work? GAO studies indicated mixed levels of compliance
- Important to map accurately, since only SFHAs involved



Flood Insurance vis-a-vis Federal Disaster Aid

- Often, there is government aid available after a disaster
- However, this does not mean that it is not necessary to purchase flood insurance
 - Aid only available for declared disasters
 - Not all floods will be declared as disasters
 - Aid is primarily as low-interest loans
 - Individual grants are generally small
 - Just to meet immediate needs



Multiple Loss Properties

- How to treat properties with multiple losses
- Severe repetitive loss (SRL) properties
 - Four or more NFIP losses $>$ \$5,000 and total $>$ \$20,000 or;
 - Two or more with cumulative claim amount $>$ property value
- 2004 GAO report
 - Locations with two or more losses accounted for 38 percent of losses
 - Half of them were still insured; they made up less than 1 percent of then-insured NFIP policies



Multiple Loss Properties

- Two major concerns
 - Cost to program
 - Should NFIP continue to insure them?
- Congress has dealt with issue only once
 - 2004 NFIP Reform Act
 - Mitigation grants and post-flood insurance
 - Increased cost of compliance (ICC)
- FEMA limited in its ability to mitigate SRL properties
 - Severe Repetitive Loss Pilot Program



Riverine and Flash Flooding vs. Coastal Flooding

- Two different flood scenarios
- Large difference in market penetration
 - 69 percent of NFIP policies in hurricane-prone states
 - 38 percent in Florida alone
 - 11 percent from Northeast coastal states
 - Remaining 20 percent of policies are in non-coastal states



Mapping Programs

- Flood map modernization (MapMod)
- Succeeded by Risk Mapping, Assessing and Planning (MAP)
 - Both MapMod and Risk MAP designed to improve and update flood hazard maps
- Multiyear Flood Hazard Identification Plan (MHIP)
 - To provide periodically updated digital maps



Hurricanes of 2004-2005

- Catastrophic loss
- U.S. Treasury debt - \$17.75 billion
- Wind/water claims issues



Proposed Congressional Reforms

- Long-term reauthorization (5+ years)
- Phase-in of full-risk rates
- Increase limit on annual premium increases
- Increase coverage limits
- Add commercial business interruption and additional living expense coverages
- Wind/water allocation method
- Addition of wind peril coverage



Proposed Congressional Reforms

- Treasury debt waiver/repayment
- Increase of FEMA's borrowing authority
- Increase deductibles for subsidized rate properties
- Study WYO expenses
- Improve mapping accuracy



Reforms Proposed in 112th Congress

- H.R. 1309—sponsored by Rep. Judy Biggert (R-IL); awaiting vote by full House
 - Reauthorizes NFIP for five years
 - Moves toward adequate rates
 - Introduces business-interruption and living-expense coverage, if properly priced
 - Does not address outstanding debt



Reforms Proposed in 112th Congress (H.R. 1309 cont'd)

- Creates a Technical Mapping Advisory Council
 - To include (among others):
 - an expert in real estate
 - an expert in insurance
 - a member of a recognized regional flood and storm water management organization
 - a representative of a state emergency management agency or association or organization for such agencies
 - a representative of state national flood insurance coordination offices
 - representatives of two local governments, at least one of whom is a local levee flood manager or executive, designated by the Federal Emergency Management Agency as Cooperating Technical Partners
 - representatives of two state governments designated by the Federal Emergency Management Agency as Cooperating Technical States
 - Purpose: to determine new mapping standards
 - First goal to “ensure that the flood insurance rate maps reflect true risk”



Reforms Proposed in 112th Congress

■ S. 1091

- Sponsored by Sen. Roger Wicker (R – MS)
- Introduced on May 26, 2011; referred to Senate Banking Committee.
- Includes reauthorization of NFIP for five years; reauthorization provisions based on S. 2284, which passed the Senate in 2008
- Only mapping provision removes limitation on state contribution for updating flood maps (currently 50 percent of the requested revision or update)
- New section introduces a system for adjusting “indeterminate” insurance claims
 - For those claims with no physical structure remaining (i.e., “slab claims”)
 - Would use scientific and technical data to model the event and arrive at an allocation between wind and water portions of the claim



Consequences of Inaction

- Consequences of short-term extensions
 - Uncertainty in the market
- Consequences of short-term program lapses
 - Extra administration costs for WYO companies or the direct facility
 - Dislocation in real estate market
- Consequences of allowing program to lapse
 - No real market for flood insurance
 - Increased reliance on post-event government aid



Summary

- Because flood was deemed uninsurable by private-sector insurance, federal government established NFIP
- NFIP has provided better understanding of how to evaluate flood risks and protect against them
- Complexity of NFIP presents challenges
 - Critical factors used to measure and assess flood risk are constantly changing
- Significant loss in hurricanes of 2004, 2005, and 2008 prompted many proposals to modify NFIP
- Important to understand issues and implications





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